



Hope and Gratitude as Self-Management Tools for Excessive Worry in HE Students

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Hope and Gratitude as Self-Management Tools for Excessive Worry in HE Students

Cameron Jamie Pattinson

A thesis submitted in partial fulfilment of the requirements of
Sheffield Hallam University
for the degree of Doctor of Philosophy

October 2022

Candidate Declaration

I hereby declare that:

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2. None of the material contained in the thesis has been used in any other submission for an academic award.
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Abstract

The prevalence of undergraduate student mental health problems is a growing concern (Grubic et al., 2020), but undergraduate students often do not seek support at their universities or are faced with long waiting lists from the universities and the NHS (Watkins et al., 2012). In the wake of the COVID-19 pandemic, moderate-severe anxiety has increased in undergraduates from 18.1% to 25.3% (Fruehwirth et al., 2021). However, mental health support is usually aimed at those with severe symptoms, and those with moderate, non-pathological symptoms are often overlooked despite struggling. Students undertake several transition periods throughout their university lives, in which student mental health is negatively affected (El Ansari et al., 2014). The aim of this research was to examine student mental health and develop a positive psychology intervention (PPI) that both alleviated mental health symptoms and provided students with self-management resources for the future. Study 1 examined the mental health of 226 undergraduate students before a transition period and 102 students after a transition period through a mixed methods survey. The results showed that anxiety was elevated before and after a transition period, whereas depression worsened after the transition period and worry slightly improved. Hope, gratitude, curiosity, optimism, and the Big 5, were found to predict student mental health differently before and after the transition period, and resilience was found to mediate all relationships. In Study 2, a PPI named the 'Worry Workshop' was developed and delivered to four groups of four students, two groups during a transition period and two groups after a transition period. The results showed that hope and gratitude was successful in decreasing worry, anxiety, and depression, and increasing life satisfaction, with the effects maintained for three months. In Study 3,

interviews were held with the participants of the Worry Workshop, and thematic analysis was used to generate themes from the data: perceptions of mental health, the impact of COVID-19, lack of support access and disappointment, challenging preconceptions of positive psychology, inhibitors to engagement, motivation beyond the intervention, group behaviours, and embedded interventions and alterations. Overall, this research demonstrates the need for early intervention in university students to prevent the development of excessive worry, anxiety, and depression, and provides a cost-effective, flexible intervention that could be implemented into undergraduate university courses and wellbeing services. Practical, methodological, theoretical, and policy recommendations are made.

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1. Literature Review

1.1 Overview

The research in this thesis was undertaken to answer the following research questions:

1. How does anxiety, depression, and worry change in undergraduate students before and after a transition period?
2. Do character strengths predict mental health in undergraduate students before and after a transition period?
3. What are the main sources of worry for undergraduate students?
4. Is a positive psychology intervention effective at alleviating symptoms of worry, anxiety, and depression, through the increasing of character strengths, in undergraduate students?
5. How do undergraduate students perceive their mental health?
6. Do undergraduate students have adequate access to support within universities, and do they seek out support?

The overall aim of this research was to design, implement, and evaluate a positive psychology intervention for students to help them manage their mental health throughout transition periods. The sub-aims were:

1. To explore how undergraduate student mental health and character strengths change across a transition period.
2. To use this information to develop a positive psychology intervention for excessive, non-pathological, worry, anxiety, and depression in students.

3. To evaluate the intervention through the perspective of the participants via a qualitative inquiry.

The following literature review was taken to establish a thorough understanding of student anxiety and worry, character strengths and the broaden-and-build theory, and to select the character strengths that would be included in the first study. This chapter will review literature on student mental health, anxiety and worry, character strengths and positive psychology, and the broaden-and-build theory.

1.2 Student mental health

The prevalence of undergraduate student mental health problems is a growing concern (Grubic et al., 2020; Regehr et al., 2013; Storrie et al, 2010). In the UK, the rate of mental health problems in students is 17.3%, with only 5.1% resulting in treatment (Macaskill, 2013). Increases in worry, stress, and anxiety can lead to issues in the students' academic lives (Thurber & Walton, 2012), for example needing extensions on assessment deadlines, or even taking a leave of absence from their courses. Mental health problems are frequently associated with poorer academic performance (Bruffaerts et al., 2018; De Luca et al., 2016). Increases in mental health problems are also associated with personal problems, such as not engaging in social interactions (Hunt & Eisenberg, 2010), which can further impact a student's relationships and academic performance.

Despite the increase in mental health concerns, undergraduate students often do not seek support at their universities. Zivin et al., (2009) examined the student population at an American university and found that over half of the students suffered from at

least one mental health problem, including anxiety, depression, and eating disorders, but fewer than half of those sought treatment during a two-year period despite the mental health problems persisting during the two years (Zivin et al., 2009). One possible explanation for this is the stigma of mental health problems; this is a strong barrier between students and accessing the support they need. Martin (2010) found that most students with mental health problems did not disclose them to their university due to fears of being discriminated against. McLafferty et al., (2017) examined 739 undergraduate students in Northern Ireland and found that over half reported at least one mental health problem, but only 10% of those students had sought help in the year prior to the study. Turner et al., (2007) found that three quarters of students at Coventry University reported experiencing anxious or depressive moods, or personal, nervous, mental, or emotional problems, yet a third of these students did not seek help from the university support services.

While it is important for students to seek support for their mental health, increases in student mental health problems put overwhelming pressure on the university health support teams, from the university doctors to the student support services. Watkins et al., (2012) explored the increase in demand and found that it was due to three reasons:

- 1) An increase in students with mental health problems.
- 2) Students and families depending solely on universities to provide the support for mental health.
- 3) Budgetary cutbacks that lead to less available staff members trained in mental health support.

This increase in demand may not be feasibly handled by smaller university support teams, leading to larger waiting lists for students needing help. One way to address this is to provide more cost-effective, varied support resources within the university, including self-help techniques. This would reduce the pressure on the support services, make sure students are given support sooner, and alleviate the mental health issues that students are facing in order for them to have an enjoyable experience at university.

The research in this thesis developed, delivered, and evaluated a positive psychology intervention to alleviate non-pathological symptoms of worry, anxiety, and depression in undergraduate students at university. It provided students with psychoeducation about their mental health and provided them with new resources, to ensure they were equipped to cope with problems in the future. The intervention was designed to be delivered to groups of up to 10 students at a time, to make sure that many students could receive the support simultaneously, therefore potentially reducing waiting lists for support.

1.3 Definitions of wellbeing and mental health

Student wellbeing and mental health is referred to throughout this research and the prior research discussed, however neither are standardised terms and therefore can be misunderstood or used interchangeably (Simons & Baldwin, 2021). There is debate about the core tenets of 'mental health' (Manwell et al., 2015) with very little consensus overall, but there is agreement that mental health is not just the presence

or absence of mental illness. Within this research, 'mental health' refers to the following:

1. If an individual can self-manage and autonomously function
2. If an individual can healthily cope with changes in emotion and situation
3. If an individual can engage in their surroundings, community, and relationships
4. If an individual can understand and effectively communicate their needs

In this research, 'mental health' is one part of 'wellbeing', which encompasses biopsychosocial health, biomedical health, wellness and welfare (Simons & Baldwin, 2021). Therefore, any negatively impact to mental health will in turn negatively impact wellbeing. In this research, both wellbeing and mental health refer not to simply the lack of mental illness, but the presence of adaptive coping and healthy behaviours. It is vital to note that the definitions of mental health and wellbeing throughout the research discussed in this literature review is not consistent between researchers, and that definitions may differ between cultures and communities (Vaillant, 2012).

1.4 COVID-19

The COVID-19 pandemic began at the time of data collection for Study 2 (Chapter 5). COVID-19 affected many aspects of daily life, finances, employment, and academia, at the time of the research, and therefore was considered to be a large overarching myriad of stressors affecting student mental health throughout this research. Of 1210 Chinese participants during 2020, 54% rated the psychological impact of COVID-19 as moderate to severe (Cullen et al., 2020). Wang et al., (2020) found that of 2031 undergraduate and graduate students, 48.14% showed a moderate-severe level of

depression, 38.48% showed a moderate-severe level of anxiety, and 18.04% had suicidal thoughts. The majority of participants reported that their stress and anxiety levels had increased during the pandemic (71.26%), and only 43.25% indicated that they felt able to cope during the pandemic. Fruehwirth et al., (2021) conducted a longitudinal study on undergraduate first-year students and found that the prevalence of moderate-severe anxiety increased from 18.1% pre-pandemic to 25.3% four months into the pandemic, and moderate-severe depression from 21.5% to 31.7%. The research from Study 2 onwards therefore discusses the results in the context of the pandemic and the subsequent effects it may have had on the research.

1.5 Transition periods

Students undertake several transitional periods during their years at university, including the initial transition period of starting university, and the changes between academic years (El Ansari et al., 2014). In the month prior to university and the first four months from the start date, students undergo an overwhelming series of life changes. In the time prior to university, students are coping with the stress of receiving their A Level results and having their university place confirmed or rejected, the potential stress of needing to contact Clearing phone lines to secure a place at a university, and the emotional experience of preparing to leave their families and friends. Students move away from their family, adjust to a new place of living, live with roommates potentially for the first time, manage their finances, adapt to a new style of learning in lectures and seminars, and manage their first assessments and exams at university (El Ansari et al., 2014). Many students move into their accommodation one

or two weeks before their classes begin, giving them a limited amount of time to adjust to the transition. Life changes often cause anxiety (Cheng et al., 2014), and therefore a series of them, in a short space of time, would lead to student anxiety and worry increasing throughout the transition period (Thurber & Walton, 2012).

Previously existing stressors of the transition period of moving to university have now also grown to incorporate the additional financial strain from increases in tuition fees (Moore et al., 2012), meaning that more students may have to work alongside their studies, giving them limited time to study for their assessments and exams. Students also continue to experience transition periods throughout university, as each new academic year brings them new challenges. The transition period from first to second year often includes moving out of halls of residence and into a student house with chosen roommates. The transition period from first to second year also involves added pressure when it comes to academic work, as for example, the grades achieved in first year are often not counted towards the overall degree. There may also be less support available for second- and third-year students than first-year students, as they are expected to have already adjusted to university (Korhonen et al., 2017).

These continued series of life changes would contribute towards students struggling in their personal and academic lives. Students have to readjust each year to different expectations and pressure in their academic journey while also balancing a social life, new friendships that require time and effort to nurture, and potentially part-time employment which comes with its own challenges. This leads to students being understandably anxious and worried about their capabilities in managing these issues. This can lead to increased numbers of students experiencing difficulties with their

work, or even students leaving university without completing their course (Thurber & Walton, 2012). Support is available in all universities, but increased demand on the support resources over time is not a sustainable approach to helping students, as waiting lists will become longer and students will not get the help they need promptly. Instead, identifying the problem of students being unable to cope with their transition periods, and better equipping them to cope, may reduce the number of students struggling, and therefore reduce the demand on support teams at universities. When looking ahead at the future of student mental health support services, it has been suggested that an integrated system of student support would be most appropriate in preventing maladaptive coping, academic failure, and declines in mental health (Duffy et al., 2019).

Worry is often directed towards future events, specifically the potential negative outcomes of the events, and the life changes students experience during their time at university provides them with ample situations about which to feel anxious or worried (El Ansari et al., 2014). Many students may worry about the potential negative outcomes of the transition to university, such as struggling to make friends or having financial trouble. Research has shown that transition periods in education can cause anxiety (Grills-Taquechel et al., 2010; Parade et al., 2009), but there is little research focused on how to alleviate the worry caused by these transitions, or how to build resilience against worry.

1.6 Anxiety and worry

1.6.1 Definitions

Worry is defined as a state of mental distress due to concern about an upcoming event or perceived threat (American Psychiatric Association, 2013). Anxiety is defined as a state of mental distress, similar to worry, but also involves somatic symptoms of tension as the body physically reacts to a perceived threat (American Psychiatric Association, 2013). It is a similar response to that of fear, in which the body mobilises itself against a perceived threat or danger. However, fear is often a short-lived response, to specific stressors, whereas anxiety is long-lasting and often targets perceived threats that persist over a long period of time.

The definitions for worry and anxiety clearly overlap as states of mental distress caused by reactions to threats. However, they are two separate concepts. Worry is a cognitive mechanism in which the individual dwells on potential problems, obstacles, or negative outcomes of an event. It is specifically directed at an event, rather than a general feeling. A person can worry about many different things, leading to excessive worry or a proclivity to rely on worry as a coping strategy. Anxiety, in comparison, is both a cognitive and physiological response to a perceived threat. While it can be directed at a specific event, anxiety can also be a general feeling experienced by the individual with no real threat present. A person can feel anxious and yet find no reason that they should feel anxious (Milne et al., 2019).

Both anxiety and worry can have various levels of severity, ranging from mild, manageable instances to symptoms so severe that they require diagnoses and treatment. The cognitive side of anxiety, for example, differs between the various anxiety disorders. In cases of obsessive-compulsive disorder (OCD), the cognitive side

of the disorder is characterised by ritualistic behaviour and thoughts, and impulsive, intrusive thoughts.

In comparison, Generalised Anxiety Disorder (GAD) is characterised by excessive worry that is perceived as uncontrollable. GAD was added to the third edition of the DSM but was often used as a residual diagnosis for those that did not fit into the existing anxiety disorders. In the DSM-IV it was changed to be characterised by excessive, uncontrollable worry, and remains that way in the DSM-5 (American Psychiatric Association, 2013). The diagnostic criteria for GAD is that the person has excessive anxiety and worry about a variety of topics for at least six months, and that the person finds it difficult to control the worry. This is accompanied by a variety of other symptoms, such as restlessness, fatigue, muscle tension, and sleep disturbance (American Psychiatric Association, 2013).

Excessive worry is a characterisation of GAD but does not feature in the criteria for other anxiety disorders. The most recent edition of the DSM is the DSM-5, published in 2013 and therefore does not necessarily represent all the current knowledge and theories within anxiety research since then and is by no means an infallible source of information. While some researchers support worry being specifically linked only to GAD, with one team even suggesting that GAD should be renamed to 'generalised worry disorder' prior to the publication of the DSM-5 (Andrews et al., 2010), other researchers argue that worry is an underlying feature of several anxiety disorders (Rabner et al., 2017) and is not necessarily specific to only GAD.

1.6.2 Adaptive worry, excessive worry, and pathological worry

If 'worry' is presented as a spectrum, the lowest level of worry would be 'adaptive worry', the middle would be 'excessive worry', and the highest would be 'pathological worry'. The research within this thesis will be examining non-pathological, excessive worry and anxiety.

Adaptive worry is commonly experienced by many people, and smaller, infrequent amounts of worry can be an adaptive response used for problem solving (Ruscio & Borkovec, 2004). For example, a person worrying about giving a presentation at work would be more likely to take care over their presentation and rehearse it to alleviate the worry, as non-excessive worry facilitates anticipation of future events and subsequent planning for them (Ruscio & Borkovec, 2004). This type of worry is often related to a specific event, such as the presentation, and only causes temporary, mild distress (Barlow, 2004).

However, previous research has demonstrated that people can experience high levels of worry that would not be considered as 'adaptive', as it causes significant distress, but it has not yet reached the level of severity necessary for a diagnosis of pathological worry or GAD (Ruscio, 2002). This indicates that people are capable of high levels of worry that can cause distress and other problems, without qualifying them for a diagnosis. When comparing healthy controls and chronic worriers, researchers found that in healthy controls, worrying was an adaptive response, but that once the worry became the default or automatic response to a situation, it lost all functionality as an adaptive coping strategy (Ottaviani et al, 2014). This indicates that individuals who have begun to default to worry as their automatic response to a problem are no longer

engaging in adaptive levels of worry and may benefit from an intervention teaching them how to expand and utilise their list of coping strategies.

1.7 Models of Anxiety and/or Worry

The models of anxiety and worry have been suggested to fall under two broad groups: cognitive and emotion focused (Kertz et al., 2015). Each of the models are discussed below.

1.7.1 Cognitive avoidance model

In the cognitive avoidance model, worry is proposed to be a verbal-linguistic thought-based activity, in which verbal thoughts are used to inhibit somatic response to perceived future threats (Sibrava & Borkovec, 2006). The cognitive avoidance model focuses on the manifestation of severe, clinical worry in GAD, proposing that the defining feature of GAD is that worry is used to ruminate on all of the potential negative outcomes of every situation in order to avoid feelings of fear and uncertainty. Experiencing fear is vital for people to adapt to fear-inducing situations and precluding the emotional processing of fear may lead to a lower tolerance towards fear-inducing situations (Borkovec, 2006). While worry may alleviate uncomfortable feelings of fear in the short-term, it is a maladaptive coping strategy that prevents people from experiencing necessary emotions (Stapinski et al, 2010). However, as it alleviates the fear response, worry and positive beliefs about worry are negatively reinforced, as worry becomes associated with people feeling less afraid (Behar et al., 2009). Also, as

the predicted negative outcomes often do not occur, worry is negatively reinforced by the relief felt when a negative outcome doesn't happen, giving the individual an illusory sense of control and preparedness (Craske, 1999). However, in the long-term, worry maintains anxiety as it interrupts the response to fear that is necessary to cope with it healthily. By facilitating the avoidance of distress and fear, worry does not allow for the individual to process those emotions and learn to cope with them. Instead, it produces a decreased tolerance to the negative emotions, leading to further anxiety and worry in the future (Stapinski et al., 2010).

Research testing the model has generated generally favourable results. A study examining 78 adolescent participants found increases in negative emotion and anxiety were predicted by cognitive avoidance and rumination (Dickson et al., 2012). This study specifically compared cognitive and behavioural avoidance and found that worry was predicted only by cognitive avoidance. Another study examining 205 workers in France found that cognitive avoidance was impacted by abusive supervision at work, which led to increased rumination and in turn, led to higher levels of negative affect (Bortolon et al., 2019). Researchers examining test-related anxiety in 200 students found that cognitive avoidance predicted procrastination alongside anxiety, resulting in students struggling with their exams (Hosseinzadeh Firouzabad et al., 2018).

Another study into student anxiety, this time focusing on anxiety around statistics and research methods in 103 graduate students, found that students that worried and had high levels of cognitive avoidance were more likely to have anxiety around their ability to perform adequately (Williams, 2015).

The cognitive avoidance model suggests that worry and anxiety create further worry and anxiety, leading to the model functioning as a cycle. This was supported in a longitudinal study of 199 non-clinical students, in which anxious symptoms at Time 1 predicted cognitive avoidance at Time 2, but also cognitive avoidance at Time 1 predicted anxious symptoms at Time 2, suggesting a cyclical relationship between the variables (Grant et al., 2013).

However, studies examining the specific aspect of threat appraisal and worry having a dampening effect on fear responses have generated inconsistent results. This may be due to researchers focusing on the biological aspects of fear instead of psychological measures, such as increased heart rate. A study examining the arousal states of participants through skin conductance and heart rate found that participants experiencing worry actually had higher levels of arousal as indicated by the skin conductance, while there were no significant differences in heart rate (Stapinski et al., 2010). They concluded that this may be due to skin conductance being a more sensitive testing method with which examine arousal rather than measuring cardiovascular changes. The study did however also examine threat associations, finding that worry did inflate threat associations and increased the perceived uncontrollability of the threats, lending support to the cognitive avoidance model. Nevertheless, no long-term support was found for worry begetting further worry; instead, it was suggested that each episode of worry was contained within itself, and that repeated episodes of worry were more likely due to the constant perceiving of threats. However, the study only featured intervals of worrying that lasted 9 minutes, whereas chronic worriers and people with GAD have lengthy periods of time in which they worry. This may mean that studying individuals with GAD or excessive worry over

longer periods of time may be more appropriate in examining the self-perpetuating nature of worry (Stapinski et al., 2010).

Other studies that employed heart rate and skin conductivity as methods of measuring arousal also showed inconsistent results in participants while they worried (Borkovec & Hu, 1990; Hofmann et al., 2005; Vrana & Lang, 1990). Borkovec & Hu (1990) found no difference in cardiovascular reactivity between periods of worry and periods of relaxed or neutral thinking. In comparison, Vrana & Lang (1990) found increased heart rate during periods of worry. Subsequent research used skin conductance level as an indicator of arousal and found participants during periods of worry had heightened arousal (Hofmann et al., 2005).

Similarly inconsistent results were found in other studies in which participants engaged in worrying prior to seeing fear-inducing images. Borkovec & Hu (1990) demonstrated that more suppressed arousal was found in the group seeing fear-inducing images than those that engaged in relaxing thoughts. Peasley-Miklus & Vrana (2000) found that while the heart rate results mirrored that of the earlier study, the facial electromyography indicated that worrying resulted in a greater response to fear. However, the use of facial electromyography to measure emotions may be an oversimplified method (Barrett et al., 2019), as it equates muscular movement to an emotion (e.g. a downturned mouth = angry), which does not fully encompass the spectrum of emotion.

When considering the evidence as a whole, it indicates that parts of the model are more robustly supported than others. The concept of worry as a method of cognitive avoidance is generally supported (Bortolon et al., 2019; Dickson et al., 2012; Grant et

al, 2013; Williams, 2015), while the results measuring the dampening effect of worry on fear responses have shown conflicting results between studies. A possible explanation is that worry does not necessarily suppress the physiological response of anxiety or fear; the studies largely focused on heart rate and skin conductivity, examining the biological aspects of a fear response. It is possible, however, that worry only dampens the cognitive aspects of anxiety and fear, with the biological aspects persisting.

While research examining the cognitive-avoidance model is inconsistent, there is support for certain components of it, such as worry increasing threat association, and worry being negatively reinforced by an illusory sense of control (Borkovec & Hu, 1990; Craske, 1999; Peasley-Miklus & Vrana, 2000; Stapinski et al., 2010; Vrana & Lang, 1990). The model provided a foundation for several contemporary models and these more recent models all contain aspects of the cognitive-avoidance model, most commonly that worry is used as an avoidance tactic.

The cognitive-avoidance model creates a foundation from which behavioural therapies similar to cognitive-behavioural therapy (CBT) can be developed. Therapies derived from the model focus on educating the individual about their emotional responses to situations and worry as a maladaptive coping strategy, then teaching the individual how to monitor and change their behaviour (Behar et al., 2009). This could be through self-monitoring processes that evaluate the emotional responses, relaxation techniques to reduce worrisome thoughts, gradual stimulus control to expose them to fear and show them how to respond adaptively, cognitive restructuring focusing on flexible thinking to help replace worrying as a strategy, and present-moment attention

focusing to avoid them ruminating on potential future negative outcomes (Behar et al., 2009). The cognitive avoidance model proposed concepts that are consistent throughout the more contemporary models. The shared aspects of the models were combined, creating a flow chart of worry, and this informed the development of the intervention.

1.7.2 Contrast avoidance model

The contrast avoidance model (Newman & Llera, 2011) suggests that rather than using worry to avoid a negative state, as proposed in the cognitive avoidance model, worry is used to maintain a negative emotional state to avoid an emotional contrast. A contrast is when the emotion being experienced greatly contrasts to the emotional state just before; for example, feeling angry just after a positive emotional state is a strong emotional contrast. If an individual were feeling happy, and then became upset, the contrast would make them feel worse than if they had been at a neutral or negative mood initially. Therefore, the contrast avoidance model hypothesised that worry is used as a defence mechanism to increase and maintain a negative emotional state, so that any future negative emotions do not produce a strong emotional contrast.

The contrast avoidance model suggests that due to hypersensitivity to emotions, individuals with GAD are more sensitive to emotional contrasts and therefore may believe they benefit from maintaining a negative emotional state as a protective defence against emotional contrasts (Newman & Llera, 2011). If the perceived future threat did subsequently occur, the individual would feel protected against the emotional contrast by already sustaining a negative emotional state through worry,

therefore negatively reinforcing worry as a behaviour. If the perceived future threat did not occur, the individual would feel a strong positive emotional contrast, as the relief would greatly contrast the sustained negative emotional state. The model suggests that either way, worry would be reinforced.

The model authors found support for every aspect of the model (Llera & Newman, 2014). Support was found for worry maintaining a negative emotional state, as there were significant increases in negative emotionality and decreases in positive emotionality for both the GAD and non-anxious control groups that were worrying, whereas the group thinking relaxed thoughts showed no increase in negative emotionality. Support was also found for worry providing a protective barrier against negative emotional contrasts, as participants in the relaxed thoughts and neutral thoughts group experienced greater emotional contrasts in response to the fear stimulus.

When subjected to a humorous stimulus, all participants experienced increases in positive emotionality, and those in the worry group also experienced significant decreases in negative emotion, suggesting that they experienced a strong positive emotional contrast. This suggests that when an individual sustains a negative emotional state, positive stimuli is responded to more strongly due to the contrast in emotions. This may reinforce the use of worrying as it makes the positive emotions feel more intense in comparison.

Finally, support was found for individuals with GAD being more sensitive to emotional contrasts, as the participants with GAD reported finding worry helpful to cope with negative exposures, whereas the non-anxious participants reported that worry made it

harder for them to cope. The reported beliefs about worry suggest that individuals with GAD believe maintaining the negative emotional state helps their ability to cope, whereas non-anxious individuals struggle with a maintained negative emotional state (Llera & Newman, 2014).

Other studies have found support for the various aspects of the contrast avoidance model (Llera & Newman, 2010; Newman & Llera, 2011; Pieper et al., 2007; Zoccola et al., 2011). Worry has been linked to increased sympathetic nervous system arousal (SNS) and decreased parasympathetic nervous system arousal (PNS), indicating a stronger negative emotional state (Pieper et al., 2010). This was also found in two studies in which worry was manipulated and increased SNS and decreased PNS was found (Llera & Newman, 2010; Llera & Newman, 2011). There is also support for worry creating a sustained negative emotional state; Zoccola et al. (2011) found that higher state worry in the evening predicted higher anxiety levels the following morning. Studies into GAD have suggested that individuals do have greater sensitivity towards emotional contrasts, and view worry as a helpful way to deal with this (Newman & Llera, 2011; Pieper et al., 2010). A more recent study investigated the contrast-avoidance model in relation to individuals with GAD and depression, controlling for depression to see if worry still predicted negative emotional states, showing that worry did predict sustained negative emotional states when controlling for depression and was consistent with the contrast-avoidance model's claims (Crouch et al., 2017).

Currently, no research has focused on the development of interventions based on the contrast avoidance model. The research undertaken to develop the model suggests that an intervention derived from the Contrast Avoidance Model could include

educating the individual about worry and emotional contrasts, how they contribute to negative mental health, and how to avoid using them. This would be alongside helping the individual face their negative and positive emotions as they happen, rather than trying to manipulate their own emotional state (Bauer et al., 2020; Behar et al., 2009).

1.7.3 Intolerance of uncertainty model

Intolerance of uncertainty (IU) is a cognitive bias that causes negative responses to ambiguous situations, with the individual perceiving the uncertain situations as threatening and unacceptable and therefore inducing the response of anxiety and worry (Carleton et al., 2007). The model consists of four components (Ladouceur et al., 2000). The first is intolerance of uncertainty itself, which is the initial feeling of distress over uncertain situations. The second is poor problem orientation, in which the individual feels that they are unable to solve problems effectively. The third is cognitive avoidance, in which the individual employs worry to avoid both negative feelings and uncertain situations by picturing potential outcomes. The fourth is flawed beliefs about the usefulness of worry, where the use of worry is negatively reinforced by making the individual feel less distress and discomfort (Ladouceur et al., 2000).

There is empirical support for IU being an intrinsic component of anxiety disorders (Carleton, Norton, & Asmundson, 2007; Carleton, Sharpe, & Asmundson, 2007; Holaway et al., 2006). IU has been proposed as a robust predictor of worry, and those with IU have been found to worry more than those without IU (Buhr & Dugas, 2009), which is a characterisation of GAD but no other anxiety disorders. However, the hypothesis that IU is more prevalent in those with GAD, and no other anxiety

disorders, has been refuted by other studies (Carleton et al., 2012; Gentes & Ruscio, 2011; Holaway et al., 2006). IU has been associated strongly with obsessive-compulsive disorder (OCD) at levels comparable to GAD (Holaway et al., 2006), and a meta-analysis found no support for IU being more strongly associated with GAD than other anxiety disorders (Gentes & Ruscio, 2011). Carleton et al., 2012 found that IU was significantly higher in people with panic disorder, OCD, GAD, social anxiety disorder (SAD), and manic-depressive disorder (MDD) than community and undergraduate samples. It was suggested that earlier research finding significantly stronger associations between IU and GAD compared to other anxiety disorders may be due to the original Intolerance of Uncertainty Scale containing more GAD-specific items, whereas the Intolerance of Uncertainty Short Form (IUS-12) eliminated these specific items (Carleton, et al., 2012). A meta-analysis examining GAD (56 effect sizes) and OCD (29 effect sizes) found that IU was prevalent in both GAD and OCD, but the definitions of IU varied between the two disorders, and when the GAD-specific definition was used, IU was found to be stronger in the GAD groups (Gentes & Ruscio, 2011). This indicates that IU may be shared across several anxiety disorders, but the nature of IU may vary between them.

Treatments derived from the intolerance of uncertainty model (IUM) are unique due to the focus on developing an increased tolerance for uncertain situations (Dugas et al., 2011). An IUM-based cognitive-behavioural therapy focusing on cognitive exposure, problem-solving training, and the re-evaluation of positive beliefs about worry, was created as a treatment for GAD (Dugas et al., 2003). 14 sessions were offered to a total of 52 individuals with GAD, and the results suggested that participants improved significantly more in the symptoms of GAD, including worry, in comparison to a control group that were put on a 'waiting list'. The individuals that

received the CBT sessions also made further improvements across the 2-year follow-up period. Another study examining regular CBT-group therapy discovered reductions in IU, indicating that standard CBT may be useful in targeting the intolerance of uncertainty in GAD (McEvoy & Mahoney, 2011).

1.7.4 Metacognitive model

The Metacognitive Model (MCM; Wells, 1995) explores two levels of worry. Type 1 worry is the initial worry about a situation or feeling, and Type 2 worry is where the individual holds negative appraisals of the Type 1 worry. The model proposes that Type 2 worry is what distinguishes people with excessive or pathological worry, than those engaging in adaptive, mild instances of worry. For example, an individual engaging in Type 1 worry is more commonly found, and consists of worries about the world or life (e.g. 'the street is not well lit and could be dangerous'). Type 2 worries are metacognitive in nature, and consist of beliefs about thinking (e.g. 'worrying will help me cope with danger', 'some thoughts are harmful'). Type 2 worries are more likely to be seen in someone with excessive or pathological worry (Wells & Matthews, 1994).

Type 2 worry is often focused on two areas: seeing the worry as uncontrollable and seeing the worry as dangerous to their psychological functioning. However, the worry is negatively reinforced as it still helps the individual to avoid negative emotions. This causes the individual to engage in more worry despite their negative perception of it, and leads to the sense of a loss of control over their worry. The individual may also engage in ineffective strategies to avoid their worries, such as suppressing their thoughts or avoiding situations, which would have led them to see that their worries

were not harmful and were controllable. This causes them to believe there is further 'evidence' for their Type 2 worries (Cartwright-Hatton & Wells, 1997; Wells, 1995). The MCM suggests that holding negative metacognitions about worry is what sets apart mild and excessive worriers. Negative beliefs about worry do seem to be prevalent in GAD sufferers more than other anxiety disorders, suggesting that excessive worry is associated with Type 2 worry (Ruscio & Borkovec, 2004; Wells, 2005).

Metacognitive Therapy (MCT) often includes targeting Type 2 worries and educating the individual about the ineffective behavioural strategies they use (Wells & King, 2006). MCT also focuses on improving attentional flexibility in order to interrupt repetitive worry-based thinking, for example asking someone 'if you stop worrying about your health, and focus on the task in hand at work, will anything actually change in your life? Would worrying actually stop you from ever getting ill?' (Behar et al., 2009).

MCT was given to eight participants with GAD, offering between three and 12 sessions that lasted between 45-60 minutes (Wells & King, 2006). The participants improved on anxiety and depression symptoms, including Type 1 worries such as worry about health and social worry, and Type 2 worry. However, the MCT content was not detailed, so conclusions about what specifically was useful in the intervention cannot be drawn.

Another study examined MCT against Applied Relaxation (AR), a treatment that teaches systematic relaxation techniques such as breathing patterns and muscle relaxation while they encounter triggers to their anxiety sessions (Wells et al., 2010). 20 GAD outpatients were randomly assigned to the therapy types and received 8-12

one-to-one sessions. At both post-treatment and the six-month and 12-month follow-up assessments, MCT outperformed AR. While both MCT and AR resulted in improvements, MCT showed significantly higher reductions in anxiety symptoms. A randomised controlled trial tested therapies based on the metacognitive model and the intolerance of uncertainty model on 126 outpatients with GAD (van der Heiden et al., 2012). The trial found that both types of therapy produced significant alleviation of GAD-specific symptoms in comparison to a delayed treatment control group, with the therapy based upon the metacognitive model producing better results on most outcome measures. A meta-analysis found that across 16 studies examining MCT (9 of which were randomised controlled trials), MCT significantly reduced anxiety symptoms (including worry and thoughts about worry) at post-treatment for all studies, and results were maintained at any follow-up times (mean follow-up time = 7.88 months; Normann et al., 2014). This meta-analysis indicates that MCT is effective in reducing Type 1 and 2 worry and anxiety in people over a sustained period of time.

The MCM has inconsistent supporting evidence, as well as methodological issues. Both the Anxious Thoughts Inventory (ATI; Wells, 1994) and the Metacognitions Questionnaire (MCQ; Wells, 2005) do not distinguish between Type 1 and 2 worry in the items (Behar et al., 2009). This indicates that Type 1 and 2 worry can be measured in the same items, yet the model is clear to state that they are two separate concepts. This would need further refinement in order to examine the relationship between Type 1 and 2 worry (Behar et al, 2009). A recent review of the MCM and MCT (McEvoy, 2019) discussed that the research is still limited in this area in that it is rarely compared within studies to established therapies such as CBT or eye-movement desensitisation and reprocessing (EMDR).

1.7.5 Emotional dysregulation model

The Emotional Dysregulation Model (EDM; Mennin et al., 2004) consists of four components, and was developed as a model specifically for GAD. Exploratory and confirmatory factor analyses alongside structural equation modelling gave support to a four-factor model (Mennin et al., 2007). First, people with GAD suffer from hyperarousal and therefore experience emotions more intensely. Second, people with GAD have less self-awareness about their emotions than others. Third, people with GAD have more negative beliefs about their own emotions. Fourth, they engage in maladaptive emotional regulation and coping strategies, leaving them potentially in worse emotional states than before.

The first component of the model works on the assumption that people with GAD have a lower threshold for coping with emotions and therefore experience all of them more intensely (Mennin et al., 2005). However, there is limited support for this assumption, with research often detailing that people with GAD experience negative emotions more intensely, but not positive emotions (Salters-Pedneault et al., 2006; Turk et al., 2005). A study that tested an emotional conflict task found that those with GAD performed significantly more poorly than those without GAD, suggesting that they were less able to sustain attention despite a distressing emotional situation (Renna et al., 2018). The second component also has inconsistent support, with some studies finding that people with GAD may struggle to identify and describe their emotions due to the intensity of the emotions they are experiencing (Mennin et al., 2005), and other

studies finding no significant differences in their ability to identify and describe emotions (Decker et al., 2008; Mennin et al., 2007).

The third component, however, is an aspect seen in other models of worry, such as the cognitive-avoidance model (Borkovec et al., 1994), and the metacognitive model (Wells, 1995). The models suggests that individuals with GAD have more negative perceptions of their emotions than people without GAD. When compared to social anxiety disorder, individuals with GAD reported greater fear and negative perceptions of emotion (Turk et al., 2005). Stapinski et al., 2010 found that those with GAD perceived their emotions as uncontrollable, which arguably is a negative perception of emotions.

The fourth component proposes that individuals with GAD struggle to manage their emotions and engage in maladaptive behaviours to manage emotions. Initial research found that individuals with GAD had much greater difficulty returning to a euthymic state following a negative mood than control subjects without GAD, suggesting poor management of emotions (Mennin et al., 2005). More recent findings suggest that emotional dysregulation contributes specifically to worry and emotional symptoms of GAD (Salguero et al., 2019). However, when controlling for metacognitions, for example the belief that worry is uncontrollable, emotional dysregulation was no longer associated with worry. This suggests that emotional dysregulation may be responsible for the maladaptive use of worry, but only when paired with flawed metacognitions about worry.

The emotional dysregulation model later became the foundation for emotional regulation therapy (ERT; Fresco et al., 2013). The first stage of the therapy involves

breaking the reactive cycle typical of someone with GAD and educating them on their emotional responses. The second stage of the therapy involves teaching the individual about emotional regulation and how to engage healthily with emotions. The third stage of the therapy brings exposure tasks into play so the individual can practice emotional regulation and so the practitioner can encourage them to be proactive about emotional regulation. The third stage tends to be longer than the others, in order to encourage participants to fully engage with the tasks. The fourth stage of therapy focuses on consolidating the knowledge given to the individual and encouraging them to practice it in everyday life, while also thinking of how to practice it in the future (Behar et al., 2009; Fresco et al., 2013).

One study provided 20 weekly sessions of the therapy outlined above (between 60-90 minutes each) to 21 PhD students with GAD (Mennin et al., 2015). Half of the sessions focused on educating the participants about emotional dysregulation and teaching them new regulation strategies, and half of the sessions focused on exposing the participants to situations in which they could use their new regulation strategies. The results indicated significant improvements in GAD symptoms, worry, impairment, quality of life, and acceptance. Another study randomly assigned a larger sample (n=53) of participants with GAD to ERT or a modified attention control (MAC) group (Mennin et al., 2018). ERT was associated with significant clinical improvements in comparison to MAC on GAD symptoms, worry, rumination, functional impairment, and quality of life, along with overall emotional regulation.

The extant literature indicated that while the EDM itself has limited support, ERT appears to be supported through the few studies behind it, and emotional regulation

as a concept has been associated with GAD. However, more research is necessary to thoroughly examine the four components of the EDM, as well as the four phases of ERT.

1.7.6 Acceptance-based model

The acceptance-based model of worry/GAD (ABM) overlaps significantly with the cognitive-avoidance model, in that it focuses on the tendency to engage in worry to avoid negative emotions. The model consists of four components. The individual will first experience a negative emotion (internal experiences), and dislike the feeling, worrying (a problematic relationship with internal experiences). The individual will then engage in worry to avoid the negative emotions (experiential avoidance), which may lead to the individual neglecting themselves, prioritising the avoidance of negative feelings. Using worry as an avoidance tactic reduces distress from negative emotions in the short-term, causing worry to become negatively reinforced. However, the experiential avoidance is then generalised to external experiences as well as internal feelings, such as the individual avoiding social engagements or conversations with friends (Behar et al., 2009). This behavioural restriction is the fourth component of the model, and may cause more distress to the individual, causing the cycle to begin again.

Treatment derived from the ABM (acceptance-based behavioural therapy; ABBT) encourages participants to develop a healthier relationship with their emotions, teaching them to accept their negative emotions rather than avoid them. Much of ABBT is divided between psychoeducation and mindfulness activities, encouraging the individual to focus on the present moment than worry about the future or past

(Roemer & Orsillo, 2007; Roemer & Orsillo, 2008). The mindfulness techniques help participants to accept that experiences come and go, and negative emotions will not be present forever, meaning that they are not something to judge or resist (Hayes-Skelton et al., 2013). There is evidence for changes in acceptance predicting positive changes in worry (Hayes et al., 2010). The therapy falls under the 'behavioural therapy' category and is consistent with CBT in many ways; however, while CBT focuses on changing maladaptive thought content, ABBT focuses more on the emotional reaction to any negative thought, rather than the thought content itself.

An open trial of ABBT was 16 individuals with GAD, providing them with a total of 16 sessions of ABBT (Orsillo & Roemer, 2007). The first four sessions lasted 90 minutes, the rest lasting 60 minutes, with the last two sessions switching from weekly to every other week to taper it out. The first four sessions focused on psychoeducation, using presentations and demonstrations, whereas later sessions focused on the development of mindfulness and acceptance. Results showed significant improvements in GAD symptoms and worry. A second study by Orsillo & Roemer (2008) developed a randomised controlled trial for 15 people with GAD receiving ABBT immediately and 16 receiving delayed treatment. After treatment 75% of participants that received ABBT showed significant improvements in worry and GAD severity, compared to 8% in the wait-list group. There were also significant changes in the engagement of experiential avoidance, suggesting the therapy was successful in improving the main focus of the ABM.

A study comparing acceptance-based psychological exercises with relaxation techniques and attention exercises found that both the acceptance-based and

attention-based groups showed significant decreases in intrusive thoughts and worry (Ainsworth et al., 2017) in comparison to the relaxation group. However, while there was an adequate sample size (n=77), the tasks were only 10 minutes each, and were not part of an overall treatment scheme, suggesting that the results may have only been applicable to short-term exercises.

A randomised controlled trial examined ABBT against applied relaxation (AR) for 81 participants diagnosed with GAD (Hayes-Skelton et al., 2013). Both ABBT and AR led to significant improvements in GAD severity and depression across the treatment and at follow-up. However, contrary to hypotheses and previous research, ABBT did not perform significantly better than AR. While this suggests that AR is as effective as ABBT, it shows that both had a very positive impact on the participants.

1.7.7 Comparing the models

Each of the models present a different perspective of worry and anxiety, and all of them have at least some research supporting each model. This indicates that while some are stronger than others, or have more significant research supporting them, each model has an argument for being 'a model of anxiety/worry'. It is therefore likely that each model covers an aspect of worry and anxiety, as they are complex concepts. However, some aspects of each model overlaps with other models, listed below in Table 1.

Table 1*Overlapping aspects of the models*

| Aspect of the model | Cognitive-Avoidance | Contrast Avoidance | Intolerance of Uncertainty | Emotional Dysregulation | Metacognitive | Acceptance-Based |
|--|---------------------|--------------------|----------------------------|-------------------------|---------------|------------------|
| Avoidance of negative emotions | X | X | X | X | X | X |
| Worry perceived as uncontrollable | X | | X | X | X | |
| Hypersensitivity to emotions and stimuli | X | X | X | X | | |
| Using CBT as a basis for therapeutic technique developed | X | X | X | X | X | X |
| Therapy focusing on psychoeducation about worry | X | X | X | X | X | X |
| Worry negatively reinforced by the avoidance of distress | X | X | X | X | X | X |

It is important to bear in mind that the models are often examining a pathological severity of worry and anxiety within GAD, and therefore some aspects of it may not be applicable to a lower level of severity of worry or anxiety. However, the models often begin with low levels of worry, or a single instance, and theorise how that may become excessive or pathological, and therefore are considered to be appropriate for the current research.

Clearly, there is significant overlap between all the models, each identifying various potential mechanisms behind worry. A study examining both the Intolerance of Uncertainty Model and the Contrast Avoidance Model found that both models may potentially be linked (Schadegg, 2019). The study introduced the concept of 'fear of change', which was proposed to be the link between the two models. Those that were intolerant of uncertainty and engaged in contrast avoidance were significantly likely to fear change in their lives. This was, however, using a new scale to measure the introduced concept of 'fear of change', and the scale has not been tested in further studies to establish reliability, but it demonstrates the potential of links between models and the necessity of considering multiple models at once throughout worry-based research.

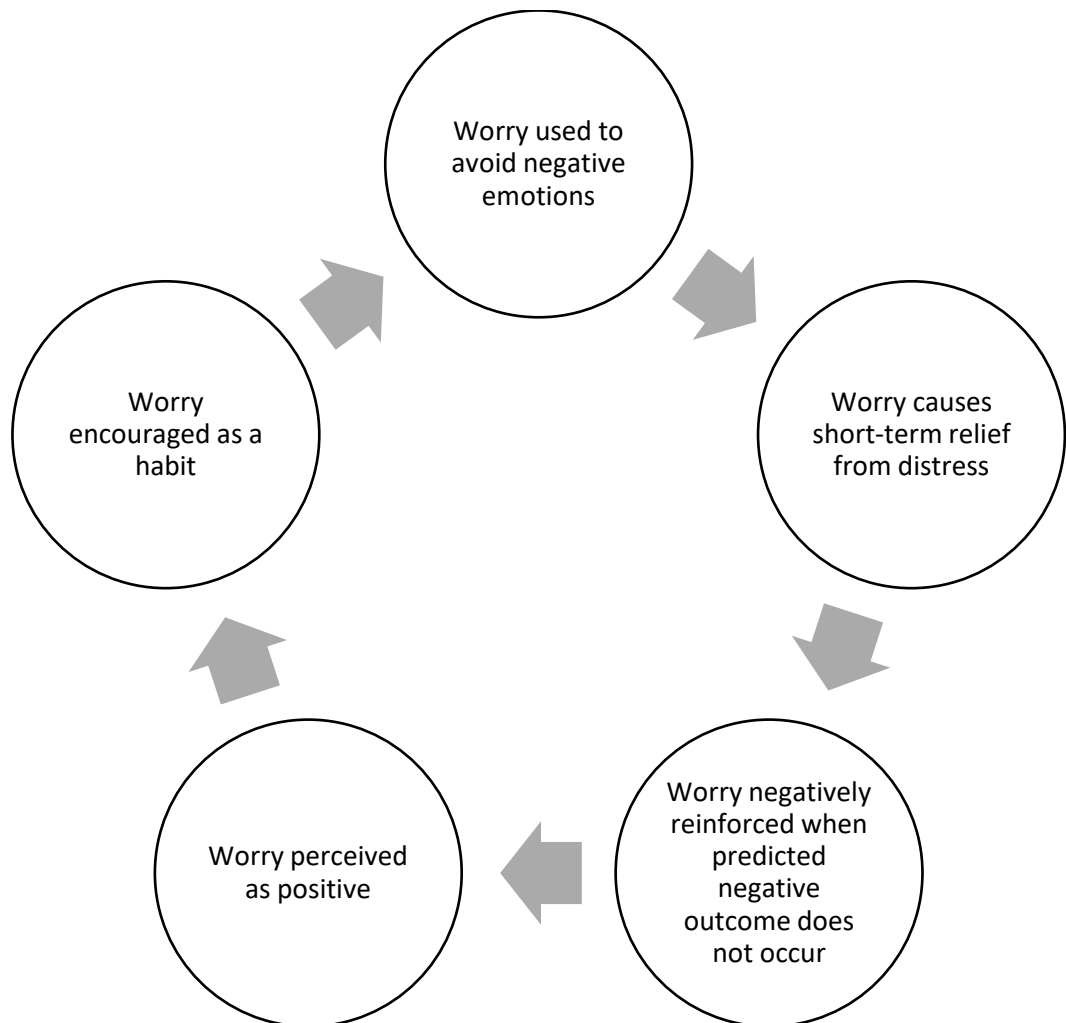
When examining worry and anxiety within this research, rather than one particular model providing the theoretical underpinning to worry, a list of common aspects will be selected that the models share to establish a foundation for developing the intervention. The models each have research that supports various aspects, suggesting that there is an argument for worry encompassing several different mechanisms depending on the person and situation. The common themes that will be addressed are:

- Employing worry to avoid negative emotions
- Employing worry to feel prepared for future events and avoid uncertainty
- Worry being reinforced and therefore used more frequently in the future
- Worry being perceived as uncontrollable
- Worry being perceived as a positive thing even in excessive amounts
- Worry being employed even when inappropriate to the situation.

This proposed list of common themes largely uses a foundation of the Cognitive Avoidance Model, with aspects of the other models woven into it. While this isn't proposed to be a separate model or a new concept, it does consider the potential multi-faceted nature of worry, based on the support given to the various available models. The relationship between these aspects is seen as cyclical, as depicted in Figure 1. This reflects many of the models discussed above, as they propose that worry is negatively reinforced, and therefore results in further worry.

Figure 1

Cycle depicting the understanding of worry used within the current research



1.8 Established treatment of anxiety and worry

There are several available treatments that have been found to be effective in combating excessive anxiety and worry, from medication such as selective serotonin reuptake inhibitors (SSRIs) to therapies such as cognitive behavioural therapy (CBT) and acceptance-commitment therapy (ACT).

1.8.1 Cognitive-behavioural therapy (CBT)

Cognitive-behavioural therapy focuses on challenging and modifying cognitive patterns that are contributing to psychological distress, improving emotional regulation. It is usually done face-to-face, with a psychologist or counsellor that can help the individual create effective strategies to address cognitive distortions and correct them. This can also be done through online CBT, but this has varying levels of support from researchers.

A study on 81 individuals with severe health anxiety examined improvement in their mental health during an internet-based CBT program. The study found that the group receiving online CBT improved more than the control group, with 13% exhibiting 'sudden gains', which predicted superior levels of improvement (Hedman et al., 2014). A review of online interventions for adolescent student depression and anxiety found that in all but one trial, the online intervention predicted significant improvement in comparison to the control (O'Dea et al., 2015). A systematic review comparing the effectiveness of CBT versus online-CBT found that they had equivalent outcomes (Andersson et al., 2014). However, this review was based on 13 studies that were focused on various mental health problems, meaning the results were based on inadequate amounts of evidence.

1.8.2 Acceptance-commitment therapy (ACT)

Acceptance-commitment therapy is a form of counselling that focuses on addressing the issues in a client's life and learning to manage emotional reactions to them. While

CBT focuses on better controlling thoughts and actions, ACT focuses on noticing, accepting and embracing thoughts and actions, especially unwanted ones, to make sure individuals don't avoid their negative experiences.

A study examining an ACT intervention on 79 adolescent students found significant decreases in anxiety and depression (Levin et al., 2016). Significant reductions in anxiety levels were also found in a study on three individuals undertaking ACT (Eifert et al., 2009), however this study was limited by a very small sample size, and a lack of statistical analysis.

In comparison to CBT, ACT is reported to perform equally as well; however, the research behind ACT is more limited than the research behind CBT, and studies comparing the effectiveness of the two are few. Despite this, in the existing studies comparing the effectiveness, there are consistent results supporting ACT. In a study comparing CBT and ACT in a sample of 87 participants, it was found that CBT outperformed ACT for participants with baseline measures of moderate anxiety, whereas ACT outperformed CBT for participants with comorbid mood disorders (Wolitzky-Taylor et al., 2012). Another study compared the two interventions in a sample of 128 individuals with anxiety disorders randomly assigned to either CBT or ACT (Arch et al., 2012). The results found that both therapies performed similarly across the outcome measures, but at follow-up, ACT predicted higher scores of the Acceptance and Action Questionnaire, and CBT predicted higher scores of the Quality of Life Index, suggesting that the two therapies created different effects in the long-term. However, both therapies had a positive impact on the participants.

1.8.3 Availability of treatments

While the methods outlined above have been found to be effective treatments, a general practitioner or psychiatrist must prescribe any medication and make referrals to the relevant therapy service in order for an individual to receive help from the NHS. For this to happen, the severity of the anxiety must be high enough to warrant the referrals. The NHS-available therapies also come with long waiting lists, sometimes more than 2 years due to budget cuts to the NHS and large amounts of referrals being made. Outside of the NHS, therapies such as CBT and ACT are available with short or no waiting times, and they do not require a diagnosis of an anxiety disorder. However, these can be costly as they are through private practices or self-employed counsellors, and therefore cannot be accessed by everyone.

Students suffering from excessive worry and anxiety may not be able to access NHS therapies and medication due to not qualifying for an anxiety disorder and may not be able to afford the cost of private therapy. Therefore, alternative therapies may be sought out, such as self-help techniques, apps that promote mindfulness and meditation (such as CalmHarm, Headspace, etc), and the mental health services at universities. As student mental health problems are increasing (Hughes & Spanner, 2019; Macaskill, 2013), but the resources students can access are limited and stretched thin (Watkins et al., 2012), alternative interventions need to be developed and implemented into student services to accommodate the increase in demand.

1.9 Positive psychology and the broaden-and-build theory

1.9.1 Positive psychology interventions

The existing treatments for anxiety and worry are built around the 'disease model' of mental health, where the treatments focus on reducing the negative impact of the condition, such as managing symptoms with therapy and medication (Chavez et al., 2019). Positive psychology, however, is an area of psychology that focuses on encouraging positive well-being by promoting positive emotions and experiences to encourage resilience against negative emotions and experiences (Csikszentmihalyi & Seligman, 2000). The interventions developed by positive psychologists can therefore be used alongside existing interventions (such as cognitive-behavioural therapy) to help encourage an increase in life satisfaction alongside the decrease in mental illness symptoms.

Positive psychology posits the concept of 'character strengths', a series of 24 personal assets measured on the Values in Action Inventory Scale (VIA-IS; Linley et al., 2007), examples being 'hope', 'humor', and 'zest'. Research into character strengths have shown that some strengths can be cultivated through different activities, and individuals can be taught to use them more effectively, improving their subjective well-being (Macaskill & Denovan, 2013). This is done through 'positive psychology interventions' (PPIs), focused on encouraging positive well-being through the increased use of character strengths, and educating the participants about their mental health, therefore alleviating anxiety and worry. A meta-analysis of PPIs (Bolier et al., 2013) found they were useful at decreasing depressive symptoms and improving psychological well-being, but that the quality of intervention studies varied greatly and that the effect sizes were small across the studies. This may reflect the wide variety of PPI designs, indicating that some are more effective than others. This was taken into account when designing the intervention for Study 2.

1.9.2 Broaden-and-build theory

The theoretical underpinning for PPIs and their effect on anxiety and worry can be explained through the broaden-and-build theory of positive emotions (Fredrickson, 2001). The theory proposes that negative emotions narrow a person's attention and cognitive abilities, while positive emotions broaden a person's attention and cognitive abilities.

Negative emotions have a narrowing effect on an individual's attention, due to the focus being on the cause of the negative emotions (e.g. a stressor causing anxiety or worry). For example, someone experiencing stress about an argument with a friend would find it difficult to focus on something other than the argument. Each person has a variety of personal psychological resources that they have developed over their life, including coping strategies to help deal with problems. Someone experiencing narrowed attention may overlook several available strategies because they are so focused on their negative feelings. This leads to limitations in their ability to cope, which subsequently leads to further negative emotions. This can continue in a downward spiral, and if maintained, can lead to long-term effects and problematic health issues such as depression and self-isolation (Fredrickson, 2001).

In comparison, positive emotions contribute to the opposite, an upward spiral. The initial positive emotions begin to broaden the attention of the individual, allowing them to take in more information around them. The broadened focus and positive feelings about the situation allow the individual to access more of their psychological resources, as their attention isn't sharply focused on one specific stressor. The broadened attention can also lead to the individual developing and building new

psychological resources as they are more likely to engage in their surroundings, for example asking a friend for advice. Upward spirals (Fredrickson & Joiner, 2002) can also create motivation to continue behaviours that lead to positive experiences. Upward spirals have been found to make a person more likely to engage in health-promoting behaviours due to their experiencing positive affect (Van Cappellen et al., 2018). Much like success breeding success, after using a new psychological resource, the individual would then feel positive about their own capabilities and is more likely to continue to draw upon their psychological resources in the future. If maintained, upward spirals can lead to contentment, happiness, and a state of psychological flourishing (Fredrickson, 2001).

1.9.3 Broaden-and-build as a foundation for interventions

The broaden-and-build theory therefore provides a theoretical explanation as to how PPIs can help alleviate anxiety and worry in two ways. Firstly, character strengths being used more frequently and effectively leads to positive emotions, providing the basis for upward spirals that lead to happiness and flourishing (Fredrickson, 2004). For example, an individual participating in a PPI based on the character strength 'gratitude' would engage in activities to help them experience and savour the feeling of gratitude more frequently. This would lead to feeling more positive about their various experiences, which would begin the upward spirals leading them to utilise psychological resources or build new psychological resources for the future. If the spiral is maintained, resilience against anxiety symptoms and worry can develop (Reschly et al., 2008).

Secondly, a PPI may also teach individuals new psychological resources, helping them build up their ability to cope with negative experiences in the future. This resilience to negative experiences can be increased through the PPIs, as the individual would be able to access more varied resources to help them cope with situations. For example, if they are feeling sad about a negative experience, they may choose positive reappraisal that they were taught in a gratitude-based PPI to look at the situation from a different perspective and find the 'silver lining' of the situation. The techniques used in PPIs are therefore useful for building the psychological resources of the individual through the upward spirals of the broaden-and-build theory, therefore increasing the resilience of that individual (Reschly et al., 2008).

During the transition periods at university, anxiety and worry will increase due to the increase in stressors, such as moving to a new house, or starting new modules. The second study in this thesis is the development and implementation of a PPI-based intervention to second-year students in preparation for their next transition period (from second to third year). The intervention will aim to both reduce the feelings of anxiety and worry and help them to build new psychological resources for them to use in the future. This will be done with the upcoming transition period in mind, helping the participants to develop strategies to cope with the future stressors through the activities they will undertake. A follow-up survey will be taken after their transition period to ascertain their anxiety and worry levels, and to see how they felt they coped during the transition period.

Several studies have shown how the broaden-and-build theory can explain positive emotions as generators of positive behaviours (Fitzpatrick & Stalikas, 2008). In a study examining character strengths in 214 first-year UK undergraduate students, it was

found that educating students about their top three character strengths immediately generated positive emotions and broadened the resources available to them (Macaskill & Denovan, 2013). A study on 134 American first-year undergraduate students examined how positive emotions affected a new relationship, specifically a relationship with a new roommate. The results suggested that the positive emotions broadened the ability to have a complex understanding of people (Vaughn & Fredrickson, 2006). The positive emotions facilitated a difficult transitional period for university students meeting their new roommates by broadening their ability to disclose and receive complex personal information. Another study on 196 Texas-based postdocs found that those with more positive emotions used more adaptive coping strategies and that resilience moderated the relationship between stress and anxiety (Gloria & Steinhardt, 2016), supporting the broaden-and-build theory that positive emotions lead to increased personal resources and increased resilience.

Despite the empirical support for the broaden-and-build theory, there are issues that must be addressed. 'Positive emotion' is often presented as one end of a binary system of emotion, with 'negative' emotion at the other end. Initial criticism of the broaden-and-build theory, and of positive psychology in general, was that so-called 'negative' emotions were appropriate emotions in certain situations (Lazarus, 2003). For example, sadness or anger are considered 'negative' emotions, but it can be considered 'positive' to use them in certain situations, for example, during a grieving period, or after an argument with a friend. The lack of clarity on 'positive' and 'negative' emotions needs to be acknowledged, and any research into emotions categorised as 'positive' must bear in mind that 'negative' emotions are often useful in different situations. In a study looking at psychological flourishing (Fredrickson &

Losada, 2005), it was found that a ratio of positive to negative emotion should be 2.9 to 1 to encourage 'flourishing'. However, the authors did note that too much 'positive' emotion (11.6 to 1) can be harmful, as experiencing negative emotion is vital to process and cope with difficult experiences. The research in this thesis will not label negative emotions (e.g. sadness, anger, guilt) as emotions to avoid, but instead focus on how positive emotions (e.g. happiness, excitement) can build psychological resources and resilience to help an individual cope during a transition period, a time when maladaptive levels of negative emotions may be frequent.

In examining the relationships between positive emotions and anxiety/worry, it is important to note the direction of the relationships. While the broaden-and-build theory suggests that positive emotions are the beginning of the spiral (Fredrickson, 2001), it also notes that the behavioural changes and building of psychological resources also generate further positive emotions, suggesting a two-way relationship (Reschly et al., 2008). It is important to focus on maintaining the spiral through the building of psychological resources, not just through the encouragement of positive emotions. The development of the intervention will therefore have a dual focus; to generative positive emotion in participants about their experiences, and to provide them with valuable psychological resources to cope with negative experiences in the future.

1.10 Signature strengths

PPIs involving character strengths often follow one of two designs; focusing either on a specific strength to boost in all participants or focusing on each participant's signature strengths. Signature strengths are the top strengths in each person and are specific to

the individual participant. A meta-analysis of 29 signature strength PPIs (Schutte & Malouff, 2019) found that using signature strengths increased life satisfaction, happiness, and positive affect, alongside decreasing symptoms of depression. Previous research has produced conflicting conclusions when examining signature strength PPIs versus specific strengths PPIs; while some find that signature strengths are superior PPI designs (Littman-Ovadia et al., 2017), others find them to be equal in effect to specific strength PPIs (Proyer et al., 2015). Due to there being 24 character strengths, there is a huge amount of complexity in comparing any interventions directly; each study utilising signature strengths will naturally be different due to the individual nature of each participant. Ultimately, the signature strength design for PPIs was not utilised in this research as the PPI would have to be personalised to each participant. The aim of the research is to develop and evaluate an intervention that could be applied to larger groups of individuals, focusing on strengths that all students could find useful, making the design more general and less personalised.

1.11 Hope, gratitude, curiosity, and optimism

While 24 character strengths are identified in the Values in Action Inventory (the VIA-IS; Linley et al., 2007), plus extra character strengths such as ‘optimism’ identified outside the VIA-IS, there is a significant lack of research into many of the strengths, for example, zest and humour (Park & Peterson, 2009). The character strengths that will be included in this thesis have empirical support for their effects on mental health and well-being. The strengths selected for this thesis had to fit the following criteria:

1. The selected strengths must be clearly defined, with psychometric scales that have been tested for reliability and validity.

2. The selected strengths must lend themselves to clear 'intervention techniques', whether that is a full PPI based on the strength, or activities that can be included in a PPI alongside other activities.
3. The selected strengths must have prior empirical support for their effects on well-being and mental health.

The final strengths selected were hope, gratitude, optimism, and curiosity. Other strengths were considered, such as forgiveness, kindness, and self-regulation.

Ultimately, the four strengths were selected as the most appropriate and interesting in relation to transition periods for students.

1.11.1 Hope

Hope is a vital strength to have when suffering from anxiety or worry. Hope is defined as having both the belief that goals are attainable and having the motivation to take the necessary steps to achieve the goals (known as agency and pathways respectively; Snyder, 2000). State (i.e. situational) hope has been found to be more flexible and therefore able to be manipulated to change through PPIs, whereas trait (i.e. dispositional) hope has been found to be more stable over time. Students undergoing the transition period of starting university may utilise state hope to achieve the new goals they have to face, such as keeping up with classwork, making new friends, and settling into their new housing. PPIs that focus on increasing students' state hope may therefore improve well-being by encouraging them to believe in their abilities to reach goals and provide the motivation to do so.

A review of hope used in preventative interventions (Kwon et al., 2015) examined different hope-based interventions, including one that examined hope levels of 22 university students during periods of high stress (Rolo & Gould, 2007). The hope intervention bolstered state hope in the students, suggesting that individuals experiencing high stress levels could benefit from a hope-related PPI. However, the study merely showed that hope could be increased in the students, not the effect of hope on the students' mental well-being. A study of 32 participants utilised an 8-week hope-based intervention and found that anxiety and depression symptoms were reduced post-intervention (Cheavens et al., 2006), alongside higher levels of self-esteem. In a study on 98 psychotherapy clients, higher agency scores were predictors of reduced symptoms of mental health problems during early treatment, and higher pathways scores were predictors of increased subjective well-being later in the treatment process (Irving et al., 2004). Hope agency and pathways were found to be bolstered after a 90-minute session delivered to 96 university students (Feldman & Dreher, 2012). While this effect was not sustained at the one-month follow-up mark, this was likely due to the one-session intervention, and an intervention with multiple sessions may produce results that last longer. Another study found that increased hope was sustained over time, and that hope was associated with higher grades and goal pursuit in 83 students (Feldman et al., 2015).

A study examined the effects of a hope-based PPI on 21 adults with a diagnosis of multiple sclerosis. The results found that through building upward spirals, hope was increased, and anxiety and stress were decreased (Anderson et al., 2017), but the sample size was small and uncontrolled, and the data was only collected at baseline and post-intervention, so there was no data on whether the effects persisted over

time. Lloyd & Hasting (2009) designed a hope-based PPI that was given to 196 parents to improve resilience to mental health symptoms and stress. The PPI resulted in decreased anxious and depressive symptoms. However, trait hope was measured rather than state hope, suggesting that they were trying to manipulate dispositional hope which is much less prone to change (Snyder, 2000).

1.11.2 Gratitude

Gratitude is another character strength that has been found to reduce mental health symptoms and has been associated with buffering effects against negative experiences (Wood et al., 2010). Gratitude has been conceptualised as having two aspects; gratitude towards others for help offered, and gratitude towards one's life experiences in general. This may be towards positive events, savouring the positive emotions, but it also may be towards negative events, as grateful people may be able to find a positive experience to arise from a negative one. For example, a student undertaking the stressful transition period may be grateful that despite the stress, they are beginning independent life away from their family.

Using PPIs to create a habitual feeling of gratitude may increase resilience against anxiety (Wood et al., 2010), focusing on both gratitude towards others and gratitude towards life experiences to induce positive emotions. Gratitude-based PPIs often use gratitude journals, a task in which participants record things they are thankful for each day. Gratitude diaries have been found to have a positive effect on depression, anxiety, and stress, as well as the ability to maintain a good sleeping pattern, as shown in a study on 109 Australian adults (Southwell & Gould, 2017), with the effects for reductions in anxiety persisting over a follow-up period, suggesting that gratitude can

improve anxiety over a lengthy period of time. The control group for this study (Southwell & Gould, 2017) was put on a 'waiting list', but was given information about gratitude diaries, which could have led to some people in the control group pre-emptively researching gratitude diaries and potentially keeping one themselves, affecting their results. In the current research, the information of the intervention was kept generic or vague prior to the sessions to prevent this issue.

A study examining telephone-delivered PPIs used gratitude as the foundation for a short telephone-based PPI that individuals could complete during waiting times for CBT and other interventions (Kerr et al., 2015). 48 participants received instructions over the phone and then completed a two-week diary for either gratitude or kindness. The results suggested that gratitude could be cultivated over the two weeks, whereas kindness could not. However, both participants in the gratitude group and the kindness group improved in scores of anxiety over the two weeks, suggesting that the intervention would be useful for helping people with anxiety.

1.11.3 Optimism

Optimism is a character strength that is crucial for any person with high worry or anxiety, as optimists expect good things to happen more frequently than bad things (Park et al., 2004). A student struggling with anxiety during a transition period would be in a better position to continue through the difficult time if they had optimism. Similarly to hope, optimism allows an individual to think positively about the future. A meta-analysis of 29 studies (a total of 3319 participants across the studies) determined that it is possible to manipulate optimism through intervention studies, and that the effect was significantly higher if the intervention utilised the Best Possible Self

technique, and if the intervention was delivered in person (Malouff & Schutte, 2017). This technique involves participants imagining their best possible self and detailing the necessary steps to become that best possible self. The meta-analysis also found that fewer sessions led to higher levels of change; however, the authors noted that the shorter interventions tended to employ the Best Possible Self technique, so the result may be due to that rather than the number of sessions. In a study of 54 adults, the Best Possible Self technique was superior in comparison to participants imagining their daily activities (Meevissen et al., 2011). Another technique, called the Count Your Blessings technique, has been found to be useful in reducing pessimism. In a study where 77 adults wrote down positive things that awaited them the following day, pessimism decreased (Littman-Ovadia & Nir, 2014). However, optimism did not increase through this technique, indicating that while it is effective in reducing pessimism, it may not be successful in bolstering optimism for the future.

Dispositional optimism has been associated with greater well-being than pessimism (Scheier et al., 2001). A study examining the effects of an optimism intervention on 466 pessimistic adults found that depressive symptoms alleviated post-test (Sergeant & Mongrain, 2014). This effect persisted at one and two month follow-up periods. The intervention was delivered online, which led to the collection of a larger sample size due to the ease in which participants could access the material. However, the follow-up periods were short and therefore further research would be needed to establish long-term effects.

Optimism and gratitude were used together in a PPI to encourage positive thought patterns in a study of 537 Israeli students (Shoshani & Steinmetz, 2014). The results found decreased anxiety and stress over a long period of time, with the follow-up

surveys being administered at 6-10 month intervals over two years. A quasi-experimental design was used to match two schools based on number of students and socio-demographic variables to mitigate the limitations of using a separate school as a control group. Another study using optimism, kindness, and gratitude in a PPI produced significant improvement in anxiety and depression for the 29 American participants (Taylor et al., 2017). The effects for anxiety and depression persisted over the two follow-up periods of three and six months. These studies indicate that using optimism alongside other strengths may be a successful approach to improving anxiety and increasing life satisfaction, but there is the question of which strengths produce a stronger effect. In a study comparing an optimism intervention and a gratitude intervention on 82 participants, the optimism intervention was significantly associated with improvements in life satisfaction, whereas the gratitude intervention was not (Peters et al., 2013). The measures were taken between sessions, to identify which sessions caused the most significant improvements. However, life satisfaction was the only outcome measure for the intervention, which suggests that the study was limited in the data gathered.

1.11.4 Curiosity

Curiosity has less empirical evidence than hope, gratitude, and optimism; however, it has a psychometrically sound scale (The Curiosity and Exploration Inventory II; Kashdan et al., 2009) and can be easily integrated into a PPI. It is relevant to student anxiety and/or worry, as curiosity encourages individuals to pursue new experiences (Kashdan et al., 2004). Therefore, curiosity may be a key factor in maintaining a positive outlook on the new, challenging situations that students face during their

transition period when starting university. A study examining relationships between character strengths and mental health in 214 first-year undergraduate students found that curiosity was significantly associated with mental health, positive affect and self-esteem (Macaskill & Denovan, 2014). Another study delivered an intervention to 178 adults that focused on strengths associated with life satisfaction and found that the group including curiosity showed higher life satisfaction than the control group (Proyer et al., 2013). A study of 226 undergraduates determined that those with more curiosity were more likely to fully engage with a gratitude intervention and were more motivated to make life changes that in turn led to behavioural changes (Kaczmarek et al., 2013). Much more research is needed on the positive psychology approach to curiosity, and the effects of curiosity on mental health, but previous studies establish a precedent for using curiosity in a positive psychology study.

1.12 The current research

The research in this thesis initially focused on the strengths discussed, hope, gratitude, optimism, and curiosity, by examining how they change across a transition period. This provided new information about the fluctuations in character strengths across time. The first study consisted of an online Qualtrics survey delivered to first-year students during August-November 2018 as they transitioned to university, to ascertain their character strengths, resilience, anxiety, and worry. A follow-up survey was delivered to first-year students in mid-2019, post-transition period, to see how these variables may have altered after the students settled into their university life. The follow-up was held after their exam period, as anxiety and worry will naturally be elevated then. The results from this study informed the second study.

The second study focused on the development of a positive psychology intervention. This was delivered to four groups of second-year students during April-July 2020 in preparation for the next transition period at the beginning of their third academic year. The intervention consisted of exercises established within prior intervention studies, tailored specifically to student participants, with each exercise relating to their lives. The exercises were accompanied by psychoeducation about worry, teaching the participants about maladaptive worry and how to stop relying on it as a coping strategy.

The intervention was delivered to the experimental group over four weeks, with one session per week plus tasks to complete independently between sessions, while a control group was on a 'waiting list'. Baseline measurements of strengths, anxiety, and worry were taken, then post-test measurements were taken directly after the last session. Two follow-up surveys were completed at one and three months respectively, in order to see how the effects changed over time. It was delivered to groups of students, in a short timeframe, with an emphasis on exercises they could continue to use after the sessions end.

The control group received the intervention after initial data collection is finished, to ensure fairness to the participants, and to examine the differences in effectiveness between the group receiving the PPI several months prior to a transition period, and a group receiving the PPI just prior to a transition period.

The third study was a qualitative study evaluating the intervention. Interviews were held with participants of both groups during the autumn of 2020. The interviews were structured to ascertain the perspective of the participant and their opinions on the

intervention, the COVID-19 pandemic, their mental health, and the acceptability of the intervention structure.

2. Methodology

This chapter will discuss the ontological and epistemological position of the researcher and the methods by which the research in this thesis is conducted. The chapter will first discuss pragmatism, then examine mixed methods research and the approaches to integrating qualitative and quantitative data. The ethical considerations for each study will be discussed.

2.1 *Ontology: pragmatism*

Pragmatism is a research paradigm that proposes the research question itself should dictate the methods used, rather than fitting the research question to the philosophical position of the researcher (Teddlie & Tashakkori, 2009). Pragmatism as a philosophy believes that human actions can never be wholly separated from past experiences and beliefs created from those experiences (Kaushik & Walsh, 2019). Pragmatism asserts that human behaviour is governed by the knowledge of consequences, and it is the actions of people, not external forces, that shape human behaviour (Kaushik & Walsh, 2019). Pragmatists believe the world is ever-changing through the actions taken by people, and therefore reality cannot be static and observable as a set of singular truths (Morgan, 2014).

A set of three guiding principles were introduced from a pragmatist seeking to define the pragmatic approach to research (Morgan, 2014).

1. Actions cannot be separated from the context and situation in which they occur.
2. Actions are linked to consequences in ways that are open to change.

3. Actions depend on worldviews that are socially shared sets of beliefs.

Pragmatism posits that no two human experiences are the same; even if two people took the same action in response to the same situation, the context behind the situation and experiences of those individuals would be different (Morgan, 2014). However, there will always be some level of shared experiences between any two people. Therefore, through the lens of pragmatism, worldviews can be both unique to the individual, and socially shared. The current research explores patterns in larger groups of people and the shared experiences between individuals, but also acknowledges that each participant is an individual with their own context and separate experiences. This is explored through different perspectives and methods, identifying patterns of behaviour alongside individual opinion.

There is some disagreement about the nature of 'reality' among pragmatists. While some believe that there is no 'objective' reality, some argue that there is. As a pragmatist, I personally believe there is an 'objective' reality, but that it exists apart from human experience. The reality any individual experiences is grounded in the environment and can only be encountered through human experience, which differs vastly between people (Tashakkori & Teddlie, 2008). Despite pragmatism being criticised in the past for being based more in methodology and the acquiring of knowledge than in ontology and the broader philosophical questions, pragmatism allows for combinations of research methods that are often viewed as incompatible due to the ontology relating to them. Pragmatism arose predominantly from individuals that believed there would never be one definitive answer to the broader philosophical questions, and instead wanted to focus on improving human experiences (Kaushik & Walsh, 2019). Pragmatist research, therefore, aims to better understand

the relationship between our actions and consequences, and better inform us for future actions (Biesta, 2010). The methodology of pragmatism is to design the research around the research question, as opposed to choosing designed based on ontological positions (Morgan, 2014). Whereas positivism and interpretivism, along with postpositivism and constructivism, tend to favour either quantitative or qualitative methods, pragmatism offers a more flexible approach to research design (Yvonne Feilzer, 2010).

Morgan (2014) advocates a five-step approach to methodology, which will be followed through the current research. It provides a methodical approach to research based in pragmatism and is applicable to a wide variety of questions while remaining open to different types of methodology (Kaushik, 2019).

1. Encountering a situation and recognising it as a research problem.
2. Reflect on the nature of the problem using the researcher's beliefs.
3. Considering potential actions to take to address the research problem.
4. Considering the best possible methodology to address the research problem.
5. Conducting the research.

It is often not quite as simple as following this step-by-step, and many steps may take a significant period of time and be repeated several times due to the researcher's self-reflection. Reflecting on the nature of the problem and potential solutions and actions is encouraged as it helps to link the research questions with the research designs (Kaushik & Walsh, 2019).

The research within this dissertation was conducted from the perspective of pragmatism; the research is not committed to a paradigm and the philosophical

doctrine behind it and is therefore open to different worldviews and methodologies (Bryman, 2006). Pragmatism approaches research by prioritising the research question and exploring many different research designs and methods that may be most appropriate for the research question (Kaushik, 2019). Pragmatism was chosen over other approaches as it allows for a wider variety of methods, analyses, and perspectives. The research questions are prioritised, and research that brings together qualitative and quantitative methods is feasible and useful for exploring the research questions from different perspectives.

2.2 Epistemology: a mixed methods approach

The research in this thesis follows a mixed methods approach, combining quantitative and qualitative methods. Study 1 (Chapters 3 and 4) uses a combination of survey measures to obtain quantitative data alongside two open text box questions to obtain qualitative data. Study 2 (Chapter 5) is an intervention study, with survey measures used in between sessions of the intervention. Study 3 (Chapter 6) is a qualitative evaluation of the intervention through interviews with participants of Study 2.

Mixed methods research (MMR) is less commonly used than qualitative or quantitative research. This may be due to the conflicting paradigms and ontological positions associated with each type of research. In broad terms, positivism is associated with quantitative research, and interpretivism is associated with qualitative research. Often, it is assumed that one type of research is incompatible with a certain ontology, and therefore is not included in studies where it could be useful (Romaoli & McNamee, 2021). This has led to fewer researchers using MMR, and it therefore being less standardised with guided approaches to integrating the two (Romaoli, 2022).

However, there is considerably more agreement on the core tenets of MMR than even ten years ago (Fetters, 2016).

Integration, the process of combining qualitative and quantitative methods into one study or project, is at the core of MMR (Fetters & Freshwater, 2015). The integration of data analysis allows the researcher to examine the data from different perspectives and generate more thorough and varied results (Moseholm & Fetters, 2017). While MMR has not yet reached the level of standardisation in research as quantitative and qualitative data have, a group of approaches to integration have emerged throughout the last two decades (Rimaioli, 2021). The approaches differ predominantly on the order and reason for MMR. Several approaches of mixed methods research (MMR) were considered during the research planning:

- Convergent mixed methods
- Unidirectional sequential frameworks
- Bidirectional sequential frameworks
- Generative sequential mixed methods

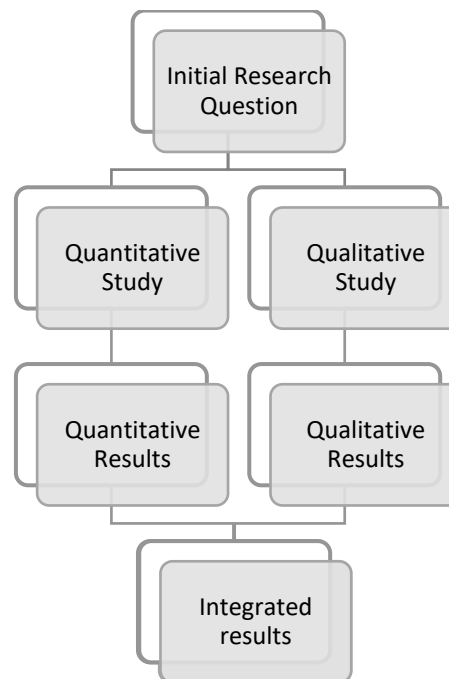
2.2.1 Convergent mixed methods approach

The convergent approach, shown in Figure 2, suggests that separate quantitative and qualitative designs should be performed for the same research study. The results are then compared, to provide a more thorough and complete overview of the topic (Rimaioli, 2021). This approach differs from the others as it recommends holding both parts of the research simultaneously and independently of each other. This would

naturally rely on there being multiple researchers and would be limited by studies that were appropriate for both a quantitative and qualitative design.

Figure 2

Flow chart depicting the convergent MMR approach

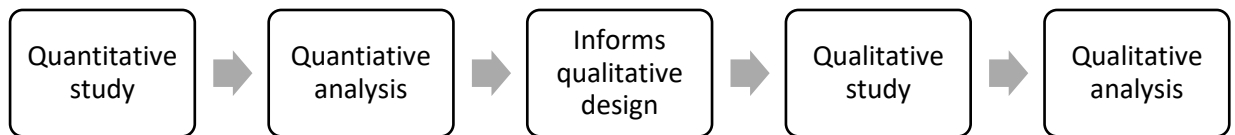


2.2.2 Unidirectional Explanatory Sequential Mixed Methods Approach

A unidirectional sequential design in MMR indicates that the completion of one set of data informs the other, for example a quantitative study in which data is collected and analysed, and then the results are assessed through qualitative methods. The unidirectional explanatory sequential approach, shown in Figure 3, focuses on this specific order; a completed quantitative study is then further explained by a qualitative study (Moseholm & Fethers, 2017).

Figure 3

Flow chart depicting the unidirectional explanatory sequential approach

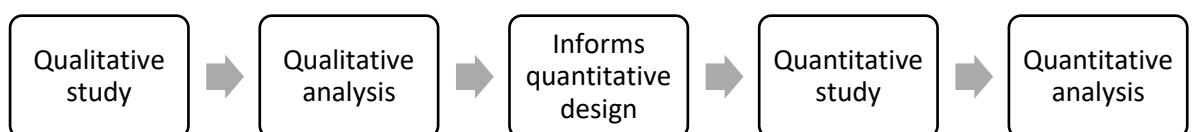


2.2.3 Unidirectional Exploratory Sequential Mixed Methods Approach

Similar to the explanatory sequential approach, the exploratory sequential approach begins with one type of study, which then informs a second. However, this approach, shown in Figure 4, follows the reverse order; an initial qualitative study is then explored further through a quantitative study (Moseholm & Feters, 2017). Both of the unidirectional approaches begin with the perspective of the initial study, be it quantitative or qualitative, and then seek a different methodology to provide further understanding of the research.

Figure 4

Flow chart depicting the unidirectional exploratory sequential approach



2.2.4 Bidirectional sequential frameworks

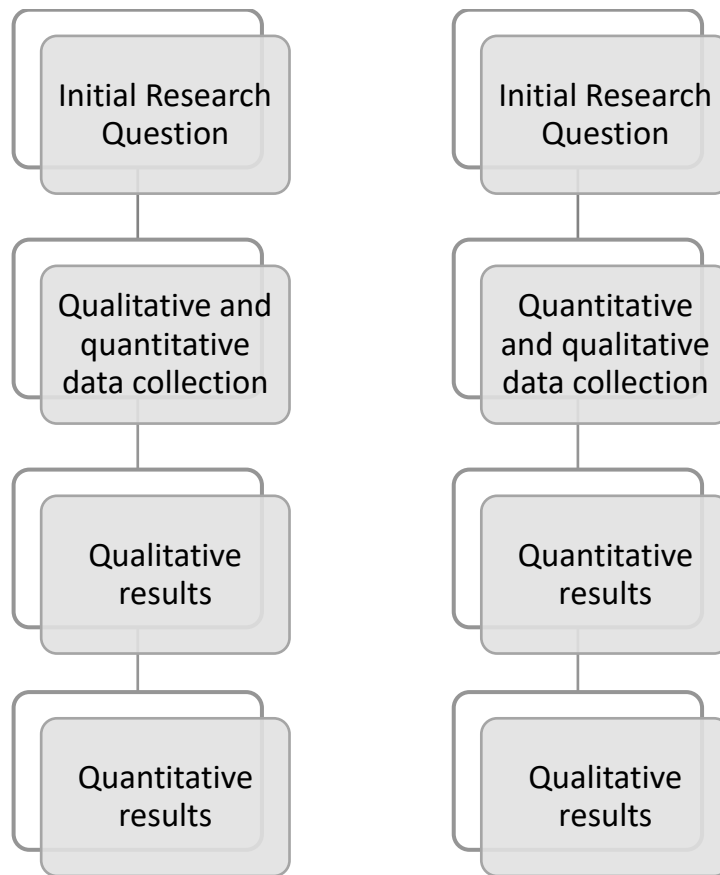
A bidirectional approach to MMR involves both quantitative and qualitative methods being used simultaneously rather than sequentially, as shown in Figure 5. A

bidirectional explanatory approach would collect quantitative and qualitative data simultaneously but would still proceed with the quantitative analysis first. A

bidirectional exploratory approach would also collect quantitative and qualitative data simultaneously and would focus on the qualitative analysis first. The main difference between unidirectional and bidirectional MMR is that unidirectional designs use the results of the first set of data to inform the second, whereas bidirectional designs perform both data sets are collected at the same time (Moseholm & Fethers, 2017).

Figure 5

Two flow charts depicting the bidirectional exploratory (left) and explanatory (right) approaches



2.2.5 Simultaneous bidirectional mixed methods approach

The final approach within the bidirectional frameworks is the simultaneous approach. In the other bidirectional approaches, data is collected simultaneously, but analysed sequentially as indicated by the explanatory/exploratory design. In the simultaneous bidirectional approach, data is collected and analysed simultaneously, with the results being constantly compared across the process (Moseholm & Feters, 2017).

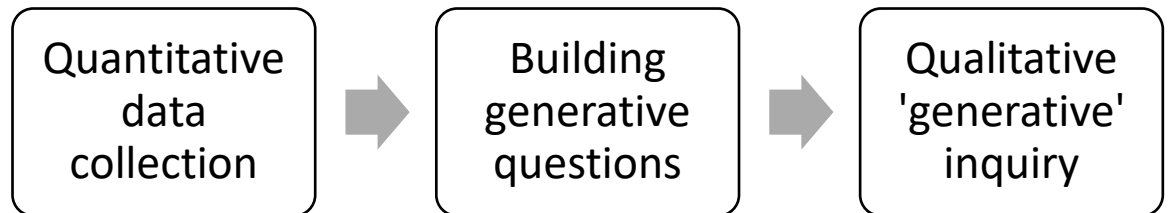
2.2.6 Generative sequential mixed methods approach

In a paper analysing MMR approaches, a social constructionist perspective was applied to developing a mixed methods approach, in which post-positivist ideas and methods were still included, which led to the Generative Sequential Mixed Methods Approach, shown in Figure 6 (Rimaioli, 2021). The approach suggests that social constructionist researchers should not discredit or avoid methods typically associated with post-positivist research. From a constructionist view, no singular methodology can be determined as the 'correct' or 'true' methodology to use in research (Yilmaz, 2013). When social constructionism is the view that our experiences and interactions shape our shared realities with other people, social constructionist researcher should consider the experiences and interactions that result from a diverse range of methods. Social constructionism is, at its core, a philosophical standpoint (McNamee, 2010), and researchers operating under that standpoint should not avoid quantitative research due to it being used historically from other philosophical standpoints. The generative sequential approach to mixed methods (Rimaioli, 2021) was proposed as a way for post-positivist and social constructionist ideas to interact in a beneficial and enlightening way.

The generative sequential approach built upon the explanatory sequential approach, beginning with a quantitative study and using it to inform a qualitative study that would further explain the findings. However, the generative approach differs from the explanatory approach as it specifically identifies a process for using the quantitative data to generate questions for the qualitative study. For example, if a questionnaire was used in the quantitative study, the items of the questionnaire that arose as critical in the quantitative analysis could be used to generate questions for the qualitative inquiry (Romaoli, 2021).

Figure 6

Flow-chart of the Generative Sequential Approach to mixed methods



2.2.7 Epistemological decisions

These approaches to mixed methods are useful, versatile, and can be utilised by researchers with varying philosophical positions and perspectives (Creswell & Poth, 2018). However, there is still a significant divide in quantitative and qualitative research, with many researchers viewing MMR as an impossibility given their philosophical position. It is vital to note that there are many studies that utilise MMR without giving their approach a name, instead just using what feels most logical to the research at hand; as MMR becomes more commonly used, it is likely that approaches will become more familiar among the research community. However, in the context of this thesis, the approaches listed above are considered to be a comprehensive overview of MMR.

Within this thesis, two approaches were taken. In Study 1, the bidirectional simultaneous approach was taken, as quantitative and qualitative questions were asked within the same survey and analysed at the same time. Study 2 is a quantitative study which is followed up by a separate qualitative evaluation in Study 3, which follows the unidirectional explanatory approach.

2.3 Methods

The research in this thesis consists of three studies. Study 1 is a mixed methods survey examining student mental health at two time-points. Study 2 is a positive psychological intervention consisting of four sessions, each session involving psychoeducation about worry and mental health alongside exercises that encourage participants to build new psychological resources focused on the character strengths hope and gratitude. The intervention was guided by the researcher and delivered online to groups of four participants at a time. Study 3 is a qualitative evaluation of the intervention using semi-structured interviews with the participants of Study 2.

2.3.1 Quantitative methods

Quantitative research is characterised by 'systematic and methodological processes, placing value on the concepts of rationality, objectivity, precision, and control' (Simonovich, 2017, page 1). Quantitative research in psychology aims to identify patterns and relationships in behaviour through logical reasoning and systematic testing (Neuman, 2006). There is an emphasis on control as it reduces the chances of inaccurate conclusions (Williams, 2007). A systematic literature review spanning five years of psychological research revealed that quantitative methods were the most commonly used among researchers (Scholtz et al., 2020).

Researchers engaging in quantitative research methods often maintain a boundary between themselves and the participants, to minimise the effect of researcher bias (Creswell, 2014). The researcher may utilise systematic processes to make

observations and analyses, following strict rules to come to logical, evidence-based conclusions. The approach emphasises the need for an objective and thorough methodology, with high levels of control (Williams, 2007). Quantitative research is often conducted from the perspective of positivism, or a philosophy sharing the same ontological beliefs as positivism. Positivist researchers view research as a logical series of steps taken from an objective standpoint to generate unbiased, reliable data (Creswell, 2013). However, other philosophies also utilise quantitative methods. These other paradigms have varied beliefs on methodology and the research methods they use but are often overlooked in research as 'lesser' or unimportant paradigms in comparison to positivism (Corry et al., 2018). Despite the emergence of these paradigms, quantitative and qualitative research are still largely attributed to the two paradigms of positivism and interpretivism, respectively (McKie, 2014).

The research in this thesis incorporates two types of quantitative design: experimental and correlational. Experimental designs test cause-effect relationships, often involving random allocation of participants, pre-test and post-test measures, and control groups vs. experimental groups (Walker, 2005). An example of an experimental design is an intervention, in which a control group and an experimental group are given different conditions, and measures are taken pre-test and post-test to compare in statistical analyses. There is a strong level of control over the experiment, from the selection of participants to the manipulation of the experiment (Creswell, 2003). This level of control provides confidence in the results, as the researcher can attribute any results to the manipulation of the experiment, as opposed to extraneous variables (Walker, 2005).

However, to completely eradicate possible errors in results requires a significant level of control over extraneous variables, which often isn't possible. There can only be a certain amount of control exerted over human participants, such as using matched pairs to compare similar participants (Neuman, 2006). Participants in longer studies may experience changes in their beliefs, behaviour, and biases, thus affecting their responses to the study (Creswell, 2003). Participants may experience the Hawthorne effect, in which they behave differently due to their awareness of being in a study (Walker, 2005). Experimental designs also involve a great deal of ethical consideration. Some designs include deception about the true nature of the study, in order to avoid response bias from participants. Often, an experimental design will include a control group. In these cases, it is considered unethical to use the control group without then giving them the treatment afforded to the experimental group. In these cases, it is vital to finish the study having given equal treatment to both groups (Neuman, 2006).

2.3.2 Quantitative research in positive psychology

Positive psychology arguably started in 1998, when Martin Seligman chose it as the 'theme' for his term as President of the APA. However, it was clearly influenced by humanistic psychology, being an area of psychology that discussed happiness and flourishing, similarly to positive psychology. Despite this, positive psychology has historically tried to distance itself from humanism and establish itself as a separate, unconnected area of research based in scientific inquiry (Froh, 2004).

As positive psychology is relatively new, it was established during the so-called 'paradigm war' (Griffiths & Norman, 2012), in which arguments for quantitative and qualitative methods under many paradigms were being debated back and forth.

Psychology itself is a discipline that historically has favoured quantitative methods, and positive psychology initially fell in line with a positivist or postpositivist framework, leading to quantitative methods being used (Donaldson et al., 2015). Quantitative research focuses on results for large groups of people, which means it could demonstrate to the research community that it was relevant to human behaviour on a large scale. As a result, however, many of the ways of testing aspects of positive psychology, for example character strengths, are quantitative self report survey measures. During the first two 'waves' of positive psychology (Lomas et al., 2021), quantitative methods were favoured under the postpositivist paradigm; however, there is an increasing emergence of qualitative and mixed methods research in positive psychology, introducing other paradigms to the area.

2.3.3 Intervention studies

Intervention studies feature heavily in positive psychology research, and often focus on improving character strengths to reduce symptoms of mental health problems. The intervention in this research was developed with hope and gratitude as the character strengths, and prior intervention studies were compared to determine how the intervention could be structured.

Gratitude was found to be a key focus of character strength research (Boggiss et al., 2020). Carr et al., (2020) conducted a meta-analysis and systematic review of PPIs and found that gratitude was the most popular single element intervention, making up 79 of 308 interventions. Gratitude interventions focus either on meaningful reflection and thinking about the positive aspects of life or writing such meditations down in the form

of a diary (Davis et al., 2016; Skrzelinska & Ferreira, 2020). Davis et al (2016) reported that the majority of gratitude interventions took the form of gratitude diaries.

One session in the intervention was dedicated to gratitude, while hope was the focus of two sessions due to its two sub-scales. Participants were provided with the template of a gratitude diary and instructed to write down three things every day that they were grateful for, for the duration of the intervention. They were encouraged to continue the diary after the intervention. Hope as a positive psychological concept is divided into two parts; hope agency, which is the motivation and belief that one can achieve one's goals, and hope pathways, which are the steps taken to achieve those goals. Interventions based on hope often focus on hope agency, using various methods to attempt to bolster the motivation. These methods include open group discussions about topics such as personal relationships, future goals, and spiritual beliefs, guided meditations, and creating self-affirmations (Magyar-Moe & Lopez, 2015).

Magyar-Moe and Lopez (2015) reviewed several strategies for accentuating both hope agency and pathways. Strategies to improve hope agency included self-affirmations, reframing situations, remembering previous successes, and avoiding negative thoughts about one's capabilities. In comparison, hope pathways seemed to have one strategy, which was teaching individuals to effectively plan to achieve their goals and overcome obstacles.

The first hope session in the intervention involved both educating the participants about hope and the effect it can have on mental health and teaching them to create self-affirmations. The participants were given chances to practice and refine their affirmations in accordance with three instructions:

1. The affirmation should be specific to a goal or situation, not general.

2. The affirmation should be positive and sincere, not self-deprecating, or negative.
3. The affirmation should be realistic and relate to a small step towards a goal.

The self-affirmations are designed to build motivation to achieve a specific, realistic goal that the individual is currently facing.

The second hope session involved further education on hope and reminding participants about the impact it can have on mental health. The session then focused on teaching the participants about effective goal mapping, through a modification to the SMART goals method (Doran, 1981). SMART goals are 'Specific, Measurable, Attainable, Realistic, Time-Bound' goals, encouraging participants to plan their goals sensibly. This was modified to include 'overcoming obstacles and planning ahead', which is one of the key aspects of hope pathways. This was referred to as the 'Pathways Method' within the intervention. Participants were encouraged to note down any obstacles they could think of at every step of the goal setting and identify possible solutions to those obstacles.

2.3.4 Correlational designs

Correlational designs investigate relationships and associations among variables (Al-Hamdan & Anthony, 2010). The exploratory nature of correlational designs enables a researcher to examine multiple hypotheses at the same time and obtain vast sample sizes to analyse. This often employs the use of survey questionnaires which are easily distributed and can be used to collect large amounts of data from anywhere in the world (Walker, 2005). Many different statistical tests can be applied to this type of

data. In comparison to experimental methods, correlational designs often have higher external validity due to the questions focusing on the participants' real life. However, they also have lower internal validity due to a lack of control over extraneous variables (Thompson et al., 2005).

Positive psychology, being a relatively new sub-discipline of psychology, has frequently utilised correlational designs to explore hypotheses and establish new concepts such as character strengths. Kim et al., (2018) performed a systematic review of positive psychology studies and found that 72.7% of the studies followed a correlational design. In comparison 12.1% followed an experimental design. Correlational survey designs have allowed researchers to explore character strengths in students (Bachik, 2021; Lavy, 2020; Lounsbury et al., 2009; Zhang & Chen, 2018). These studies have demonstrated that students have fluctuating levels of character strengths and that various strengths were related to subjective well-being, happiness, academic performance, and life satisfaction. However, research into positive psychological factors during transition periods is still limited, with studies examining students in secondary school (Bharara, 2020) or through adulthood post-education (Linley et al., 2011).

Study 1 in this thesis was a survey distributed to a large group of students before and after an academic transition period. The survey consisted of mental health questionnaires, positive psychology measures for four character strengths, a measure for the Big 5 personality factors, a resilience measure, and a life satisfaction measure. The study was exploratory in nature, to examine changes in the variables before and after a transition period. The data collected provided an understanding of how character strengths might alter over a transition period, and potential relationships

they might have with mental health. It also provided information necessary to develop the intervention for Study 2.

2.3.5 Mediation

Mediation analysis was used in Study 1 to examine the potential mediating effects of resilience on the relationships between character strengths and mental health. This was done through the PROCESS Macro for SPSS (Hayes, 2017), which uses bootstrapped confidence intervals to determine whether a mediating relationship is present. This method does not state if there is a 'full' or 'partial' mediation, as older methods such as the Causal Steps do (Baron & Kenney, 1986). While the Causal Steps and the concept of full/partial mediation are still frequently used among researchers today (Rucker et al, 2011), it is considered to be outdated and recommendations have been made to abandon both altogether (Hayes, 2018). In this research, the bootstrapping method was used to determine if a mediating relationship was present and what direction it impacted the variables, but as recommended (Hayes, 2017), the concept of a 'full' or 'partial' mediation is not considered.

2.3.6 Longitudinal Research

Longitudinal research is the collection of data and research over time, as opposed to cross-sectional research which is data collected at a singular time point (Williams, 2007). Longitudinal research can examine temporal relationships of variables with more certainty; more time-points equates to further evidence of relationships (Ployhart & Vanderberg, 2010). The aims of longitudinal research are to demonstrate

patterns of change over time, and to determine the direction of relationships between variables (Patten & Newhart, 2017). There are limitations when it comes to longitudinal research; often, the ability to collect multiple sets of data across time is limited by money and resources. Longitudinal research is carried out on the same sample of individuals repeatedly and is therefore limited by attrition rates of the sample (Hopwood et al., 2022).

Carr et al., (2021) reviewed positive psychology interventions and determined that of 347 studies selected for review, 166 (47.84%) did not involve follow-up data, 181 (52.16%) reported Time 1 follow-up data (average = 3.14 months), and 59 (17%) reported Time 2 follow-up data (average = 7.80) months. This indicates that longitudinal research that includes post-intervention data makes up almost half of positive psychology intervention research, and has provided further information on well-being, quality of life, and mental health over time. The first study in this thesis was originally designed to follow a longitudinal research design, but the attrition rate of participants was so high, further participants were recruited at the follow-up stage to gather a large enough sample size. Study 2, however, follows a prospective panel longitudinal design, testing the same set of participants across multiple time points throughout and after the intervention, up to three months after the intervention finished.

2.3.7 Strengths and limitations of quantitative methods

Quantitative analysis can enable a researcher to examine a large group of participants, to identify patterns and potential relationships (Walker, 2005). The umbrella term of quantitative research covers multiple types of design that can be utilised in different

ways to address a variety of research questions. The studies designed can have high levels of control, resulting in strong validity and reliability in the results (Creswell, 2003). It focuses on objectivity, generalisability, and consists of systematic, methodical approaches to data collection, alongside rigorously tested statistical analysis.

The limitations of quantitative research in psychology largely comes from the subjects and researcher being human. The involvement of a researcher in human behaviour, no matter how detached from the study, will impact the study through biases and motivations (Creswell, 2014). While the control of a study can be high, the more control, the less realism there is. Participants cannot be expected to act the same in their daily lives as they do in test conditions, and they also cannot be expected to act the same as each other. While there are aspects of human behaviour that seem to persist universally, across widely different groups of people, a lot of behaviour is clearly governed by our environment, our experiences, and our connections with other people (Queirós et al., 2017). The rigidity of quantitative research may not be able to capture the depth of this complexity, and the use of hypothesis testing may mean important findings are overlooked because they were not specifically related to the set hypotheses.

Overall, quantitative methods were chosen to examine patterns in behaviour using standardised measures to draw reliable conclusions about student mental health, and the impact of a hope and gratitude intervention. The limitations were that self-report measures rely on participant self-perception which may not be wholly accurate, that the data may not capture the depth and complexity of student mental health, and that the researcher may inadvertently bias the research. To address the first two, the results from the quantitative data was compared to the findings from the qualitative

data, using data triangulation to identify patterns between the two and strengthen the reliability of the results. To address the latter, the researcher was detached entirely from Study 1 as it was an anonymous survey completed without supervision from the researcher. Study 2 required the researcher to be involved in the delivering of the intervention, and the researcher took the following steps to mitigate the impact they had on the study:

- Delivered the intervention as similarly as possible to all groups
- Provided the same instructions for exercises and homework tasks to all groups
- Made no changes to the intervention once it had begun

It should be acknowledged that the researcher was not detached from Study 2, and the participants would have relied on the researcher for guidance throughout the intervention.

2.3.8 Qualitative methods

Qualitative research is often focused on the perspective of the participant, and their subjective experience with the research (Stutterheim & Ratcliffe, 2021). Qualitative research is often associated with paradigms such as interpretivism and social constructionism, which believe there are multiple subjective realities all constructed by the individual. However, many qualitative researchers come from other philosophical standpoints; as a critical realist, qualitative research is not to establish different subjective realities, it is to examine subjective experiences of the same reality (Roberts, 2014). The goal of the research is to get as close to the different realities as possible through diverse and varied perspectives.

A key difference between quantitative and qualitative data is the role of the researcher; in qualitative research, the researcher is often part of the study, engaging with participants and contributing their own knowledge to the results (Denscombe, 2008). There is not the strict 'objectivity' that quantitative research aims for, and therefore the researcher must address their own impact frequently (Manicas, 2009). Reflexivity is vital to the qualitative research process and involves reflecting on behaviour, impact, bias, and motivation throughout the entire research project (Roberts, 2014).

Qualitative methods are designed to elicit detail from the participant and there are many qualitative methods that do so. Most relevant to the current research is semi-structured interviews, and open-ended qualitative questions in surveys. An interview is a two-way dialogue, and the role of the researcher is to encourage and guide the participant to provide detailed answers. Semi-structured interviews were selected in order to allow for extraneous detail the participant may wish to offer, providing perspectives that may not have been previously considered by the researcher (Hennink et al., 2020). Qualitative researchers, as previously discussed, consider research to be value-laden, and the interview process is no exception. Researchers view themselves as active participants in the interview process, and therefore acknowledge their appearance, personality, and motivations will impact the interview, whether purposefully or accidentally (Hennink et al., 2020). Therefore, the interview is a 'knowledge-producing conversation' (Biber et al., 2006). Semi-structured interviews can be used not only to ascertain individual experience, but also to establish the subjectivity of the interviewee, and the context that person comes from (Wengraf, 2001).

Open-ended survey questions are questions that can be responded to in a text box, rather than clicking a set response such as 'always' or 'never'. The purpose of open-ended questions is to gather more personal and subjective information from larger numbers of participants than an interview or focus group. It often provides small amounts of data per person, as opposed to several pages of transcribed data in an interview. However, over-use of text boxes can be seen as burdening the respondent and causing them to not complete the survey (Schmidt et al., 2020). To mitigate this, the open-ended survey questions were optional to complete, and a maximum of three per survey were included.

2.3.9 Qualitative research in positive psychology

Qualitative research in positive psychology is a more recent development. While it certainly existed pre-2017, a special edition of the Journal of Positive Psychology in 2017 focused entirely on qualitative methods and how to incorporate them into positive psychology research, creating a turning point in the community (Hefferon et al., 2017).

The first and second 'waves' of positive psychology were informed predominantly by quantitative methods, which has led to a wide variety of research and fascinating findings (Lomas et al, 2021). However, the third 'wave' of positive psychology is emerging with a focus on complexity, building upon the foundation that has been built. This includes broadening the methodological scope of positive psychology research, incorporating qualitative and mixed-methods research (Plano Clark, 2017). Qualitative methods can be used to further explore the existing quantitative research, or to explore new areas of positive psychology. Qualitative research is often done with the

researcher and participants collaborating together to form knowledge through methods such as action research and collaborative inquiry (Hefferon et al., 2017). As qualitative methods become more commonly used within positive psychology, a greater focus on subjective participant experiences will shape the understanding of happiness, character strengths, and flourishing.

Study 1 featured three text box questions to give participants the opportunity to write their own worries and reasons for excitement about university, as well as their past methods of supporting their mental health. Study 3 utilises semi-structured interviews with participants of Study 2 to gain their perspective and opinion of the intervention. Semi-structured interviews were selected to allow for certain vital questions to be asked of every participant, but also to allow for tangents and discovery (Magaldi & Berler, 2020). Positive psychology has a limited amount of qualitative research (Rich, 2017), but is argued to suit qualitative methods as it focuses on the experience of the individual (Smith, 2017). Thematic analysis has been used in qualitative positive psychology research to analyse perceptions of positive psychology interventions (Michel et al., 2020). Michel et al (2020) used interviews and written statements to gain a thorough understanding of attitudes towards 29 PPIs, alongside rating them for quantitative analysis, providing the perspective of young people (16-21 years old), which had not previously been recorded. The text boxes in Study 1 and the interviews in Study 3 were designed to provide the perspective of the students about their subjective mental health and perception of the intervention.

2.3.10 Thematic analysis

The semi-structured interviews in Study 3 were analysed using reflexive thematic analysis. Thematic analysis, much like pragmatism, is independent of any particular ontological approach to research, and can be applied to a wide variety of research questions (Evans & Lewis, 2018). In thematic analysis, the researcher examines the data for patterns and generates lists of codes from the data to record these patterns (Braun & Clarke, 2019). From this, the researcher generates themes from the codes, which are analytical outputs actively created by the researcher. Themes are creative, interpretive stories about the data, through the process of coding combined with the researcher's subjectivity and understanding (Braun & Clarke, 2019). Reflexive thematic analysis involves constantly revisiting the data and the codes, re-evaluating the assumptions and themes generated from the process (Braun et al., 2017). In conducting reflexive thematic analysis, the researcher accepts that assumptions and subjectivity are part of qualitative analysis and reflexive practice is key to challenging this. Braun & Clarke (2019) argue that thematic analysis now comes in many different variations, and that being deliberate and clear about what process a researcher follows for their analysis is vital.

2.3.11 Strengths and limitations of qualitative methods

Qualitative research is often criticised by being held to the same standards that quantitative research is. Common critiques include a lack of generalisability due to small groups of participants, and not striving for the same level of control to ensure reliability and validity in results. However, it can be argued that two such different approaches to research and data collection cannot be compared directly in their criticism. In the same way that qualitative methods cannot follow the same reliability

and validity analyses of quantitative methods, quantitative methods cannot follow the same reliability and validity analyses of qualitative methods. For example, qualitative researchers strive to achieve high levels of credibility, dependability, confirmability, and transferability (Gioia et al., 2013), which are achieved in appropriate ways for the qualitative methods used. Similarly, the aims of quantitative and qualitative research differ significantly; while quantitative research aims to generate results that are generalisable to wider groups of people, qualitative research aims to explore subjective experiences of different individuals (Roberts, 2014). While this does include looking at shared experiences and worldviews, qualitative research does not aim to reveal a singular shared objective reality, and therefore does not need to have the same aim of generalisability (Creswell, 2014). In Study 3, steps were taken to ensure credibility, dependability, confirmability, and transferability, as shown in Table 2.

To improve the credibility of results, triangulation was employed. Triangulation in the context of this research is the use of two or more methods of data collection that result in the same conclusion, thus increasing the credibility of the results (Tracy, 2010). This type of triangulation features in all three studies. Study 1 uses quantitative measures and qualitative text boxes to ascertain the causes of worry in students. Study 2 and Study 3 both examine an intervention through different methods.

Table 2*Qualitative quality criteria*

| Criterion | Steps taken |
|----------------|--|
| Credibility | <p>To guarantee credibility of the analysis of the interview data, the researcher engaged in peer debriefing with an independent colleague who was not involved with the research and, while a qualitative researcher, was not involved in positive psychology. This provided an independent party to challenge the researcher's own personal biases and analysis.</p> <p>The research also features several types of triangulation, which increased the credibility of the findings.</p> |
| Dependability | <p>To ensure dependability, the researcher sought the input of the Director of Studies. The DoS's experience with qualitative work was invaluable to providing new insights into the data, and as they had been uninvolved with the data until that point, the feedback came from a new perspective.</p> <p>The reflexive approach to the data meant that there were several points at which immersion-crystallisation was used (Borkan, 2021). This involves repeatedly reading and analysing</p> |
| Confirmability | <p>parts of the data, and then pausing the data analysis to reflect on the current themes and patterns. This allowed the researcher confirm the patterns through repetition and objective reflection.</p> |

Transferability While the data analysis largely pertains to the second study of this thesis, conclusions are drawn from the data that can benefit both positive psychology research and student mental health research. These are discussed in the analysis section.

Qualitative research involves significant involvement from the researcher, and often open communication between the researcher and participant. This naturally means there are many opportunities for the researcher to inadvertently impact the research through their biases and motivations (Babbie, 2010). Transparency from the researcher is crucial in these situations to mitigate potential bias.

2.4 Ethical considerations

Each study was approved by the Sheffield Hallam Board of Ethics (Appendices D.1-D.2). In each study, participants were provided an information sheet (Appendices A.2, B.2, and C.1) detailing the requirements of the study, including GDPR information, and the contact information for both the researcher and the supervisor of the research. Participants in each study were required to sign a consent form (Appendices A.3, B.3, and C.2). In Study 1 and 2, the consent forms and information sheets were part of the Qualtrics surveys distributed and required clicking buttons to indicate consent for each part. In Study 3, the information sheet was emailed prior to the interview with the participant, and a PDF of a consent form was sent for them to sign and return.

Participants in each study were clearly informed about their right to withdraw in the information sheet and the debriefing form, which was included at the end of each study (Appendices A.4, B.4, and C.3). Participants were able to withdraw their data

during each study and for up to one week after the completion of the study. After that week, the data would be anonymised and data withdrawal therefore impossible.

In Study 1, demographic information was collected to examine patterns among students, including ethnicity, gender, age, living situation, disability status, mental health status, mental health treatment, and employment status (Appendices A.6 and A.7). Each question had a 'prefer not to say' option to ensure participants did not have to disclose any information about themselves. It was made clear in the information sheet that no personally identifiable information would be included in the published material. In Study 2, there were only 16 participants, and 8 in Study 3 (taken from the same sample of 16), and therefore demographic information was not collected beyond gender and age, to protect their anonymity. Participants in Study 2 each were given a Participant ID Code so their data sets for each survey could be matched, but once the sets were matched, the ID Codes were deleted (Appendix B.7). Participant names were shared with each other and the researcher during the intervention, but the data was anonymised, and the raw data stored under password protection until October 2020 when the raw data was deleted and only an anonymised version was retained.

Each study was considered to be low risk for causing any emotional distress to participants, as the studies were aimed at the general student population and not targeted towards those with severe mental health issues. Study 1 included a mood neutralisation task at the end, in which participants discussed their excitement about university and what they had enjoyed the most about it. This aimed to offset any negative emotion caused by discussing worries about university. In each study, the information sheet gave the contact details of the researcher, if any of the questions caused severe distress. In Study 2 and 3, the participants were seen regularly by the

researcher, and encouraged to reach out if they experienced any distress caused by the intervention or the interview.

Study 2 and 3 had to be amended to accommodate the COVID-19 pandemic, and this involved altering the intervention to be delivered online rather than in a classroom, and the interviews to be held over Zoom rather than in person (Appendix D.2).

2.5 Conclusion

Both quantitative and qualitative methods were used in this research. Qualitative methods were first used in Study 1, accompanying quantitative methods to allow participants to write more complex answers alongside self-report survey measures. This created a more thorough understanding of the quantitative research. Study 3 was wholly qualitative in nature, using interviews to further explore the results of the intervention in Study 2, and to explore the subjective experience of the participants during the intervention.

In order to counter the limitations of research discussed in this chapter, constant re-examination of biases and motivations were performed. This was undertaken in both the quantitative and qualitative research. Within the quantitative research, the scales were tested for reliability, and measures were selected that had also been shown to have good reliability in prior research. *A priori* analyses were performed to identify the minimum number of participants required to perform appropriate statistical analyses. Within the qualitative research, questions were reviewed constantly to ensure there were no leading questions, and all questions were open to allow the participant to answer in their own way. It was made clear to participants at the start of the

interviews that they should feel free to be negative in their responses, as honesty was the best feedback. Participants were encouraged to elaborate on their opinions and allowed to go on tangents outside of the questions, to allow for any opinions and answers that may not have been considered by the researcher.

In both quantitative and qualitative research, there is a tendency to reject the other methodology, often due to the methodology conflicting with the ontology and epistemology of the researcher. The research within this thesis followed a mixed methods design to gain the benefits of both quantitative and qualitative research, while trying to minimise the limitations caused by using both methodologies.

Altogether, the studies provide a mixed methods approach to the initial research question of 'can positive psychology help students suffering from excessive worry during transition periods?'. Study 1 provided an exploration of changes in mental health and character strengths over a complex transition period, alongside identifying the largest areas of worry for students throughout this time. This provided the foundation for Study 2, a quantitative intervention designed to reduce worry, depression, and anxiety by increasing character strengths and resilience. While Study 2 provided the analysis of the intervention's effectiveness, Study 3 ran just after it to examine the intervention through the perspective of the participants. These two studies combined to give a thorough, varied analysis of the intervention, its impact, and where it could be improved. Across the studies, two different types of MMR were employed; the bidirectional simultaneous mixed methods approach in Study 1, and the unidirectional explanatory sequential mixed methods approach across Study 2 and 3.

3. Study 1 Time 1

This chapter will examine the first time point of Study 1, a mixed methods survey examining mental health. The chapter will first introduce the study, then discuss the methods by which the study was conducted. The results are divided into quantitative and qualitative sections.

3.1 Introduction

3.1.1 Student Anxiety and Worry

Student mental health has become a growing area of research due to increased awareness of mental health issues among undergraduates (Regehr et al., 2013).

Mental health problems are associated with poorer academic performance (Bruffaerts et al., 2018), and problems such as anxiety and excessive worry can cause students to struggle with coursework, fail examinations, and in some cases drop out of university.

There are several transition periods that students undertake during their time at university, such as the beginning of each new academic year, in which there are many stressors. These transition periods can cause significant increases in anxiety and worry, due to students being afraid of the unfamiliar experiences ahead or feeling unprepared (Cheng et al., 2014; Thurber & Walton, 2012). Many of the stressors persist throughout university, such as financial strain, coursework, exams, time management, and friendship problems. The Endsleigh Insurance National Student Survey (2015) found that 77% of students were working part-time, with 57% of those students working to afford rent, food, and bills. All of these stressors can contribute to significant periods of worry and anxiety, causing a series impact on the experience of university. This

study will explore the relationships between anxiety, worry, and variables rooted in positive psychology to better understand the student experience throughout transition periods.

3.1.2 Positive Psychology

This study will explore the relationships between certain character strengths and anxiety and worry, focusing on students during a transition period. Along with a follow-up study to examine changes over time, this study will inform the development of a PPI targeting undergraduate students during transition periods.

When selecting the character strengths that would be explored, three criteria had to be met:

1. The character strength must be clearly defined along with measures that have been adequately tested.
2. The character strength must lend itself clearly to an intervention technique, whether that is an already established technique, or one that can be created.
3. The character strength must have been linked to anxiety or worry prior to this research.

The strengths selected from a review of research on character strengths were hope, gratitude, curiosity, and optimism. They met all the criteria and were therefore included within the exploratory study.

Hope is defined as having both the belief that goals are attainable and having the motivation to take the necessary steps to achieve the goals (known as hope agency and hope pathways respectively; Snyder, 2000). An individual with high levels of hope

would feel positive about their goals and set realistic targets. This could be applicable to academic goals, financial goals, and personal goals. Similarly to hope, optimistic individuals expect positive outcomes from their experiences and feel more confident about their abilities. A hopeful, optimistic person would face obstacles with a positive attitude and be more likely to cope with those obstacles effectively. Hope and optimism share the similarity about expecting positive outcomes; however, hope is focused on beliefs about the self and includes goal setting and attainment, whereas optimism is a positive thought pattern about life experiences (Rand, 2018). Optimism has been found to have a negative relationship with anxiety, and a positive relationship with academic achievement (Singh & Jha, 2013). Students exhibiting high levels of optimism may feel confident about their studies and their ability to succeed during examinations or assessments.

Gratitude has been suggested to encompass feelings of thankfulness towards others for support and guidance, but also to life experiences gained and the lessons learned from them. Grateful people are able to seek the 'silver lining' during a negative experience and savour the positive experiences in life (Wood et al., 2010). Students with high levels of gratitude may be more likely to focus on the university experiences that they are enjoying, rather than becoming overwhelmed by worries. Curiosity has less research in support of it than hope, optimism and gratitude, but it is theoretically relevant to undergraduate students undertaking a transition period as it involves being open to new experiences (Kashdan et al., 2004). Students face a variety of unfamiliar situations, such as moving to a new place, moving in with new people, beginning new subjects and engaging with new social experiences. Curiosity is conceptualised as having the desire to try new and challenging experiences (exploration), and also having

the drive to seek out and fully engage with the new and challenging experiences (absorption).

The Big 5 personality factors and resilience were also included as potential predictor variables in this study. The Big Five personality factors are extraversion, agreeableness, openness, emotional stability, and conscientiousness, and have all been linked to anxiety or worry. Extraversion has been found to be negatively associated with social anxiety disorder (Kaplan et al., 2015), indicating that extraversion may predict lower levels of anxiety. Both extraversion and emotional stability were found to be mediating variables between chronic stress and anxiety disorders (Uliaszek et al., 2009). A meta-analysis comparing 175 studies on the Big Five found that emotional stability and conscientiousness was low in groups with anxiety disorders, and extraversion was low in groups with social anxiety disorders (Kotov et al., 2010). The meta-analysis found that largely, openness and agreeableness were not associated with anxiety disorders. However, Łakuta (2018) found that openness and agreeableness were associated with social anxiety, suggesting that different types of anxiety may be predicted by different personality factors.

Resilience was included in this study to establish whether resilience to negative emotions predicted anxiety. In a study examining university medical students, resilience, along with openness, conscientiousness, and agreeableness, predicted anxiety symptoms (Shi et al., 2015). Ahmed and Julius (2015) found that while resilience predicted depression, anxiety was not predicted by resilience and was instead predicted by academic performance. This suggests that the root of student anxiety may vary. The inclusion of resilience in Study 1 is to explore whether there is a

direct relationship between resilience and anxiety/worry in an undergraduate population across a transition period.

3.1.3 The current study

The current study aims to explore relationships between character strengths, personality factors, resilience, anxiety, and worry, as well as identifying the stressors that most affect students during transition periods. The participants will be students just prior to the start of their first year of university, during which they will be experiencing the start of their transition period. The study will inform the development of a PPI named 'The Worry Workshop' that will be implemented and evaluated as Studies 2 and 3.

The aims of this study are:

1. To explore the relationships of the potential predictor variables (character strengths, personality, and resilience) and outcome variables (anxiety, depression, and worry) through quantitative analysis.
2. To identify the stressors that cause the most worry in undergraduates during transition periods through quantitative and qualitative analysis.

The study looked at two separate time-points; during the transition period, and after the transition period had passed. This chapter will discuss the first time-point, and Chapter 4 will compare the results with the second time-point.

3.2 Methodology

3.2.1 Participants

226 first year undergraduate students from UK universities were recruited through opportunity sampling. The students were from a wide range of courses. 190 of the participants identified as female, 32 as male, and 3 as other genders. Participants ranged in age from 18-54, with a mean age of 18. Prior to university, 85.4% of participants lived with parents/guardians. 55.3% of participants were planning to live in university accommodation, with 20.8% choosing to remain at home. 41.6% of participants reported they were not in employment due to their studies; 38% were employed part-time. In G*Power, a-priori calculations were performed that suggested a sample of 89 would be appropriate to perform two-tailed linear multiple regression including ten predictor variables. A significantly higher number (226) was collected to account for attrition in the follow-up survey.

3.2.2 Mental Health Status

Participants were asked to tick any mental health problems they had a diagnosis for, although the question was optional, and they could tick 'prefer not to say'. 93 participants identified as having one or more mental health problems.

33 participants identified as having one mental health problem. This was predominantly GAD (n=20), with the others being depression (n=7), PTSD (n=1), bipolar disorder (n=1), and 'other' (n=4).

30 participants identified as having two or more mental health problems. 22 participants had two disorders, 5 participants had three disorders, 2 participants had

four disorders, and 1 participant had six disorders. Of the participants with two disorders, the most common combination was GAD and depression (n=16), with the other combinations being GAD and other (n=2), depression and other (n=2), GAD and eating disorder (n=1) and depression and ADHD (n=1). Of the participants with three disorders, the combinations were mostly GAD and depression with an additional third disorder: bipolar disorder (n=1), personality disorder (n=1), and eating disorder (n=2). The other combination was depression, ADHD, and other (n=3). The remaining participants with multiple disorders had the following combinations: depression, OCD, bipolar disorder, and schizophrenia (n=1), depression, PTSD, eating disorder, and other (n=1), and GAD, depression, OCD, bipolar disorder, personality disorder, and other (n=1).

147 participants stated they had no mental health diagnoses, and 17 ticked 'prefer not to say'. When asked to list any treatment participants were receiving for their mental health problems, participants listed antidepressants, cognitive-behavioural therapy (CBT), going through IAPT, talking to their GP, undergoing talking therapies, and various self-care techniques such as breathing exercises. Antidepressants were the most commonly reported (n=16), predominantly treating either GAD, depression, or a combination of both. Some participants reported having finished CBT (n=3), and some reported being on a waiting list for counselling or CBT (n=3).

3.2.3 Measures

3.2.3.1 Demographics

Questions were asked to ascertain the following demographics: age, gender, ethnicity, employment, living situation prior to university, and living situation at university.

3.2.3.2 The Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983)

A 14-item scale. Each item is measured on a 4-point Likert scale (from 0-3) under various wording appropriate to the item (e.g. a little of the time – a lot of the time). 7 items are used to measure anxiety, and 7 items are used to measure depression.

Participants select their answers based on how they felt in the previous week. Several items are reverse scored and then total scores for the anxiety and depression subscales are generated. In both anxiety and depression, a score of 0-10 indicates a mild case, 11-14 indicates a moderate case, and 15-21 indicates a severe case. The HADS indicates consistency in reliability and validity; a study examining 747 studies using the HADS (Bjelland, Dahl, Haug, & Neckelmann, 2002) showed that the factor analyses did confirm a two-factor model of anxiety and depression within the scale. It also showed Cronbach's alphas of 0.83 for the HADS-A, and 0.82 for the HADS-D, and that correlations between the HADS and other commonly used questionnaires for anxiety and depression ranged from 0.49 to 0.83.

3.2.3.3 The Penn-State Worry Questionnaire (Meyer, Miller, Metzger, & Borkovec, 1990)

A 16-item scale. Each item is measured on a 5-point Likert scale from 'not at all typical of me' to 'very typical of me'. Several items are reverse scored and then a total score is generated from 16-80, 80 being the highest possible level of worry. The Penn-State

Worry Questionnaire was tested repeatedly during its development; eight studies were used to examine test-retest reliability, discriminant validity and construct validity (Meyer, Miller, Metzger, & Borkovec, 1990). The PSWQ demonstrated strong internal consistency ($\alpha=0.94-0.95$) across these studies.

3.2.3.4 The Adult Dispositional Hope Scale (Snyder, Harris, Anderson, Holleran, Irving, Sigmon, Yoshinobu, Gibb, Langelle, & Harney, 1991)

A 12-item scale. Each item is measured on an 8-point Likert scale from 'definitely false' to 'definitely true'. Four of the items measure hope agency (2, 9, 10, 12), four of the items measure hope pathways (1, 4, 6, 8), and the remaining four items are filler items. Total scores for the two subscales are generated by adding the item scores together, giving a potential score of 8-32 for each subscale. The total hope score is generated by adding the two together, 64 being the highest possible score of hope. Confirmatory factor analyses (Babyak et al., 1993) demonstrated that the hope scale measured two distinct factors (agency and pathways), but also found support for a higher-order latent construct (hope) overarching the two. The ADHS has demonstrated good levels of reliability (Snyder et al., 1991) for overall hope (Cronbach's $\alpha =0.74-0.84$), agency ($\alpha =0.71-0.76$), and pathways ($\alpha =0.63-0.80$).

3.2.3.5 The Gratitude Questionnaire-6 (McCullough, Emmons, & Tsang, 2002).

A 6-item scale. Each item is measured on a 7-point Likert scale from 'strongly disagree' to 'strongly agree'. Two items are reversed scored (3 and 6) and then a total gratitude score is calculated by adding the item scores together, giving a total possible score

between 6 and 42. The GQ-6 has shown good levels of reliability, with Cronbach's alphas for the six items ranging between 0.76 and 0.84 (McCullough et al., 2002). When comparing the GQ-6 with self-reported levels of relevant words, participants that scored higher on the GQ-6 reported feeling more 'thankful', 'appreciative', and 'grateful' (Gray et al., 2001).

3.2.3.6 The Life Orientation Test – Revised (Scheier, Carver, & Bridges, 1994)

A 10-item scale. Each item is measured on a 5-point Likert scale from 'I agree a lot' to 'I disagree a lot'. Four items (2, 5, 6, 8) are filler items and are not included in the total score. Some items are reversed scored and a total optimism score is generated by adding the item scores together, giving a total possible score of 6-30. The LOT-R has shown good reliability ($\alpha = 0.78$), with consistency over time. The test-retest correlations ranged from 0.56-0.79, suggesting the scale is stable over time (Scheier et al., 1994).

3.2.3.7 The Curiosity and Exploration Scale II (Kashdan, Gallagher, Silvia, Winterstein, Breen, Terhar, & Steger, 2009)

A 10-item scale. Each item is measured on a 7-point Likert scale from 'very slightly or not at all' to 'extremely'. 5 items (1, 3, 5, 7, 9) measure 'stretching', the motivation to seek out new experiences, and 5 items (2, 4, 6, 8, 10) measure 'embracing', a willingness to embrace the unpredictable or challenging. Total scores for each subscale are generated by adding the item scores, and a total curiosity score is generated by adding the subscales together. Factor analyses confirmed the two-factor model

(stretching and embracing) for this scale (Kashdan et al., 2009), and further analyses provided evidence for strong construct validity, showing moderately large relationships with personal growth, openness to experiences, psychological flexibility, and others. The CEI-II showed good internal reliability ($\alpha = 0.86$).

3.2.3.8 The Brief Resilience Scale (Smith, Dalen, Wiggins, Tooley, Christopher, & Bernard, 2008)

A 6-item scale. Each item is measured on a 5-point Likert scale from 'strongly disagree' to 'strongly agree'. 3 items are reversed scores (2, 4, 6). A total resilience score is generated by adding the item scores, giving a total score between 6-30. Factor analyses confirmed a one-factor model of resilience in the scale (Smith et al., 2008). Internal consistency was found to be acceptable ($\alpha = 0.80-0.91$), and test-retest reliability was 0.69 for one month, showing that the results were consistent across the same sample at different times.

3.2.3.9 The Ten-Item Personality Inventory (Gosling, Rentfrow, & Swann Jr., 2003)

A 10-item scale measuring the Big 5 Personality Factors. Each item is measured on a 7-point Likert scale from 'strongly disagree' to 'strongly agree'. Each of the Big 5 is represented by two items, one of which is reverse scored. Total scores are generated by adding these together for each personality factor. While short, the TIPI has adequate levels of test-retest reliability and convergence with the more widely used Big 5 measures (Gosling et al., 2003). The TIPI was selected to measure the Big 5

without participants having to fill out a longer survey, as personality was not the main focus of the research.

3.2.3.10 Worries about university questions

A list of six items. Each item is a potential concern or challenging experience students may face during university: moving away from home, living independently, making new friends, starting classes, managing own finances, and getting used to a new city/town/place. Each item is scored on a 5-point Likert scale (with an option for 'not applicable') from 'really excited about it' to 'really worried about it'.

3.2.3.11 Text boxes

Two text boxes were provided for open-ended questions. One gave participants the opportunity to write down any other worries they may have about starting university. The other was for them to write down what they are most looking forward to about starting university. The latter served as a mood neutralisation tool to try and help participants end their survey feeling positive about university.

3.2.4 Procedure

First-year undergraduate students were recruited for the first survey through three different methods:

1. Welcome emails: when students were given their log-in details to 'Shuspace', they also received a welcome email from the university. This email contained a short advertisement to the study and a link to the first survey.
2. SONA: first-year psychology students need to participate in studies (online or in-person) to gain Psycreds for one of their modules. The survey was available to access for 15 Psycreds on the SONA system, listed alongside a short advertisement.
3. Social media: the survey advertisement and link were posted in several Facebook groups advertised to first-year undergraduate students.

The link, once clicked, took participants to the beginning of a Qualtrics survey. First, participants read the information sheet, along with a GDPR information sheet, and then clicked to continue. Next, a consent form was provided, in which participants had to click 'yes' to the statements in order to indicate their consent. If they did not click 'yes' to all of the statements, the survey would terminate. If they did click 'yes', they would be able to continue the survey. Demographic questions were answered first, including the optional disclosing of mental health diagnoses and treatment. The rest of the measures followed in the following order: HADS, PSWQ, ADHS, GQ-6, LOT-R, CEI-II, BRS, TIPI, worries about university questions, and finished with the qualitative questions. A debriefing form was provided. The contact information for the researcher and supervisors was included.

3.2.5 Ethics

An ethics proposal was written and accepted by Sheffield Hallam University's ethics committee: ER6928418.

3.2.6 Data Treatment

The quantitative data was exported from Qualtrics into an SPSS document. The data was cleaned by examining missing values throughout the data. Some participants had clicked through the questionnaires without responding and were omitted from the data. For partially completed data sets, if the participant had completed less than 40% of the survey, they were also deleted. 76 total participants were deleted from the data set. If they had completed more than 40%, their missing values were set to a score of -999 in SPSS and omitted from analysis. After this, the variables were renamed and labelled for clarity, reverse scores and total scores were computed, and the data was analysed using descriptive statistics, correlation analyses, and linear multiple regression analyses. The qualitative data was exported from Qualtrics into a Microsoft Word document. Thematic analysis was used to identify patterns and themes which were then discussed.

3.2.7 Scale Reliability

Each measure was tested for scale reliability, as seen in Table 3. The alpha levels for the scales were mostly acceptable at scores above 0.70; however the TIPI scales for openness, conscientiousness, and agreeableness fall below the acceptability level. This is a problem that has been previously found in examining the TIPI at individual subscale levels, as there are only two items per subscale.

Table 3*Cronbach's alpha scores for each variable*

| Variable | Alpha |
|---------------------|-------|
| Anxiety | 0.86 |
| Depression | 0.76 |
| Worry | 0.94 |
| Hope | 0.86 |
| Gratitude | 0.87 |
| Curiosity | 0.90 |
| Optimism | 0.85 |
| Resilience | 0.88 |
| Extraversion | 0.71 |
| Agreeableness | 0.40 |
| Conscientiousness | 0.66 |
| Emotional Stability | 0.74 |
| Openness | 0.40 |

3.3 Quantitative Analysis

3.3.1 Descriptive Statistics

The means, ranges and standard deviations for the variables are shown in Table 4. On average, students displayed elevated levels of anxiety, but did not seem to have symptoms of depression. Students showed moderate levels of worry, but were at the higher end of the category, with 60 being the minimum score required for 'excessive worry'.

Students also seemed to show moderate levels of hope, gratitude, optimism, curiosity, and resilience. When examining the subscales of the TIPI, participants showed moderate levels of extraversion and emotional stability, with higher scores for agreeableness, openness, and conscientiousness.

Table 4*Descriptive statistics for each variable*

| Variable | Mean | Std. Dev |
|---------------------|-------|----------|
| Anxiety | 9.98 | 4.88 |
| Depression | 4.95 | 3.53 |
| Worry | 56.84 | 15.39 |
| Hope | 43.03 | 9.54 |
| Gratitude | 33.12 | 6.86 |
| Curiosity | 29.82 | 8.50 |
| Optimism | 16.78 | 4.85 |
| Resilience | 16.94 | 5.20 |
| Extraversion | 7.56 | 3.17 |
| Agreeableness | 9.50 | 2.51 |
| Conscientiousness | 10.06 | 2.85 |
| Emotional Stability | 7.47 | 3.23 |
| Openness | 9.93 | 2.41 |

3.3.2 Stressors

Descriptive statistics were generated for the list of stressors given to students to score from 1-5 based on how worried and excited they felt, as seen in Table 5. The mean scores indicate that on average, students felt a mixture of worried and excited about

every stressor. There was no stressor that fell into the 'just excited' category, and financial worries ranked the highest at 3.17.

Table 5*Descriptive statistics for each stressor*

| Variable | Mean | Std. Dev | N |
|--------------------|------|----------|-----|
| Independent Living | 2.29 | 1.15 | 168 |
| Moving Out | 2.45 | 1.11 | 168 |
| New Friends | 2.78 | 1.48 | 217 |
| Starting Classes | 2.62 | 1.33 | 220 |
| Finances | 3.17 | 1.42 | 200 |
| New City | 2.32 | 1.31 | 188 |

3.3.3 Correlations

Pearson correlations were produced to explore the relationships that anxiety, worry, and depression had with the other variables, shown in Table 6. The character strengths, resilience, extraversion, and emotional stability all negatively correlated with anxiety, worry, and depression. Agreeableness and conscientiousness had a negative association with anxiety and depression, but not worry. Openness did not appear to be associated with anxiety, worry, or depression.

Table 6*Correlations between variables*

| Variable | Worry | Sig | Anxiety | Sig | Depression | Sig |
|---------------------|-------|------|---------|------|------------|------|
| Hope | -.34 | <.01 | -.34 | <.01 | -.57 | <.01 |
| Gratitude | -.27 | <.01 | -.39 | <.01 | -.55 | <.01 |
| Curiosity | -.35 | <.01 | -.26 | <.01 | -.33 | <.01 |
| Optimism | -.56 | <.01 | -.58 | <.01 | -.58 | <.01 |
| Resilience | -.53 | <.01 | -.42 | <.01 | -.41 | <.01 |
| Extraversion | -.36 | <.01 | -.32 | <.01 | -.34 | <.01 |
| Agreeableness | -.05 | .49 | -.17 | <.01 | -.22 | <.01 |
| Conscientiousness | -.06 | .36 | -.16 | .02 | -.24 | <.01 |
| Emotional Stability | -.71 | <.01 | -.69 | <.01 | -.48 | <.01 |
| Openness | -.10 | .14 | -.01 | .93 | -.10 | .14 |

3.3.4 Inter-correlation Analyses

Inter-correlation analyses were run on the predictor variables to examine the associations between them, shown in Table 7. The character strengths all have significant positive associations with each other, resilience, extraversion, emotional stability, and openness. However, hope and curiosity have no significant association with agreeableness, and resilience is not associated with agreeableness or conscientiousness. As seen in prior research, hope was expected to correlate with the Big 5 except possibly emotional stability (Khan et al., 2011), so this was an unexpected

result. Curiosity has been the focus of fewer studies, and so there was no particular expectation of curiosity correlating with agreeableness. Resilience was also expected to have correlated with all the personality factors as seen in prior research (Oshio et al., 2018). Within the personality factors, openness only correlates significantly with extraversion, and conscientiousness only correlates with emotional stability.

Inter-correlations were also performed to examine the relationships between the dependent variables. Anxiety significantly correlated with depression ($r(224) = .62$, $p < .01$) and worry ($r(224) = .75$, $p < .01$), and worry also significantly correlated with depression ($r(224) = .43$, $p < .01$).

Table 7*Inter-correlations between variables*

| Variables | Hope | Gratitude | Curiosity | Optimism | Resilience | Extraversion | Agreeableness | Openness | Emotional Stability | Conscientiousness |
|---------------------|------|-----------|-----------|----------|------------|--------------|---------------|----------|---------------------|-------------------|
| Hope | - | .54** | .60** | .69** | .47** | .38** | .11 | .39** | .40** | .35** |
| Gratitude | - | - | .36** | .56** | .26** | .31** | .30* | .26** | .29** | .16** |
| Curiosity | - | - | - | .53** | .45** | .44** | .04 | .19** | .35** | .52** |
| Optimism | - | - | - | - | .52** | .38** | .19** | .26** | .54** | .28** |
| Resilience | - | - | - | - | - | .25** | .001 | .04 | .57** | .16* |
| Extraversion | - | - | - | - | - | - | .02 | .10 | .26** | .27** |
| Agreeableness | - | - | - | - | - | - | - | .09 | .18** | .08 |
| Openness | - | - | - | - | - | - | - | - | .16** | .11 |
| Emotional Stability | - | - | - | - | - | - | - | - | - | .10 |
| Conscientiousness | - | - | - | - | - | - | - | - | - | - |

* *Significant, equal to or less than .05*** *Significant, equal to or less than .01*

3.3.5 Predictor variables and anxiety

Multiple linear regression was selected as an analysis appropriate to explore the contribution of each predictor variable to each outcome variable to help explain a predictive relationship. The ten predictor variables (character strengths, personality factors, and resilience) were entered into the analysis. The R Square value indicates that the proportion of the variance in anxiety that can be explained by the predictor variables is 58.7%. The variables significantly predicted anxiety, $F(10, 215) = 30.578$, $p < .01$, $R^2 = .587$. The coefficients indicate that hope, gratitude, optimism, extraversion, emotional stability, and openness all significantly negatively predicted anxiety ($p < .05$).

3.3.6 Predictor variables and worry

The R Square value indicates the proportion of the variance in worry that can be explained by the predictor variables is 60.2%. The variables significantly predicted worry, $F(10, 215) = 32.453$, $p < .01$, $R^2 = .602$. The coefficients indicate that hope, optimism, extraversion, and emotional stability all significantly negatively predicted worry ($p < .05$).

3.3.7 Predictor variables and depression

The R Square value indicates the proportion of the variance in depression that can be explained by the predictor variables is 49.8%. The variables significantly predicted depression, $F(10, 215) = 21.31$, $p < .01$, $R^2 = .498$. The coefficients indicate that hope, gratitude, extraversion, and emotional stability all significantly negatively predicted depression ($p < .05$).

3.4 Qualitative Analysis

The study featured two qualitative questions in the survey, leaving open text boxes for participants to fill in what worried and excited them about starting university. The answers within the data were exported to a Word document. Thematic analysis was used to organise the data and group it into categories. The quotes throughout this chapter have had spelling corrected where necessary for clarity.

3.4.1 Worries

The question was an optional part of the survey, and 115 participants (50.9%) filled out answers to ‘what are your biggest worries about beginning university?’. Some identified one worry, while some identified several. The list was exported and then read to identify patterns throughout the answers. A list of common ‘worries’ was compiled and then grouped into overarching themes. A list of responses can be found in Table 8, in Appendix A.8, and the themes can be found below in Table 9.

Table 9*List of themes and descriptions*

| Theme | Description |
|------------------|---|
| Fitting In | Worries about struggling to fit in and relate to other students due to gender, language barriers, having responsibilities as a parent, or disabilities. |
| Social Life | Worries about making new friends, being able to balance their academic and social lives, and maintaining prior relationships. |
| Unfamiliarity | Worries about missing their previous routines and struggling to establish new ones. |
| Course Content | Worries about their ability to succeed at their course, and if they chose the correct path. |
| Living Situation | Worries about roommate disputes, managing housework, and for some students, potentially missing out on an aspect of student life by living at home. |
| Assessments | Worries about struggling with exams, coursework, presentations, and public speaking. |
| Finances | Worries about balancing finances, working part-time alongside studies, and not having enough money. |
| Health | Worries about struggling with physical and mental health during university. |

3.4.2 Findings

3.4.2.1 Intolerance of uncertainty

As the questions were about future events, the participants divulged worries about the future. The worries were often focused on the uncertainty of the future events, and whether or not certain negative outcomes would happen. The intolerance of uncertainty model (Carleton et al., 2007) suggests this is the first stage of worry, in which the individual feels distress over uncertain future events. This is demonstrated in many of the worries, for example:

‘I worry that if I can't find friends quick enough that people will have made friendship groups which will be hard to join/feel included.’

‘Mostly worried about not being able to cope with the work or not.’

‘Financial concerns, I'm not sure whether my maintenance loan will be enough for the whole year.’

‘Dealing with mental health issues which may get worse at uni - the unpredictability of how this will go.’

These worries detail situations that have multiple outcomes, and the worry is being caused by the uncertainty over which outcome is more likely. Intolerance of uncertainty has been found to be a strong predictor of worry (Buhr & Dugas, 2009), and the model indicates that it causes poor problem orientation as the second component, in which the individual feels they have a limited capability in solving these problems. This is also apparent within the worries listed, for example:

‘Lack of ability skills and knowledge. Uni is a completely different and large step from what I'm used to from its course work all the way to the layout of the buildings.’

‘Worrying that I may not be able to cope mentally with the pressures.’

‘My main worry is that I am not truly smart enough for the course.’

‘Feeling like I’m not as good as other students who are more intelligent than me.’

These quotes demonstrate that some students feel they are ill-equipped to deal with the things they worry about. The third and fourth component, cognitive avoidance and flawed beliefs about worry, were not apparent within the answers, but this was likely because the question did not prompt answers about how the individual felt about their feelings of worry.

3.4.2.2 Fitting in

The first category, ‘fitting in’, was significantly smaller than the other categories and each worry within it was only expressed once or twice. The category represents some smaller populations within the student population, including parents, mature students, international students, and LGBTQIA+ students:

‘Juggling single motherhood and uni workload.’

‘Going back to uni as well as being a mature student whilst others on the course are younger.’

‘Being a mature student and having never studied the topic before. Being able to catch up to the same level as everyone else.’

‘The fact that my native language isn't English, even though I consider myself speaking English very fluently.’

‘Being trans.’

Some of these worries are specific to their circumstances and might require specific support – such as parents being allowed to miss some classes due to their children’s school hours, or disabled students being supported by DSA. However, the resources that will be developed in the intervention in this research will be designed to be applicable to many different situations, including worries in this category.

3.4.2.3 Social life

The worries listed in this category fit the theme of worrying about a social life.

Students are often leaving their established, familiar social life and adjusting to a new social environment (Gadzella, 2004). Responses varied between feeling worried about not making friends or even being able to approach other people:

‘Being alone on breaks between learning and approaching people.’

‘I worry that if I can't find friends quick enough that people will have made friendship groups which will be hard to join/feel included.’

‘I haven't had friends for a long time, and I am extremely self-conscious.’

‘I am excited about making friends, I just hope these friends are similar to me.’

Students, most often, begin university directly after sixth form or college, having maintained friendships at school for several years. At university, new friendships form and many students worry about their ability to make new friends, as well as maintaining their old friendships and romantic relationships. Poorly maintained relationships with family and friends can lead to increases in stress (Gupchup et al., 2004). This was represented more strongly in other worries, such as:

‘Not seeing my friends and family at home as much as I would like.’

‘Not being able to see my boyfriend and having to meet new people.’

Other responses indicated students worried about being able to maintain a social life alongside university and/or a job:

‘Workload and life balance.’

‘Juggling the workload alongside family life.’

‘Also managing a job with a social life and a degree.’

The social life worries were just as prevalent as the course content and assessment worries, indicating that students valued their social life as important as their degree. Creating a social network has been found to make the entire transition easier for students (Kantanis, 2000). Students are expected to establish an entirely new social life alongside committing time to their education which provides a significant amount of pressure (Hofer et al., 2009).

University is not just about the education a student receives, but about a step into adulthood, including new experiences. There is also a significant emphasis on social experiences specific to university students, such as societies and student nightlife, with

many students attending 'freshers' week' events at clubs and bars. However, these are conflicting priorities, and are sometimes incompatible (Grund, 2013), leading to students struggling to maintain a work-life balance (Pluut et al., 2015). It is vital for students to maintain a social support network, as it can lead to increased drop-out rates (Mtshweni, 2019).

3.4.2.4 Unfamiliarity

University is often associated with a 'fresh start', as many students are leaving their hometowns, their friendships from school, and moving away from their family. This might be exciting, but it is an overwhelming amount of change in a short space of time. Many students suffer from homesickness due to moving away from the familiar and into the new (Thurber & Walton, 2012). Alongside this, the style of learning changes, the grading system changes, and the place itself changes. This is a lot of unfamiliarity to deal with, and a significant number of worries focused on the unpredictability of these issues:

'Interacting with unfamiliar people on a daily basis.'

'Uni is a completely different and large step from what I'm used to from its course work all the way to the layout of the buildings.'

'Missing vital information about important dates or times.'

'Finding where to go around the campus and the city as I am new to Sheffield and new to the University.'

'Finding my way around/getting lost.'

Many students will have experienced these types of worries in the past, for example during the transition period to secondary school. However, for many it will have been several years since they last had to adjust to new surroundings and people. In research about place attachment, often individuals use their familiarity with their place of living as a part of their self-identity (Droseltis & Vignoles, 2010). Moving away from home for university involves the removal of the home they are comfortable with and plunges the students into a brand-new environment.

3.4.2.5 Course content

Many responses detailed worries about the leap in difficulty from sixth form or college to university. The style of learning is different to that of a school, with lectures and seminars instead of classroom learning. While the academic pressure can be viewed as a positive challenge, adjusting to a university course can be daunting (Kumaraswamy, 2013). The participants listed several worries about the difficulty of the content itself, and whether they would be able to handle it. Some claimed they weren't 'clever enough' to attend their course:

'I'm most worried about the how difficult the course will be.'

'Worrying about not being academically bright enough to succeed.'

Some of the other worries revolved around the style of learning, specifically engaging in independent learning:

'I'll have to keep my procrastination in check once I start studying.'

'Being more of an independent learner and making myself more productive.'

‘Workload, being independent and expected to be very creative and productive.’

Prior to their university experience, learning was likely done mostly within daily classes, alongside some independent study at home. Adapting to independent learning means that students will spend more time alone, in charge of their own study hours, potentially leading to feelings of loneliness and worry (Weckwerth & Flynn, 2006). In a mixed-methods study examining the adjustment of 234 first-year students found that some students did not feel they had successfully adapted to the academic style until second year (Charalambous, 2020). It is clear in some of the worries that they feel they are expected to be independent learners, and the pressure of meeting expectations can lead to students dropping out of their courses (Smith & Wertlieb, 2005).

There were also concerns about students having a lack of support at university:

‘Not having family around to support me when the stress or work may become too much.’

‘Not getting the help I need.’

‘The amount of support I get.’

These worries link back to that feeling of uncertainty and unfamiliarity. Students that feel uncertain about the future may feel more comfortable if they had access to regular support. Students that perceive they have a limited amount of support available may be more inclined to drop out of university (Mah & Ifenthaler, 2018). Many students are not informed about the available support services they can access, leading to a feeling of helplessness (Trautwein & Bauss, 2017).

3.4.2.6 Living situation

Most students come to university straight from home at 18, and therefore it is the first move of their adult life. Different living situations bring their own unique problems and therefore worries. Students moving into Halls of Residence worried about having not chosen their roommates, and potentially having 'bad' ones:

'Managing and organising the flat.'

'Not getting on with flat mates.'

'Not being friends with my roommates.'

Students remaining at home, or living with their partner and/or children, worried about 'missing out' as they weren't living with other students. In other studies, it has been found that students living off-campus had higher levels of anxiety in comparison to those on-campus (Lester, 2013; Othieno et al., 2014). This may be due to off-campus students struggling with the feeling of missing out on social bonding experiences with roommates and other students:

'I'm worried that it's gonna be harder to find friends when you are not living in student halls on your first year.'

'Missing out on things as I am living at home.'

Some participants, presumably students moving out for the first time, listed concerns about developing new skills such as cooking and cleaning, which indicates that they may have been dependent on other people to support them in this way:

'Learning to cook.'

Students are often found to have negative eating habits, decreasing their intake of fruit, vegetables, and increasing their sugar and alcohol intake, which is linked to increases in psychological distress (Deasy et al., 2016).

3.4.2.7 Assessments

Students coming directly from school will have completed A Levels, which are usually exams and/or coursework. This should prepare them for university, as exams and coursework make up the bulk of graded material. However, many participants listed worries about failing exams, not understanding their assessments, or even worrying that they might struggle with new types of assessments:

‘The workload & how hard exams/assignments are.’

‘Completing assignments correctly.’

‘Doing well in coursework.’

A review of qualitative research about academic stressors indicated that examinations made up a significant percentage of the reported stressors (20%; Hurst et al., 2013), specifically focused on the time constraints within the exams rather than the subjects. Students are increasingly viewing a degree as the way into a competitive job market (Thurber & Walton, 2012), and so it is expected that many will worry about failing exams and coursework. This is related to the worries listed earlier focused on the adjustment to independent learning; if students cannot adjust, they will face difficulties in their assessments.

Presentations and public speaking were also listed several times, indicating that students were insecure about presenting their work to classrooms:

‘Embarrassing myself, doing presentations in front of classmates.’

‘Public speaking and presentations.’

This is a worry shared by many people who dislike public speaking or feeling like the spotlight is on them. In a review of 18 empirical studies on public speaking anxiety, public speaking was found to be a distinct subtype of social anxiety (Blöte et al., 2009).

3.4.2.8 Finances

Due to the increase in tuition fees, alongside the increased cost of living, many students are unable to support themselves from their maintenance loan alone. The student loans system runs on a household income-based calculation, but this fails to consider families that are unwilling to support their children once they have left home. Students have an increasing amount of financial stress (Heckman et al., 2014). Many students now work part-time alongside full-time courses, sacrificing crucial study hours to supplement their income:

‘Managing my own finances and budgeting my money weekly.’

‘Also managing a job with a social life and a degree.’

‘Managing money/ managing a job and university.’

‘I’m worried about getting a job to finance everything. To basically eat and survive.’

Some mature students are giving up a full-time salary in order to attend university, meaning that their income is significantly reduced:

‘Being paid half of what my salary is in student loans and having to budget much harder.’

Working part-time hours has been found to overwhelm students’ timetables (Robotham, 2012), causing them to spend more time at their part-time employment than their timetabled classes. Financial concern was found to be one of the main stressors for university students in a study examining 19 stressors (Beiter et al., 2015).

3.4.2.9 Health

These worries largely centred around mental health, specifically the unpredictable nature of mental health fluctuations. A study examining stressors for university students found that general health was one of the ten highest concerns for students (Beiter et al, 2015). A downward spiral in mental health can cause extreme difficulty with attending classes, completing assignments, and socialising with friends:

‘Having a depressive episode in term time.’

‘Falling behind because of my mental health issues.’

‘Dealing with mental health issues which may get worse at uni - the unpredictability of how this will go.’

Burnout, characterised by feelings of inefficiency and exhaustion, is considered to be a common problem among students (Lin & Huang, 2012) and it can lead to decreases in student wellbeing. Burnout tends to increase throughout the academic years and

therefore affect students more as their degree progresses (Lin & Huang, 2012).

Another common problem with students is an irregular sleeping pattern due to many social events taking place late at night, and then lectures early in the morning. Poor sleeping habits have been found to negatively affect mental health (Orzech et al., 2011).

3.4.3 Conclusion of findings from the worry question

The results demonstrate a variety of worries, focused on both academic and interpersonal issues. Interestingly, both types of issue were equally weighted, indicating that students worry about the educational and social sides of university life at the same level. Within the categories, there were some worries specific to one type of student, such as a mature or international student. However, the majority of the worries listed were applicable to any student and are likely shared by most students.

Many worries were also applicable to students in second and third year, as the academic pressure increases each year, and students often move to a new house each year of study. While some worries will be alleviated after a short amount of time, such as getting lost in a new city, a significant amount of the worries above will persist and potentially worsen without support. It is important that students are supported and provided with ways to improve their worry levels during transition periods.

3.4.4 Excitement

The question was an optional part of the survey, and 164 participants (72.57%) filled out answers to 'what are you most excited about university?'. Some identified one item, while some identified several. The list was exported and then read to identify patterns throughout the answers. A list of common 'excitements' was compiled and then grouped into overarching themes. The themes can be found below in Table 10.

Table 10

List of themes and descriptions

| Theme | Description |
|-----------------|--|
| Social Life | Feeling excited about making new friends, meeting new people, enjoying student social activities, societies, and nights out. |
| Course Content | Feeling excited about restarting education, studying something they actively chose to do, gaining new knowledges and enjoying placement years. |
| Personal Growth | Feeling excited about living independently from family and old routines, having new experiences, living in a new place and building a future. |

3.4.4.1 Comparison to worries

When examining the worries and excitement, there is a direct overlap. Many participants worried about the same things they felt excitement about. This suggests that students may experience more worry about the things that excite them, due to fear of their expectations not being met. For example, students excited about living independently may worry about it not being what they expected or worry about not excelling at independent living.

There was significantly less variation within the positive aspects than the worries, and many of them were less specific. When reporting worries, students reported specific anxieties about each category:

‘Having new roommates, interacting with unfamiliar people on a daily basis,
interacting with people outside of my family on a daily basis.’

In comparison, students described being excited about broader terms, such as independence, education, and a social life, rather than specific things about each of those terms:

‘Meeting new friends and the challenges ahead.’

‘Meeting new people and build my future.’

3.4.4.2 Social life

Students seemed to show just as much excitement for the upcoming changes to their social life as they did for the university experience itself. Students reported excitement about meeting new people and making new friends:

‘The course and new friends.’

‘Being around like-minded peers.’

‘Living independently with the opportunity to meet new people in a new place.’

While this was found to be a common cause of excitement among students, it was also one of the most prevalent worries reported:

‘I haven't had friends for a long time, and I am extremely self-conscious.’

This indicates that students place a lot of emphasis on the importance of creating and maintaining a good social life with many connections throughout their time at university. This may be due to them facing the loss of many of their prior friendships as they settle into adulthood and feeling alone in their experience.

3.4.4.3 Course content

Participants reported feeling excited about their upcoming studies, particularly focused on studying by choice, as opposed to prior obligatory education:

‘Doing the course I’m interested in.’

‘Studying a subject I am really interested in.’

‘Studying my course! It's something that I really love and am passionate about so I'm looking forward to learning more.’

Students appeared to place equal importance on their academic life and their social life, indicating that the prospect of learning and making new friends were equally exciting to the participants.

There were also mature students who looked forward to restarting their education after time away:

‘To be back learning and getting up with a purpose to do well in my education.’

‘To get back into education after a year off working full time.’

While mature students have some different worries and hopes when it comes to their university experience, they also seemed to share many of the same worries and hopes as the other students. This suggests that the intervention development period should

take into account shared experiences, and differing experiences of different student groups.

Students also reported being excited about the long-term goal of graduating with a degree:

‘Learning new things and beginning a career.’

‘Getting a degree.’

This demonstrates that students are often looking at the ‘big picture’ of their overall achievements, rather than examining the more imminent changes and choices they will make.

3.4.4.4 Personal growth

Students reported being excited about the personal growth they hoped to make while at university:

‘Learning and growing, opening my mind to new situations, people, places and experiences.’

‘To grow my confidence and independence. To learn new skills.’

‘Being able to hopefully overcome the challenges I face and come out stronger/surprise myself.’

This theme involved the most detailed responses, indicating that participants felt particularly strongly about their personal growth at university. This shows that while students find upcoming series of changes worrying, they also still remain excited about their experiences during the changes. They also seem to show hope for their future

selves, believing that their university experience will provide them with new skills and personal development.

3.4.4.5 Conclusion for excitement

There is significant overlap between things that participants worry about, and things that they find exciting about the future, which suggests that students may often worry about things that they look forward to. This may be due to students ruminating on the potential future outcomes of the changes they value as important, imagining both positive and negative outcomes. The development of an intervention addressing student worry may therefore want to also focus on experiences that students look forward to, as there may be significant overlap.

3.5 Discussion

3.5.1 *Character strengths*

Hope and optimism significantly predicted anxiety and worry, with hope also significantly predicting depression, which supports previous research concerning these character strengths. Studies have indicated that hope can decrease anxiety and worry (Anderson et al., 2017; Cheavens et al., 2006). Students with higher levels of hope are likely to feel positive about their academic and personal goals and find realistic pathways to reach those goals. Students with higher levels of hope are also likely to overcome obstacles they face in the pursuit of their goals and continue to feel positive about their goals despite those obstacles (Snyder, 2000). The results of Study 1 suggest that hope significantly predicted all three of the outcome variables during a transition period, indicating that hope may be a vital attribute to have during times of great change. Previous research has also indicated optimism has a negative relationship with anxiety (Bagana et al., 2011; El-Anzi 2005). Students with higher levels of optimism are more likely to feel positive facing stressors and expect a positive outcome (Park et al., 2004). Here, optimism significantly predicted anxiety and worry, suggesting that optimistic individuals were less likely to feel anxious and worried during the transition period; however, it did not predict depression, which was unexpected as it was assumed that being pessimistic would be associated with depression. Hope and optimism are often considered as similar concepts, but this suggests that they differ in their contribution to depressive behaviours. This may be due to hope being focused on the self and goal attainment, which would be negatively associated with depressive

symptoms such as lethargy and negative self-perception, instead of optimism which is the expectation of good things to happen to the individual.

Gratitude was found to be a predictor of anxiety and depression, which is supported by previous research (Kerr et al., 2015; Southwell & Gould, 2017). Students with higher levels of gratitude are more likely to focus on positive outcomes and feel grateful for the experiences they have, seeking the silver lining in any negative experience (Wood et al., 2010). However, gratitude was not found to be a significant predictor of worry, suggesting that students with high levels of gratitude still experienced distressing levels of worry. This may be due to the transition period and the pressure of the stressors, forcing even students with high levels of gratitude to worry excessively. This will be examined in the follow-up study, to see how the relationship compares pre- and-post transition period.

Curiosity was not found to be a significant predictor of worry, depression, or anxiety, indicating that while students were curious and wanted to explore their upcoming changes, it did not impact how worried they were. This is reflected in the stressor table (Table 5) in which students indicated that on average, they were both worried and excited about all the changes they would experience at university. While they were curious and eager to explore, they also worried about potential negative outcomes.

The stressors table (Table 5) indicates that worry and excitement are often felt together, rather than separately, about a variety of changes in a transition period. This may suggest a foundation for the development of the intervention; participants could be taught to re-appraise their worries by focusing on the positive, exciting aspects of the potential situation. This could be done through all four character strengths explored here. With hope, it would be to set a new goal and build motivation towards

it. With gratitude, it would be to find the silver lining and see the positive of a situation. With curiosity, it would be to explore new areas within the transition to build enjoyment. With optimism, it would be to re-frame the situation in a more positive light and mentally picture good outcomes.

3.5.2 Personality and resilience

Depression, worry, and anxiety were significantly predicted by extraversion and emotional stability, and anxiety was also predicted by openness. It is likely that students with high levels of extraversion and openness would engage more with classes, social events, and other students, helping to reduce their worries about making new friends (Bakker et al., 2015). However, only anxiety was predicted by openness, suggesting that depression and worry were not associated with being open to new experiences. This was unexpected, as often individuals with depression or worry may isolate themselves, closing themselves off to new experiences. Students with high levels of emotional stability will feel calmer and more positive about the experiences ahead of them, and therefore be less likely to feel worried or anxious about the transition (Serebryakova et al., 2016).

Conscientiousness and agreeableness did not predict depression, worry, or anxiety. On the TIPI, conscientiousness is measured by participants indicating how much they identify with being 'dependable, self-disciplined' and 'disorganised, careless'. In the qualitative analysis, it was found that students worried about procrastinating and not being organised, which would indicate that conscientiousness was a predictor of worry. Agreeableness is measured by 'critical, quarrelsome' and 'sympathetic, warm'. This links again to the qualitative analysis in which students reported worrying about

being liked by other students, indicating that agreeableness was a predictor of worry. This may indicate that students felt worried or anxious about being perceived as conscientious or agreeable, rather than being worried because they were conscientious or agreeable. The Big 5 have been found to be associated with the outcome variables in students throughout prior research in varying degrees (Hong et al., 2021; Milić et al., 2019). The results here suggest that during the academic transition period, only extraversion and emotional stability were associated with all three outcome variables, with openness also predicting anxiety.

Resilience also did not significantly predict depression, worry, or anxiety, which was an unexpected result. Resilience has been associated with reduced anxiety in previous research (Ahmed & Julius, 2015; Poole et al., 2017), however it is often a mediating factor between a variable and anxiety rather than a direct predictor. This may indicate that resilience plays a mediating role but does not directly affect anxiety and worry. The possibility of resilience as a mediating role will be explored in Chapter 4.

3.5.3 Stressors during transition periods

Students face a variety of stressors, and a secondary aim of this study was to identify the stressors students perceived as the most worrisome. In a list of suggested stressors, the scores indicated that students felt a mixture of worried and excited about living independently, moving to a new town, meeting new people, managing their finances, starting classes, and moving away from their family. The finances stressor caused the most worry in this list. There were no stressors listed that caused excitement without worry, clearly demonstrating that students worried about the situations that also caused them excitement, suggesting a nervous anticipation of

future events. This is similarly represented in the qualitative analysis, with the main categories being 'social life', 'unfamiliarity', 'living situation', 'course content', 'assessments', 'finances', and 'health'. Students worried equally about academic problems and social problems, indicating that they worried about their new life as a whole rather than specifically the university-related issues such as coursework or exams.

Many of the worries represented issues that would be ongoing throughout university, such as coursework, assessments, and financial struggles. However, other worries were issues that were only pertinent to the beginning of first year, such as moving into halls of residence and getting used to moving around a new city. The persistent worries would cause sustained or repeated periods of worry, and therefore be more important to target, which was considered when designing the intervention.

3.5.4 Limitations

A limitation of this study is the use of the TIPI. It was selected for its length to prevent the survey response time being longer than fifteen minutes, as the measure is significantly shorter than other measures of the Big Five Personality Factors. However, it may not have been sensitive enough to fully capture the personality factors. In future research, it may be more prudent to do separate studies involving the Big Five so that longer, more thorough measures can be utilised without extending the survey time beyond a reasonable length.

3.5.5 Implications

This study establishes the variety and severity of stressors that students face when starting university. It also provides evidence for certain character strengths and personality factors predicting anxiety and worry, suggesting that positive psychology interventions focused on these variables may help alleviate anxiety and worry.

Character strengths, while similar to personality factors in them being traits, are malleable and can be altered (Gander et al., 2019). An intervention focused on malleable character strengths may therefore reduce anxiety and worry in undergraduates.

3.5.6 Conclusion

Undergraduates face a wide range of stressors that cause worry, ranging from academic problems such as exams to social problems such as making new friends.

Financial stressors were found to be the most worry-inducing, due to students having to take out loans and work part-time during their full-time university course. This study found that hope, optimism, gratitude, extraversion, emotional stability and openness predicted levels of depression, anxiety and worry. Interventions focused on developing these factors will benefit undergraduates through transition periods.

4. Study 1 Time 2

This chapter will examine the second time point of Study 1 and compare it to the results from the first time point. This is a separate chapter to ensure clarity in the results. The quantitative and qualitative results are again divided into separate sections and each compared to the results from Time 1.

4.1 Introduction

The previous chapter examined the relationships between character strengths, personality factors, resilience, anxiety and worry in undergraduate students during a transition period. The current study will provide an analysis of the change in depression, anxiety, worry, hope, gratitude, optimism, curiosity, the Big 5 personality factors, and resilience, once the transition period has passed. In order to examine the change in variables over time, a different set of students were recruited after their transition period.

The transition period will have involved several stressors specific to the first month of university, for example moving into halls of residence, or finding their way around the city. After four months at university, many of these stressors will be alleviated, whereas some stressors will persist such as establishing friendships and coping with the workload.

The transition period will also have brought positive experiences, such as bonding with new people, enjoying independent living, and starting a new educational system different from sixth form and secondary school. However, it is still a period of significant change, in which students must detach themselves from a life dependent on

earlier friendships and family and establish themselves in adulthood. They may have found themselves facing problems they do not have the resources or experience to cope with, such as struggling with budgeting and financial strain. The follow-up survey examined the change in mental health and positive psychological resources after the students had adjusted to their new lives.

4.2 Methodology

4.2.1 Participants

102 first year undergraduate students from UK universities were sampled through opportunity sampling. 56 of the participants identified as men, 38 as women, and 7 as other genders. Participants ranged in age from 18-32 years, with 89% of participants being 18-20. This is a higher percentage than overall UK undergraduate student demographics in which 68.4% of students were between 18 and 21 years of age upon starting their degree (Equality, Diversity, and Student Characteristics Data, 2022). 55.4% of participants lived in university accommodation, with 12% living with roommates in rented accommodation and 13% living at home. 92% of participants reported they were white British. Participants were recruited from a number of universities through social media and email advertisements and were taking different courses. In G*Power, *a priori* calculations were performed that suggested a sample of 89 would be appropriate to perform two-tailed linear multiple regression including ten predictor variables.

4.2.2 Mental health

Participants were asked to select any mental health problems they had a diagnosis for, although the question was optional, and they could tick 'prefer not to say'.

11 participants identified as having one mental health problem, with the problems being depression (n=5), GAD, (n=2), OCD (n=1), eating disorder (n=1) and 'other' (n=2).

22 participants identified as having two or more mental health problems. 13 participants had two disorders, 6 participants had three disorders, 2 participants had

four disorders, and 1 participant had 7 disorders. Of the participants with two disorders, the most common combination was GAD and depression (n=12), with one other participant reporting a combination of depression and PTSD. Of the participants with three disorders, all participants had a combination of GAD and depression with a third mental health problem. These were eating disorder (n=2), personality disorder (n=1), and 'other' (n=3). The participants with four disorders both had GAD, depression, and PTSD. One had an eating disorder, and other had OCD. The final participant had GAD, depression, PTSD, OCD, an eating disorder, a personality disorder, and 'other'.

63 participants stated they had no current mental health diagnoses. When asked to list any treatment participants were receiving for their mental health, 16 participants listed combinations of antidepressants, counselling, cognitive-behavioural therapy (CBT), talking to their GP, and having therapy animals. 3 participants indicated specifically that they did not receive support or treatment for their mental health problems. Medication was the most commonly reported treatment (n=14), predominantly treating GAD, depression, or both. Some participants reported undertaking counselling (n=4), with two of those participants indicating a combination of medication and counselling. Two participants indicated they were on a waiting list for therapy.

4.2.3 Measures

The measures used at Time 1 (Chapter 3) were also used at Time 2. The list is as follows:

1. Hope: The Adult Dispositional Hope Scale.
2. Gratitude – The Gratitude Questionnaire – 6
3. Optimism – The Life Orientation Test – Revised
4. Curiosity – The Curiosity and Exploration Inventory
5. Resilience – The Brief Resilience Scale
6. Anxiety/Depression – The Hospital Anxiety and Depression Scale
7. Worry – The Penn State Worry Questionnaire
8. The Big 5 Personality Factors – The Ten-Item Personality Inventory.

4.2.3.1 Worries about university

A 7-item question list developed for this research. Each item is a potential concern or challenging experience students may have been undertaking during university: moving away from home, living independently, making new friends, starting classes, managing own finances, and getting used to a new city/town/place, and having a job. Each item is scored on a 5-point Likert scale (with an option for 'not applicable') from 'I was really excited about it' to 'I'm really worried about it'. Each item is considered separately, not as an overall measure.

4.2.3.2 Worries about university: text box

An open text box that gives participants the opportunity to write down anything that has been particularly worrisome for them recently.

4.2.3.3 Enjoyment of university: text box

An open text box that gives participants the opportunity to write down what they have most enjoyed so far about university. This will not be used in the analysis; it serves to help participants end the survey feeling positive about university, rather than focusing on their worries.

4.2.4 Procedure

First-year undergraduate students were recruited for the first survey through three different methods:

1. Students from the initial study were approached to participate in the follow-up.
2. SONA: first-year psychology students were recruited who gain Psycreds for one of their modules. The survey was available to access for 15 Psycreds on the SONA system, listed alongside a short advertisement.
3. Social media: the survey advertisement and link were posted in several Facebook groups advertised to first-year undergraduate students.

Participants read an information sheet including a section on GDPR, and then indicated their consent to the study by clicking 'yes' to a series of statements. If they did not click 'yes' to all of the statements, the survey would terminate. Demographic questions were answered first, including the optional disclosing of mental health diagnoses and treatment. The rest of the measures followed in the following order: ADHS, PSWQ, GQ-6, HADS, CEI-II, LOT-R, TIPI, BRS, the question list about worry, and finished with the qualitative questions. A short debriefing form was provided for the participants to read. The contact information for the researcher and supervisors was included.

4.2.5 Ethics

An ethics proposal was written and accepted by Sheffield Hallam University's ethics committee: ER6928418.

4.2.6 Data treatment

The quantitative data was exported from Qualtrics into an SPSS document. The data was cleaned, reverse scores and totals were computed, and the data was analysed using descriptive statistics, correlation analyses, and linear multiple regression analyses.

The qualitative data was exported from Qualtrics into a Microsoft Word document. Thematic analysis was used to identify patterns and themes which were then discussed.

4.2.7 Scale reliability

The alpha levels for the scales were mostly acceptable at scores significantly above 0.70, as seen in Table 11; however, the TIPI scales for openness, conscientiousness, and agreeableness fall below the acceptability level. This is a common problem with the structure of the TIPI as it has only two items per sub-scale.

Table 11

Cronbach's alpha scores for each variable

| Variable | Alpha |
|---------------------|-------|
| Anxiety | 0.90 |
| Depression | 0.86 |
| Worry | 0.95 |
| Hope | 0.91 |
| Gratitude | 0.89 |
| Curiosity | 0.92 |
| Optimism | 0.87 |
| Resilience | 0.93 |
| Extraversion | 0.79 |
| Agreeableness | 0.51 |
| Conscientiousness | 0.61 |
| Emotional Stability | 0.81 |
| Openness | 0.41 |

4.3 Quantitative analysis

4.3.1 Descriptive statistics

As seen in Table 12, participants showed 'borderline' levels of anxiety, suggesting their anxiety levels were problematic but not yet grounds for a diagnosis of an anxiety disorder. This was similar to the sample at Time 1. However, participants in Time 2 differed to those in Time 1 as they had higher levels of depression. Participants at Time 2 on average had moderate levels of worry.

Participants also seemed to show moderate levels of hope, gratitude, optimism, curiosity, and resilience. When examining the subscales of the TIPI, participants showed moderate levels of emotional stability, with higher scores for extraversion, agreeableness, openness, and conscientiousness.

The sample at Time 2 was smaller than the sample at Time 1, and did not consist of the same students, so there should be caution in interpreting the results. However, due to the similar nature of the demographics, there is reasonable confidence in the similarity of the samples.

Table 12*Descriptive statistics for each variable*

| Variable | Mean | Std. Dev |
|---------------------|-------|----------|
| Anxiety | 10.31 | 4.79 |
| Depression | 7.58 | 2.43 |
| Worry | 52.51 | 13.90 |
| Hope | 39.22 | 9.99 |
| Gratitude | 28.61 | 6.74 |
| Curiosity | 29.15 | 8.09 |
| Optimism | 17.41 | 4.94 |
| Resilience | 17.28 | 4.85 |
| Extraversion | 8.23 | 2.75 |
| Agreeableness | 9.06 | 2.28 |
| Conscientiousness | 8.72 | 2.53 |
| Emotional Stability | 7.54 | 2.80 |
| Openness | 9.19 | 2.19 |

4.3.2 Stressors

Descriptive statistics were generated for the table of stressors given to participants to score from 1-5 based on how worried and excited they felt, as shown in Table 13. The stressors were: living independently without assistance, moving away from their parents and into their own home, making new friends at university, undertaking the classes in their respective courses, managing their own finances, living in a new city or

town, and managing a job alongside their course. Each item had a 'not applicable' option.

The mean scores indicate that on average, students felt a mixture of worried and excited about every stressor. There was no stressor that fell into the 'just excited' category. Worries about finances and getting a job were the highest at 3.11 and 3.27 respectively.

Table 13

Mean scores and standard deviations for each stressor

| Variable | Mean | Std. Dev | N |
|--------------------|------|----------|-----|
| Independent Living | 2.56 | 1.10 | 91 |
| Moving Home | 2.57 | 1.10 | 91 |
| New Friends | 2.85 | 1.25 | 100 |
| Starting Classes | 2.71 | 1.14 | 99 |
| Finances | 3.11 | 1.17 | 98 |
| New City | 2.43 | 1.07 | 88 |
| Getting a job | 3.27 | 1.05 | 67 |

4.3.3 Correlations

Pearson correlations were produced to explore the relationships that anxiety, worry, and depression had with the other variables, shown in Table 14. The character strengths, resilience, extraversion, and emotional stability are all negatively associated with anxiety, worry, and depression. Openness, agreeableness, and conscientiousness are not correlated with worry or anxiety but are negatively correlated with depression.

Table 14

Correlations between variables

| Variable | Anxiety | Sig | Worry | Sig | Depression | Sig |
|---------------------|---------|------|-------|------|------------|------|
| Hope | -.60 | <.01 | -.56 | <.01 | -.73 | <.01 |
| Gratitude | -.33 | <.01 | -.22 | .03 | -.60 | <.01 |
| Curiosity | -.45 | <.01 | -.55 | <.01 | -.46 | <.01 |
| Optimism | -.74 | <.01 | -.75 | <.01 | -.60 | <.01 |
| Resilience | -.66 | <.01 | -.67 | <.01 | -.56 | <.01 |
| Extraversion | -.39 | <.01 | -.43 | <.01 | -.51 | <.01 |
| Agreeableness | -.02 | .87 | -.12 | .25 | -.33 | <.01 |
| Conscientiousness | -.14 | .16 | -.10 | .34 | -.42 | <.01 |
| Emotional Stability | -.77 | <.01 | -.79 | <.01 | -.54 | <.01 |
| Openness | -.09 | .39 | -.13 | .21 | -.40 | <.01 |

4.3.4 Inter-correlation analyses

Inter-correlation analyses were performed to examine relationships between the predictor variables, shown in Table 15. The character strengths all have significant positive associations with each other, resilience, extraversion, conscientiousness, and emotional stability. However, resilience, curiosity and optimism have no significant association with agreeableness, and optimism is not associated with openness. Within the personality factors, emotional stability does not correlate with openness or agreeableness.

Inter-correlations were also performed to examine the relationships between the dependent variables. Anxiety positively correlated with depression ($r(100)=.60, p<.01$) and worry ($r(100)=.80, p<.01$), and worry also positively correlated with depression ($r(100)=.40, p<.01$).

Table 15*Inter-correlations between variables*

| Variables | Hope | Gratitude | Curiosity | Optimism | Resilience | Extraversion | Agreeableness | Conscientiousness | Emotional Stability | Openness |
|---------------------|------|-----------|-----------|----------|------------|--------------|---------------|-------------------|---------------------|----------|
| Hope | - | .73** | .67** | .76** | .70** | .61** | .20* | .54** | .63** | .36** |
| Gratitude | - | - | .50** | .41** | .43** | .52** | .46** | .53** | .34** | .51** |
| Curiosity | - | - | - | .62** | .66** | .53** | .10 | .21** | .53** | .48** |
| Optimism | - | - | - | - | .70** | .47** | .07 | .39** | .77** | .11 |
| Resilience | - | - | - | - | - | .49** | .07 | .30** | .74** | .26** |
| Extraversion | - | - | - | - | - | - | .24* | .34** | .40** | .32** |
| Agreeableness | - | - | - | - | - | - | - | .34** | .03 | .47** |
| Conscientiousness | - | - | - | - | - | - | - | - | .23* | .21* |
| Emotional Stability | - | - | - | - | - | - | - | - | - | .12 |
| Openness | - | - | - | - | - | - | - | - | - | - |

* Significant, equal to or less than .05

** Significant, equal to or less than .01

4.3.5 Predictor variables and anxiety

Multiple linear regression was selected as an analysis appropriate to examine how the variables may relate to anxiety. The ten predictor variables (character strengths, personality factors, and resilience) were included in the analysis. The R Square value indicates the proportion of the variance in anxiety that can be explained by the predictor variables is 69.1%. The variables significantly predicted anxiety, $F(10, 91) = 20.38$, $p < .001$, $R^2 = .69$. The coefficients indicate that curiosity, optimism, conscientiousness, and emotional stability negatively predicted anxiety ($p < .05$).

4.3.6 Predictor variables and depression

Multiple linear regression was selected as an analysis appropriate to examine how the variables may relate to depression. The predictor variables (character strengths, personality factors, and resilience) were included in the analysis. The R Square value indicates the proportion of the variance in depression that can be explained by the predictor variables is 62.9%. The variables significantly predicted worry, $F(10, 91) = 15.40$, $p < .001$, $R^2 = .63$. The coefficients indicate that hope, gratitude, curiosity, and openness all significantly negatively predicted depression ($p < .05$).

4.3.7 Predictor variables and worry

Multiple linear regression was selected as an analysis appropriate to examine how the variables may relate to worry. The predictor variables (character strengths, personality factors, and resilience) were included in the analysis. The R Square value indicates the proportion of the variance in worry that can be explained by the predictor variables is

74.3%. The variables significantly predicted worry, $F(10, 91) = 26.27$, $p < .01$, $R^2 = .74$.

The coefficients indicate that optimism, extraversion, agreeableness, conscientiousness, and emotional stability negatively predicted worry ($p < .05$).

4.3.8 Comparison between Time 1 and Time 2

Independent samples t-tests were performed to compare the means of each variable between the two time-points. Where Levene's Test for Equality of Variances was significant, the degrees of freedom were adjusted, as shown in Table 16.

The t-tests indicate that depression, worry, hope, gratitude, conscientiousness, and openness are significantly different at Time 1 and Time 2. When examining the mean scores, depression was significantly higher by Time 2, whereas worry, hope, gratitude, conscientiousness, and openness had all decreased. While worry had decreased significantly at Time 2, the scores still fell within the 'moderate' category, indicating that it had not decreased to the 'normal' category. Depression, however, was more dramatically elevated at Time 2, going from a 'normal' level to a 'borderline abnormal' level. Hope, gratitude, conscientiousness, and openness all significantly decreased, but remained within the mid-range of each measure.

Anxiety, curiosity, optimism, resilience, extraversion, agreeableness, and emotional stability were not significantly different at the two time points, suggesting that anxiety continued to be elevated, the personality factors continued to be mid-range, and curiosity and optimism continued to be at moderate levels.

Table 16*Independent samples t-tests between Time 1 and Time 2*

| Variable | T | df | Sig. | Mean Time 1 | Std. Dev | Mean Time 2 | Std. Dev |
|---------------------|-------|--------|------|-------------|----------|-------------|----------|
| Anxiety | -.58 | 326 | .56 | 9.98 | 4.88 | 10.31 | 4.79 |
| Depression | -5.48 | 167.02 | <.01 | 4.95 | 3.53 | 7.58 | 4.22 |
| Worry | 2.43 | 326 | .02 | 56.84 | 15.39 | 52.51 | 13.90 |
| Hope | 3.30 | 326 | <.01 | 43.03 | 9.54 | 39.22 | 9.99 |
| Gratitude | 5.55 | 326 | <.01 | 33.12 | 6.86 | 28.61 | 6.74 |
| Curiosity | .67 | 326 | .50 | 29.82 | 8.49 | 29.15 | 8.09 |
| Optimism | -1.05 | 326 | .28 | 16.78 | 4.95 | 17.41 | 4.94 |
| Resilience | -.56 | 326 | .57 | 16.94 | 5.20 | 17.28 | 4.85 |
| Extraversion | -1.93 | 222.11 | .06 | 7.56 | 3.17 | 8.23 | 2.75 |
| Agreeableness | 1.53 | 326 | .13 | 9.50 | 2.51 | 9.06 | 2.28 |
| Conscientiousness | 4.28 | 217.71 | <.01 | 10.06 | 2.85 | 8.72 | 2.53 |
| Emotional Stability | -.19 | 222.44 | .85 | 7.54 | 3.23 | 7.54 | 2.80 |
| Openness | 2.68 | 326 | <.01 | 9.93 | 2.41 | 9.19 | 2.19 |

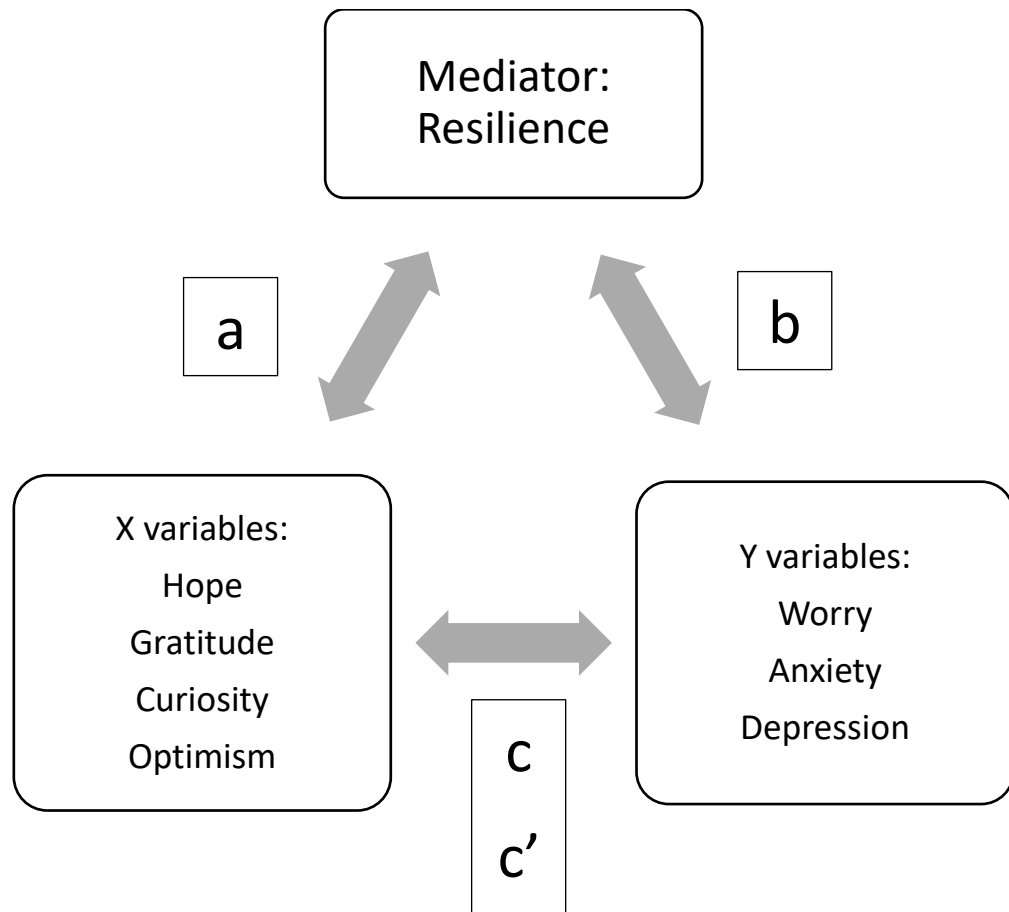
4.3.9 Mediation analyses

Resilience at Times 1 and 2 did not significantly predict depression, worry, or anxiety. This prompted further analysis, as resilience has been associated with mental health in many prior studies; however, it is often a mediating variable rather than a direct predictor. Due to this, mediation analyses were performed to examine any potential mediation of relationships, as shown in Figure 7.

Mediation analyses were performed through the PROCESS macro for SPSS by Hayes. The analyses were included to examine the relationships between the character strengths and the outcome variables of anxiety, depression, and worry, when including resilience as a mediating variable. The relationships were analysed using bootstrap confidence intervals, as the bootstrap method is considered to be more reliable in smaller samples, whereas the Sobel test is more reliable in larger samples (Özdil & Kutlu, 2019).

Figure 7

The mediation model used for the analyses



The following tables document the indirect effects of the X variables on Y variables at each time point, with 95% bootstrap confidence intervals. Each table includes the lower-level and upper-level confidence interval, and if the two levels do not straddle 0, this indicates that resilience mediates the relationship between the variables. The 95% confidence interval of the indirect effect was obtained with 5000 bootstrap resamples (Preacher & Hayes, 2008).

4.3.9.1 Hope

The relationships between hope and the dependent variables were all mediated by resilience, as the confidence intervals did not straddle zero, as seen in Table 17. Hope negatively predicted worry, anxiety, and depression as mediated by resilience.

Table 17

Indirect effects of hope on mental health using 95% bootstrap confidence intervals

| Variable | <i>B</i> | LLCI | ULCI |
|----------------------------|----------|------|------|
| Hope and Worry Time 1 | -.37* | -.52 | -.23 |
| Hope and Worry Time 2 | -.53* | -.79 | -.28 |
| Hope and Anxiety Time 1 | -.08* | -.13 | -.04 |
| Hope and Anxiety Time 2 | -.16* | -.04 | -.23 |
| Hope and Depression Time 1 | -.03* | -.06 | -.01 |
| Hope and Depression Time 2 | -.03* | -.09 | -.02 |

* Significant indirect effects as the confidence intervals do not straddle zero

4.3.9.2 Gratitude

The relationships between gratitude and the dependent variables were mediated by resilience, as the confidence intervals did not straddle zero, shown in Table 18. Gratitude negatively predicted worry, anxiety, and depression as mediated by resilience.

Table 18

Indirect effects of gratitude on mental health using 95% bootstrap confidence intervals

| Variable | <i>B</i> | LLCI | ULCI |
|---------------------------------|----------|------|------|
| Gratitude and Worry Time 1 | -.29* | -.46 | -.13 |
| Gratitude and Worry Time 2 | -.62* | -.99 | -.28 |
| Gratitude and Anxiety Time 1 | -.06* | -.11 | -.03 |
| Gratitude and Anxiety Time 2 | -.19* | -.30 | -.09 |
| Gratitude and Depression Time 1 | -.04* | -.07 | -.02 |
| Gratitude and Depression Time 2 | -.09* | -.15 | -.04 |

* Significant indirect effects as the confidence intervals do not straddle zero

4.3.9.3 Curiosity

The relationships between curiosity and the dependent variables were mediated by resilience, as the confidence intervals did not straddle zero, shown in Table 19.

Curiosity negatively predicted worry, anxiety, and depression as mediated by resilience.

Table 19

Indirect effects of curiosity on mental health using 95% bootstrap confidence intervals

| Variable | <i>b</i> | LLCI | ULCI |
|---------------------------------|----------|------|------|
| Curiosity and Worry Time 1 | -.38* | -.55 | -.24 |
| Curiosity and Worry Time 2 | -.60* | -.88 | -.34 |
| Curiosity and Anxiety Time 1 | -.10* | -.15 | -.06 |
| Curiosity and Anxiety Time 2 | -.25* | -.35 | -.16 |
| Curiosity and Depression Time 1 | -.06* | -.09 | -.03 |
| Curiosity and Depression Time 2 | -.16* | -.25 | -.08 |

* Significant indirect effects as the confidence intervals do not straddle zero

4.3.9.4 Optimism

The relationships between optimism and the dependent variables were mediated by resilience, as the confidence intervals did not straddle zero, shown in Table 20.

Optimism negatively predicted worry, anxiety, and depression as mediated by resilience.

The results were overwhelmingly in favour of resilience performing as a mediating variable in relationships between character strengths and mental health. Each relationship at both time points were mediated by resilience.

Table 20

Indirect effects of optimism on mental health using 95% bootstrap confidence intervals

| Variable | <i>B</i> | LLCI | ULCI |
|--------------------------------|----------|-------|-------|
| Optimism and Worry Time 1 | -.53* | -.81 | -.29 |
| Optimism and Worry Time 2 | -.56* | -1.07 | -.09 |
| Optimism and Anxiety Time 1 | -.08* | -.16 | -.02 |
| Optimism and Anxiety Time 2 | -.18* | -.36 | -.004 |
| Optimism and Depression Time 1 | -.06* | -.11 | -.01 |
| Optimism and Depression Time 2 | -.17* | -.28 | -.04 |

* Significant indirect effects as the confidence intervals do not straddle zero

Overall, the quantitative analysis shows that different combinations of strengths predicted anxiety, depression, and worry before and after a transition period.

Resilience was found to mediate the relationship between every character strength and every mental health variable.

4.4 Qualitative analysis

The follow-up study took place during the middle and end of the students' first year of university, once students had been through their winter examinations. The study featured two qualitative questions, one that asked, 'what has been the most exciting part about university?' and served as a mood neutraliser.

The second question asked, 'Is there anything that has happened in the past few months that has been especially worrisome for you?'. Content analysis was used to organise the data and group it into categories. To do this, the worries were listed, and then themes were identified.

4.4.1 Worries

The question was an optional part of the survey, and 32 participants filled out an answer (31.37%). Some identified one worry, while some identified several. The list was exported and then read to identify patterns throughout the answers. A list of common 'worries' was compiled and then grouped into overarching themes. These worries were then grouped into themes. The list of worries can be found in Table 21, in Appendix A.8, and the themes can be found below in Table 22.

Table 22*List of themes and descriptions*

| Theme | Description |
|---------------------|--|
| Course content | Worries about struggling with studying, assessments and exams, having difficulty securing placement years, becoming disinterested in the course, and wanting to change subjects. |
| Living situation | Worries about moving out of halls of residence and getting used to new roommates. |
| Health | Worries about deterioration in mental and physical health, struggling with new medication and thoughts of suicidal ideation and self-harm. |
| Relationships | Worries about conflicts or ending a romantic relationship, issues with family members becoming unwell or passing away, maintaining long-distance relationships, and a social life suffering due to university. |
| Financial Struggles | Worries about money, working part-time during university, and paying for childcare or nursery. |

4.4.2 Results and discussion

There are some worries from Time 1 that do not appear in Time 2; worries about the unfamiliarity of the new situation that the students were facing, and worries about not making friends or fitting in, suggesting that they were more comfortable with their surroundings and social engagements. One participant did mention that their social life was suffering, but this indicates that they did establish a social life and made friends.

These worries are more specific to the very beginning of a new situation and will likely not arise again until the students leave university and begin a new unfamiliar situation.

The majority of the worries that appeared at Time 1 also appeared at Time 2, such as examinations, living situation, and finances, suggesting that they persisted throughout the year, causing students distress over a significant period of time. Some worries are only present at Time 2 indicating that students not only have to cope with existing worries, but they are also constantly faced with new ones.

It was anticipated that after the transition period, students would feel less worried.

However, the following results indicate that post-exams, students still have many worries that have not alleviated despite the period of change settling. This is an interesting finding, as it suggests that transition periods may cause levels of worry that persist after the change has stopped. It indicates that educating students on worry and how to navigate transition periods more effectively may help to alleviate worry that persists afterwards.

4.4.2.1 Course Content

In comparison to Time 1, participants at Time 2 specifically identified assessments as a prominent worry, rather than predicted struggles in the future. This was unexpected as participants were recruited after their winter examination period. Time 1 showed students worrying about their potential inabilities and fears about a different style of learning, whereas the worries listed at Time 2 indicate that students' worries are more focused on exams and assignments:

'Studying and assignments.'

'Exams have been stressful.'

'Exams.'

Assessment periods are associated with higher levels of worry for a number of reasons; for example, there are often groups of exams in quick succession, students may procrastinate during term-time and need to catch up quickly, many exams are closed-book and require students to memorise a large volume of information. A review of research on academic stressors indicated that examinations made up twenty percent of the reported stressors (Hurst et al., 2013). However, as the winter examination period had ended, it was interesting that the worry about examinations persisted. This could be indicative of chronic worry about the next round of examinations in the future, as students will repeatedly face exams. This suggests that after a transition period, participants may have simply transferred their worrying from one subject to another, without allowing themselves time to enjoy their examination period finishing. This may also be due to students retaking exams.

Other participants reported worries included finding a work placement for the following year and thinking about future careers:

‘Issues with placement in university course.’

‘Also stress about finding a career following university.’

Due to the increases in students attending university and an increasingly competitive job market (Thurber & Walton, 2012), it is becoming difficult to find employment after university. While a work placement can give experience, it can also be difficult for students to balance a work placement alongside paid part-time work that many students have to do.

One participant disclosed that they had grown disinterested in their course and changed to another one, but was worrying about the decision:

‘I didn’t like my uni course and had to organise changing it, bored all the time.’

While a small percentage of students change their course during their first year, many students feel dissatisfied with their course. The boredom this participant reported may be due to the expectations and reality of the course not matching up (Rowley et al., 2010). This would naturally lead to disengagement with the course.

4.4.2.2 Living situation

The majority of university students begin university immediately after sixth form, moving into halls of residence at the university. Halls of residence can vary on the number of students per flat, and students rarely meet beforehand. Reported worries at Time 1 showed students worrying that they would get ‘bad’ roommates or not like

their roommates. At Time 2, participants reported bad experiences with roommates and tense living situations. Students spend more time in their residence than in their classrooms, and therefore will spend a lot of time around their roommates (Blimling, 2014). If there are disagreements between roommates or tension, it is then hard to avoid it. Participants reported tension with roommates, sometimes to the point of having to move out:

‘Housemates all fell out towards end of our tenancy so we ended up rearranging housing situations.’

‘Tensions with my flatmates.’

‘Moved out twice.’

Students often sign tenancy agreements around January for the following September, leaving ample time in between for roommates to argue and end their friendships. Many students may find it easier to live alone, or at home, as a participant reported:

‘Whether or not I would leave home and move to accommodation at university, chose to stay at home and I'm glad I did.’

4.4.2.3 Health

At Time 1, participants reported being worried about potential mental health fluctuations, and keeping themselves healthy. At Time 2, several students reported experiencing periods in which their health became worse, suggesting that the transition period may have negatively impacted their mental or physical health. In

some cases, this led to trying new medication, and one participant reported two suicide attempts while at university:

‘Starting antidepressants, dealing with agoraphobia.’

‘I realised certain times I have negative thoughts or self-doubt, but I always keep myself in check and learn from these experiences.’

‘I have been unable to sleep well or for any reasonable period of time.’

‘I have had 2 suicide attempts since the year has started and ended up in hospital both times. Was admitted for 2 days on the 2nd attempt.’

In a survey of 2843 students, the prevalence of anxiety or depressive disorders was 15.6% in undergraduate, and 2% reported experiencing suicidal ideation (Eisenberg et al., 2007). Many students cite university as their onset of mental health problems (Pedrelli et al., 2015), indicating that the series of transition-based stressors they experience every year contributes towards their mental health problems. The data here shows that students may experience significant declines in mental health in a short space of time, and that this may be due to the level of worry they experience.

4.4.2.4 Relationships

University is a time in which students uproot from their established social life, that is often centred around a family household and friendships from school, to begin an entirely new social network. Many of the worries at Time 1 were about making new friends and establishing a social life in a new place. At Time 2, these worries seem to have been alleviated as students will have made friends during their time at university.

Instead, worries about relationships at Time 2 appear to mostly be about maintaining earlier friendships and relationships with family:

‘Family problems, distance from partner.’

‘Family issues.’

‘Arguing with parents. Thinking about the future. Arguing with girlfriend.’

‘Long distance relationships and friendships.’

‘Had a falling out with my family, other tensions at home.’

‘Breaking up with boyfriend.’

Poorly maintained relationships with family and friends can lead to increases in stress (Gupchup et al., 2004). University is a significant period of growth for young adults in which they undertake separation-individuation, detaching themselves from parental figures and establishing themselves in adulthood (Lindsey, 2014). This can cause increases in anxiety as relationships that existed before this can suffer.

Students also reported worries around their parents divorcing, or a family member being unwell or passing away:

‘Parent divorce.’

‘Friendships and my family, as my mum is suffering from cancer.’

‘Uncle died. Grandad ill.’

These events will impact students’ lives strongly, and they may need to take time off from their course. These are major life events, and the intervention developed in this thesis is not designed for such worries, but for ongoing daily stressors. Grief

counselling and regular sessions with the wellbeing teams at universities would be more appropriate for this type of stressor.

4.4.2.5 Financial struggles

At Time 1, participants reported many worries about future financial struggles.

Financial concerns were found to be one of the main stressors for university students in a study examining 19 stressors (Beiter et al., 2015). At Time 2, it was the most commonly reported stressor, with participants describing poor budgeting and money management, along with balancing part-time work alongside studies:

‘Trying to sort out money and budgeting.’

‘Financial worries.’

‘No money left from loan/overdraft.’

‘Part time work has been a particular stress and worry of mine.’

A survey of 2843 students found that students experiencing financial struggles were more likely to have mental health problems (Eisenberg et al., 2010). With the increase in loans, and the household income-based system of maintenance loans, students have an increasing amount of financial stress, leading many to work part-time alongside their full-time studies (Heckman et al., 2014).

4.4.3 Conclusion of the qualitative analysis

Students experience a variety of worries throughout first year, with some persisting throughout the whole year, and some worries being specific to certain times. Financial

struggles, health concerns, changes in relationship maintenance, increased workload and difficulties with living situations all combine to create a constant stream of situations to worry about. Students may therefore be more susceptible to using worry as a coping strategy, further impacting their mental health in the future.

Time 1 worries were focused on the changes ahead and based in uncertainty around future situations such as a new living situation and an unfamiliar place. Participants reported being both worried and excited about every aspect of university, including managing finances, establishing a new social life, and performing well academically. Many of these worries were alleviated by Time 2, but instead of participants being less worried, they seemed to transfer their worry to new stressors. This may suggest that worry became a common behaviour or coping strategy for the participants throughout the transition period.

4.5 Discussion

4.5.1 Comparison to Time 1 mental health

Anxiety was still significantly elevated at Time 2, indicating there was no change in anxiety between the two time points. In comparison, depression was significantly worse, and worry had significantly alleviated. This would fit logically with the nature of a transition period having passed; the worry about uncertain future events would alleviate, but the aftermath of such a stressful period may increase feelings of depression. The qualitative data indicated that negative feelings about examinations and coursework persisted after the exam period ended, supporting the idea that a transition period may have lasting effects on mood.

4.5.2 Character strengths

Hope and gratitude had significantly decreased after the transition period, whereas curiosity and optimism had not changed. This may suggest that hope and gratitude were more easily impacted by the series of life changes, and that students may feel less hopeful and grateful after a transition period. Anxiety, depression, and worry were all significantly predicted by at least some of the character strengths. Curiosity significantly predicted anxiety and depression, optimism significantly predicted anxiety and worry, and hope and gratitude significantly predicted depression. This differed to the pre-transition period measures.

The strengths that predicted each mental health variable changed partially between Times 1 and 2, with at least one strength remaining consistent between time points.

All of the relationships were negative, suggesting that as strengths increased, mental health improved.

Depression was predicted by hope and gratitude at Time 1, and curiosity, hope, and gratitude at Time 2. Curiosity encourages students to pursue new experiences (Kashdan et al., 2004), and depression is often characterised by a person becoming more isolated and alone, which may indicate why curiosity was involved at Time 2. However, curiosity was not found to significantly predict anything at Time 1, yet it features as a predictor of both anxiety and depression at Time 2. This could be due to students becoming more inclined as the academic year progresses to explore more of their new environment, or conversely to isolate more due to the pressure of the transition period.

Interestingly, hope did not feature at Time 2 for anxiety or worry, yet optimism remained, which was unexpected given the strong similarities between hope and optimism (Park et al., 2004). This indicates that after the transition period had passed, the amount of hope a person had did not necessarily relate to their mental health. However, given how strongly it was associated with all three variables at Time 1, this may be due to the level of hope being significantly lower at Time 2. This may indicate that hope predicts anxiety and worry when it is above a certain level but is more consistently a predictor of depression.

Optimism, in comparison, remained at the same level between Time 1 and Time 2, and significantly predicted anxiety and worry at Time 1 and Time 2. This is in keeping with the literature, as research has indicated that optimism has a negative relationship with anxiety (Bagana et al., 2011; El-Anzi, 2005). However, due to the unchanging nature of optimism during a transition period, it is possible that this could be due to trait

optimism instead of state optimism. Trait optimism is less malleable than state optimism, and those with high trait optimism tend to have superior psychological health (Peterson, 2000). The measure used was the Life Orientation Test – Revised, which measures ‘dispositional’ optimism, suggesting it may have been more appropriate to find or develop a measure for state optimism. Since the data collection, a survey named the State Optimism Measure has been developed to examine state optimism (Millstein, 2019), and may be considered for future research.

Gratitude was found to significantly predict depression at both time points, which was supported by previous research; students with higher levels of gratitude are more likely to focus on positive outcomes and seek the silver lining in negative experiences (Wood et al., 2010). However, gratitude was not found to significantly predict anxiety or worry at Time 2, suggesting that students with high levels of gratitude were still prone to distressing levels of worry. This may indicate that gratitude is more effective at alleviating depressive symptoms, and that students who worry are still capable of feeling grateful. This may be related to the relief a person might feel when a predicted negative outcome of a situation does not happen, where gratitude is felt due to the negative outcome not happening.

4.5.3 Personality and resilience

At Time 2, conscientiousness and openness had significantly decreased. This may explain why curiosity negatively predicted anxiety and depression; openness is arguably one of the core tenets of curiosity, and a decrease in openness would naturally lead to students isolating themselves. Conscientiousness is categorised in the TIPI measure as ‘dependable, self-disciplined’, with the opposite being ‘disorganised,

careless'. The decrease in conscientiousness may be due to students coming to the end of their first academic year and finding they struggled with managing their studies independently within the less rigid format of university. This was seen as a prominent worry in the qualitative analysis, in which students worried about managing their studies and staying motivated.

Worry and anxiety were significantly predicted by conscientiousness, which differs from Time 1 where conscientiousness did not feature. Again, this may be due to the academic-specific transition to independent learning, as students reported being worried about managing their studies. This may indicate that students who are trying harder with their studies are more worried and anxious. The qualitative data supports this, as participants worried about their exams and assessments even after their examination period had ended, suggesting they were being diligent about their studies. This may be due to the students engaging with the work more, and therefore assigning more personal value to the work they submit, worrying more about it because it is significant to them.

The most central personality factor as a predictor appears to be emotional stability, as it is a predictor of everything except depression at Time 2. Fluctuating mental health alongside fluctuating life events would likely prove very stressful for students and indicates that any form of support for their emotions would likely improve their mental health over time. Extraversion predicted all three variables at Time 1, during which being extraverted would assist with students establishing themselves within new friendships, classes, and experiences. However, towards the end of the year, students would arguably be more settled into their lives, and the need for extraversion to manage their mental health would be lower, which is reflected in the results.

Resilience did not directly predict any of the mental health variables. However, mediation analyses revealed overwhelming support for resilience as a mediating factor. When including resilience as a mediating factor, the four character strengths significantly negatively predicted all three outcome variables. This suggests that while there were direct effects between some character strengths and mental health, all of the included character strengths had indirect effects on mental health when resilience mediated the relationship. This is vital to consider for future research, as it suggests that increasing resilience alone would not cause improvement in mental health but using strengths to increase resilience may cause significant improvement in mental health.

4.5.4 Stressors during transition periods

Students face a variety of stressors, and a secondary aim of this study was to identify the stressors students perceived as the most worrisome. In a list of suggested stressors, the scores indicated that students felt a mixture of worried and excited about living independently, moving to a new place, meeting new people, managing their finances, starting classes, and moving away from their family. The finances stressor caused the most worry in this list. There were no stressors listed that caused just excitement or worry.

This is similarly represented in the qualitative analysis, with the main themes being ‘course content’, ‘living situation’, ‘health’, ‘relationships’, and ‘financial struggles’. A notable difference between Time 1 and Time 2 is the lack of the themes ‘social life’ and ‘unfamiliarity’. The latter theme has an obvious explanation; the participants would have been in their new situation for almost a year, and therefore the unfamiliarity of

the situation would have been alleviated. This would be similar in the ‘social life’ theme, as students would have had plenty of time to enjoy and establish their new friendships and social life.

Many of the worries represented issues that would be ongoing throughout university, such as coursework, assessments, and financial struggles. These persistent worries would cause sustained or repeated periods of worry, and therefore be more important to target, which was considered when designing the intervention. It is also fair to assume that these stressors would continue throughout the rest of their academic life. The qualitative data indicates that even after the exam period had passed, examinations remained to be a source of worry for the participants. The findings suggest that while worry did decrease in score at Time 2, the average score still fell within the ‘moderate’ category of worry, indicating that worry was persisting post-transition period. This may show that transition periods cause long-term effects on mental health, and that worry may persist across students’ entire academic lives due to the barrage of stressors during the transition period. This might indicate that teaching students about worry and providing them with healthier strategies may help them navigate the transition period and alleviate the long-term impact on mental health.

4.5.5 Limitations

A limitation of this study is the use of the TIPI. It was selected for its length to prevent the survey response time being longer than fifteen minutes, as the measure is significantly shorter than other measures of the Big Five Personality Factors. However, it may not have been sensitive enough to fully capture the personality factors. This was

a limitation of the first part of this study also; however, to accurately compare the two data sets, a decision was made to continue the inclusion of the TIPI. However, any data from the TIPI should be considered as less reliable information than the other measures, and any further study should use a more detailed or longer scale.

This study was initially designed to be the second time point in a longitudinal study; however, the dropout rate of students at the second time point was so severe, there had to be more participant recruitment. The result is that this became two cross-sectional studies of separate samples, and therefore the different participant groups could account for some of the differences in responses. The mental health of participants was asked about in an optional question to try and ascertain if the two samples were similar in terms of mental health conditions. However, as this was an optional question to avoid forcing participants to disclose their mental health conditions, this may not have gathered an accurate picture. However, the demographics of both groups were similar, and the proportion of mental health diagnoses between groups were also similar.

4.5.6 Implications

This study establishes the variety and severity of stressors that students face when starting university. It also provides evidence for certain character strengths and personality factors predicting anxiety, depression, and worry, suggesting that positive psychology interventions focused on these variables may help alleviate anxiety and worry. Character strengths, while similar to personality factors in them being traits, are malleable and can be altered (Gander et al., 2019). Hope and gratitude fluctuated across the year, suggesting that they are more prone to change than curiosity and

optimism and may therefore be more easily manipulated in an intervention. An intervention focused on malleable character strengths may therefore reduce anxiety, depression, and worry in undergraduates. Resilience was found to mediate the relationship between every character strength and every mental health variable, demonstrating the importance of resilience in students and providing evidence that at least four character strengths are directly linked to resilience. This should be considered in the development of any PPI, as other strengths may also impact resilience in students.

This study also shows that student worry, while decreasing significantly, remained within the 'moderate' category of the measure. The results suggest that transition periods may have long-term effects on student mental health, with worry persisting even after some of the stressors have ended. Student worry continued to focus on exams even post-examination period, suggesting that students were then worrying about exams that were several months away. This may be indicative of students becoming habitual worriers in the wake of the transition period and may suggest that the best time to perform an intervention would be prior to the transition period. This highlights the importance of early intervention by university support services as a preventative measure against developing mental health problems. Mental health policies at universities are often focused on severe or diagnosed mental health problems in students, overlooking students that are struggling at a less extreme level. This research demonstrates the need for change in mental health policies to encompass all students and provide support across the entire student population.

4.6 Conclusion

Undergraduates face a wide range of stressors that cause worry, ranging from academic problems such as exams to social problems such as making new friends. Financial stressors were found to be the most worry-inducing, due to students having to take out loans and work part-time during their full-time university course. The comparison between time points 1 and 2 that hope and gratitude are more prone to change, and that using them to boost resilience in an intervention may decrease anxiety, worry, and depression in undergraduates. University mental health policies are often focused on extreme and pathological mental health concerns, and therefore students with moderate or excessive worry may not be able to access the same support. This research demonstrates the need for university mental health policy and support services to be more widely available and to encourage students to access them.

5. Intervention Study: The Worry Workshop

This chapter will cover the intervention study, detailing a PPI named ‘The Worry Workshop’. The chapter will begin with an introduction detailing positive psychology interventions, and then explain the structure and methods used in the intervention. The results are then discussed, first comparing the intervention groups to a control group, and then comparing both intervention groups. This is then discussed in relation to the literature.

5.1 Introduction

Positive psychology interventions may be characterised as an intentional activity or method, such as training or coaching, based on one of the following three goals (Meyers et al., 2013):

1. The cultivation of valued subjective experiences
2. The building of positive individual traits
3. The building of civic virtue and positive institutions

A review of 51 positive psychology interventions aiming to enhance well-being and reduce depression showed a mixture of interventions focused on enhancing gratitude, creating positive writing, and mindfulness techniques (Sin & Lyubomirsky, 2009). These interventions fall under the first two goals (Meyers et al., 2013). Also falling underneath these two goals are interventions to increase ‘positive psychological capital’ (Luthans & Youssef, 2004), which are concepts that fall somewhere between state and trait, being more malleable than traits, but more stable than state-like

characteristics (Meyers et al., 2013). Examples of this would be optimism, hope, and resilience (Luthans et al., 2007).

The development of the positive psychology intervention in this study began with the foundational knowledge generated by Study 1. Study 1 demonstrated that hope and gratitude fluctuated more throughout the transition period of the start of the academic year and may therefore be more malleable. Study 1's qualitative findings indicated that students are very busy and have a lot of academic work and employment to mitigate the financial strain. This furthered the development of the intervention by making it a short workshop of four sessions, once per week, that students could easily fit into their schedules. Two strengths were selected from the four included in Study 1 as the study was designed to be short, and four strengths would have been too much for participants to take on at once. While the intervention developed here focused on hope and gratitude, there could be other versions of the intervention easily adapted to suit other character strengths. This would theoretically create a series of short workshops that students could sign up to when they had the time and would lend support to them throughout the year.

The intervention was originally intended to be delivered face-to-face on the university campus, but due to the unexpected COVID-19 pandemic, the intervention had to be altered to suit a digital delivery. This involved changing the language in the presentations, for example changing 'in pairs, discuss what you might put in your gratitude diary' as it was not possible to segment the group into pairs digitally. It also involved creating a PDF version of the gratitude diary (Appendix B.6) rather than a printed version that would be handed out in person.

5.1.1 Hypotheses

H_a The intervention groups will have significantly lower anxiety, depression, worry, and brooding than the control group.

H_a The intervention groups will have significantly higher hope agency, hope pathways, gratitude, reflection, and life satisfaction than the control group.

H_0 There will be no significant differences in the results of the two intervention groups

H_a The effects of the intervention will be maintained at the follow-up time points in both intervention groups.

5.2 Methodology

5.2.1 Participants

16 second-year students were recruited from Sheffield Hallam University through short advertisements in their lectures and on social media. They were randomly assigned to the experimental and control groups. The students were all either 19 or 20 years old and had begun their undergraduate degree immediately after sixth form/college. They all spoke English fluently as a first or second language. The first group consisted of 2 men and 6 women, and the second group consisted of 3 men and 5 women.

A priori power analyses were performed in G*Power to obtain the minimum adequate sample size for the tests used. Separate analyses were run for the between-subjects tests and the within-subjects tests. The recommended sample size was 82 for between-subjects testing, and 24 for within-subjects testing, with a medium effect size, a desired power level of 80%, and a significance level of 0.05.

This demonstrates that the study was underpowered, indicating that it may be unable to catch small or medium effects within the tests. The within-subjects testing may be more reliable as the sample size was much closer to the sample used than between-subjects.

5.2.2 Intervention structure

The Worry Workshop consisted of four sessions that lasted between 30 and 45 minutes, held once a week. The Worry Workshop had a dual focus of hope and gratitude, with both psychoeducation and practical exercises, as shown in Table 23. Each session was followed with a homework task to reinforce the lessons learned within the sessions.

Table 23*Session content breakdown*

| Session | Session Aims | Session Exercises | Homework Plans |
|---------|---|---|--|
| One | 1. Educate participants about worry 2. Educate participants about gratitude 3. Improve gratitude towards oneself and others | 1. Discuss worries specific to participants 2. Begin the gratitude diary 3. Practice the gratitude diary together | Complete a week of the gratitude diary |
| Two | 1. Recap previous session 2. Educate participants about hope agency 3. Improve hope agency | 1. Discuss the previous homework task 2. Practice motivation-based affirmations 3. Share affirmations with group | Complete daily motivational affirmations, and continue with the gratitude diary |
| Three | 1. Recap previous session 2. Educate participants about hope pathways 3. Improve hope pathways | 1. Discuss and share affirmations 2. Practice 'Pathways' 3. Share pathways with the group | Continue with affirmations and gratitude diary, and generate pathways for two academic/personal problems |
| Four | 1. Recap previous session 2. Consolidate knowledge | 1. Answering any questions about exercises 2. Practicing workshop exercises | N/A. |

5.2.3 Gratitude

The gratitude intervention session focused on improving gratitude towards the self and other people. The session included psychoeducation on gratitude and focused on a technique called a gratitude diary. Participants were instructed to keep a daily diary that was sent to them as a document to print or fill out on their device, documenting 3-5 things a day that they were grateful for. This could range from small things (e.g. I am thankful that my bus was on time) to larger things (e.g. I am grateful for my mother supporting me through my career). Participants were given the opportunity to share their entries in the sessions if they wanted to. The gratitude diary has been found to be effective in improving various aspects of wellbeing (Geraghty et al., 2010; Kerr et al., 2015; Killen & Macaskill, 2014, Southwell & Gould, 2017).

5.2.4 Hope agency

The first hope session focused on encouraging hope agency, which involves the motivation and belief that goals can be achieved. This was achieved through daily affirmations. Affirmations that are applicable to most students were given to the participants, but they were also shown how to write their own affirmations for specific goals. Examples of generic affirmations are:

‘I am capable of achieving my goals.’

‘I am able to do my work, one step at a time.’

‘I have come so far with my studies, and I can go even further.’

Examples of more specific affirmations are:

‘The two hours of work I do today at the library will be productive and useful.’

‘I am going to succeed in my plan to do 15-minute revision bursts with 5-minute breaks.’

‘The work I will put in today will help me learn how to write better conclusions.’

The session also showed the participants how to practice affirmations, for example speaking it aloud clearly to themselves, and writing them down to look at as frequently as they need to. This encouraged the participants to feel more motivated throughout their daily lives. Participants were encouraged to write an affirmation each day that related to a goal they had in mind for the day. They had the opportunity to share these affirmations in the sessions. Affirmations have been found to boost empathy (Stone & Parks, 2018) and improve well-being (Howell, 2017).

5.2.5 Hope pathways

The second session focused on improving hope pathways, which is the ability to take the necessary steps to reach goals. Often, people may make non-specific, unrealistic goals (e.g., I will get a first in all of my assessments), which can cause frustration and apathy when the goals are not then achieved. The session focused on helping participants to set specific goals that were realistic through goal mapping, a practical exercise in which participants mapped out the steps needed for them to achieve their goal and noted down potential obstacles and how to work around them. Participants also set contingency plans for any potential setbacks so they would not be discouraged by any potential failure. This was called the Pathways Method. This technique has

been found to increase hope in students (Davidson et al., 2012; Feldman & Dreher, 2012).

5.2.6 Final session

The final session focused on consolidating the information the participants had learned in the sessions, through recapping the educational material and practicing the exercises again. The participants were encouraged to keep up the gratitude journal long-term and use the hope strategies to plan for goal achievement in the long-term too. The final session was designed this way to ensure the participants were able to build confidence in the exercises and make plans to use the exercises in the future.

5.2.7 Measures

Between sessions, participants filled out surveys to ascertain levels of their worry, depression, anxiety, hope, gratitude, life satisfaction and rumination (Appendix B.7).

5.2.7.1 Prior measures

Some measures were also used in Study 1 (Chapters 3 and 4); the HADS, the Penn State Worry Questionnaire, the Adult Hope Scale, and the Gratitude Questionnaire-6.

Additionally, the following measures were included:

5.2.7.2 The Ruminative Response Scale – 10 (Treynor, Gonzalez, & Nolen-Hoeksema, 2003)

This scale was derived from the Ruminative Response Scale, a 22-item scale. The 10-item scale taken from the original scale was created to measure two specific subscales of rumination: brooding and reflecting. This measure was selected to examine the amount participants ruminated, as it is a feature of worry. 5 items measure each subscale. Responses are recorded on a 4-point Likert scale from ‘almost always’ to ‘almost never’. The scale has been found to have good internal and external reliability (Erdur-Baker & Bugay, 2010; Lei et al., 2017) and both studies performed confirmatory factor analyses that showed the items significantly loaded onto the two factors of brooding and reflecting.

5.2.7.3 The Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985)

This scale consists of 5 items measured on a 7-point Likert scale from ‘strongly agree’ to ‘strongly disagree’. The scale has been found to have good reliability; a meta-analysis of 60 studies that used the SWLS found a mean Cronbach’s alpha of 0.78 (Corrigan et al., 2013). The scale was selected to examine participants’ perspective of their contentment in their life throughout the intervention.

5.2.8 Procedure

The Worry Workshop was advertised through short presentations given at the end of lectures to students at Sheffield Hallam University. It was also advertised on social

media in student groups. Consent forms were sent to the participants. Participants were told they would receive the workshop within the next four months.

In the first stage of the Worry Workshop, 8 students participated in the intervention while 8 were placed onto a waiting list. Participants were assigned randomly to these groups. The workshop sessions were split into two groups of four participants. The sessions were held once a week for four weeks and took place over Zoom. Before and after each session, participants would complete a series of questionnaires. The control group filled out the same questionnaires once a week. After the sessions finished, all participants completed two more sets of questionnaires at a one-month and three-month follow-up time points.

After the follow-up measures were recorded, the second stage of the intervention proceeded. The control group participants were then placed into two groups of four and received the intervention. They also recorded responses before and after each session, and at one-month and three-month follow-up time points. This was to ensure fairness to participants that signed up to the workshop. It also provided a wider perspective on the results of the intervention, as the second group received the intervention at a different point in the year. While the first group received their intervention during their spring/summer exam period, the second group received theirs in a period of low stress at the start of the academic year.

5.3 Data Treatment

5.3.1 Data Preparation

The data was transferred from Qualtrics to SPSS, where it was then cleaned. Missing items in the data sets were coded as missing and therefore excluded from analyses.

The variables were organised, labelled, and reverse-scored where appropriate. Total scores were compiled for each variable.

5.3.2 Scale Reliability

Each scale for each data set was analysed for reliability. Table 24 details the Cronbach's alphas for each scale (divided by subscales where appropriate). Reliability is considered to be achieved for the scales. All of the scales had acceptable Cronbach's alphas above 0.70, indicating strong scale reliability, except for the anxiety subscale of the HADS. This had below acceptable Cronbach's alphas for Group 1, while it was above 0.70 for Group 2 in their experimental and control groups, suggesting that the low score is due to a cohort effect. The depression subscale also fell below 0.70 for the Group 1, but only just at 0.69.

When examining the inter-correlations of the anxiety subscale of the HADS in Group 1, many of the items correlated at less than 0.4, with some falling as low as 0.2. This could be due to the time period, as the data set was collected during the beginning of the COVID-19 pandemic, and anxiety would naturally be fluctuating during an unprecedented transition period (Agius et al., 2020; Majrashi et al., 2021).

However, several of the scales also fall above 0.90, with some as high as 0.97, suggesting that the scales may be carrying some items that are redundant, repeatedly asking too similar questions for the participants. As two scales, the Penn State Worry Questionnaire and the Life Satisfaction Scale, repeatedly had Cronbach's alphas above 0.9, inter-correlation analyses between the items of the scale were performed to check if any of the items correlated with each other above a 0.9.

The Penn State Worry Questionnaire (Meyer et al., 1990) did not have any inter-correlated items above 0.9 in both the second experimental group and the control group. Within the first group, there were three inter-correlations above 0.9. Item 5 correlated with Item 7 (0.91), and Item 15 correlated with both Item 7 (0.93) and Item 14 (0.92). As this did not appear to be repeated with the other groups, it is likely due to chance and the small sample size.

The Life Satisfaction Scale (Diener et al., 1985) was more complex; while the control group data set showed no inter-correlations above 0.9, the other two data sets did. In the first group, Item 1 correlated with Item 2 (0.91). In the second group, Item 1 correlated with Item 2 (0.93), Item 3 (0.93), and Item 4 (0.91). Item 2 also correlated with Item 3 (0.91). Again, this could be due to chance and the small sample size; for a more in-depth analysis, a larger sample size would be required. No analyses were withheld as a result of the inter-correlations.

Table 24*Cronbach's alphas for each variable*

| Variable | Group 1 | Group 2 (Control) | Group 2 (Experimental) |
|-------------------|---------|-------------------|------------------------|
| Anxiety | 0.42 | 0.88 | 0.73 |
| Depression | 0.69 | 0.88 | 0.85 |
| Worry | 0.96 | 0.93 | 0.96 |
| Hope Agency | 0.79 | 0.88 | 0.95 |
| Hope Pathways | 0.90 | 0.94 | 0.96 |
| Gratitude | 0.91 | 0.92 | 0.93 |
| Brooding | 0.92 | 0.91 | 0.92 |
| Reflection | 0.88 | 0.84 | 0.84 |
| Life Satisfaction | 0.96 | 0.94 | 0.97 |

5.4 Data Analysis

5.4.1 Within-groups analysis

This set of analyses compared the control condition and experimental condition of Group 2.

5.4.1.1 T-tests

Paired-samples t-tests were performed to compare mean scores between the intervention and control groups for each variable. Separate t-tests were run for pre-workshop variables and post-workshop variables, as shown in Table 25.

The t-tests comparing pre-workshop scores were not significant. This indicates that participants did not get significantly worse while on the waiting list and began the intervention in a similar state of mental health as they were during the control condition.

The t-tests for post-workshop variables were all significant bar the reflecting subscale of rumination, indicating that the intervention was successful. Reflection did not significantly change and appeared to be maintained as a high level before and after the intervention. Otherwise, the mean scores show that after participants received the intervention, there were decreases in anxiety, depression, worry, and brooding, while hope agency, hope pathways, gratitude, and life satisfaction increased.

Table 25

Paired samples t-tests between Group 2 (control) and Group 2 (experimental)

| Variable | T | Df | Sig. | Group 2 (Control) | Group 2 (Control) | Group 2 | Group 2 |
|-----------------------------|-------|----|------|-------------------|-------------------|-------------------------|----------------------------|
| | | | | Means | Std. Dev | (Experimental) Means | (Experimental) Std. Dev |
| Anxiety Pre-Workshop | -1.89 | 7 | .10 | 15.25 | 4.33 | 10.50 | 4.47 |
| Anxiety Post-Workshop | -6.18 | 7 | <.01 | 15.13 | 3.48 | 7.13 | 2.70 |
| Depression Pre-Workshop | -.898 | 7 | .40 | 11.13 | 4.52 | 8.63 | 4.34 |
| Depression Post-Workshop | -3.12 | 7 | .02 | 11.63 | 3.58 | 6.75 | 3.92 |
| Worry Pre-Workshop | .32 | 7 | .76 | 58.75 | 14.34 | 60.75 | 10.01 |
| Worry Post-Workshop | -9.45 | 7 | <.01 | 65.60 | 7.98 | 38.63 | 6.50 |
| Hope Agency Pre-Workshop | -1.86 | 7 | .106 | 18.63 | 4.63 | 13.00 | 5.35 |
| Hope Agency Post-Workshop | 6.90 | 7 | <.01 | 11.75 | 4.86 | 27.13 | 2.30 |
| Hope Pathways Pre-Workshop | -1.14 | 7 | .30 | 19.13 | 5.64 | 16.00 | 2.93 |
| Hope Pathways Post-Workshop | 5.67 | 7 | <.01 | 12.75 | 5.99 | 28.75 | 3.41 |
| Gratitude Pre-Workshop | -1.48 | 7 | .18 | 22.25 | 7.29 | 16.00 | 2.93 |
| Gratitude Post-Workshop | 12.28 | 7 | <.01 | 14.38 | 4.69 | 36.75 | 3.20 |

| | | | | | | | |
|-------------------------------------|-------|---|------|-------|------|--------|------|
| Brooding Pre-Workshop | -.41 | 7 | .69 | 14.38 | 4.50 | 10.19 | 4.27 |
| Brooding Post-Workshop | -4.41 | 7 | <.01 | 15.63 | 3.58 | 8.38 | 2.62 |
| Reflecting Pre-Workshop | .89 | 7 | .40 | 12.00 | 1.60 | 13.75 | 5.39 |
| Reflecting Post-Workshop | -1.66 | 7 | .14 | 16.00 | 3.59 | 13.13. | 3.40 |
| Life Satisfaction Pre- Workshop | -1.39 | 7 | .21 | 16.25 | 6.65 | 11.63 | 5.40 |
| Life Satisfaction Post- Workshop | 9.58 | 7 | <.01 | 10.13 | 4.42 | 29.63 | 2.26 |

5.4.2 Between-groups analysis

This set of analyses compared a Group 1 experiencing the intervention and Group 2 on a waiting-list control.

5.4.2.1 T-tests

Independent samples t-tests were performed to compare the means of each variable between Group 1 and Group 2 (control). Separate t-tests were run for variables pre-workshop and post-workshop for both groups. Wherever Levene's Test for Equality of Variances was significant at 0.05, the degrees of freedom were adjusted.

As shown Table 26, all variables pre-workshop did not significantly differ between groups, except for the reflecting subscale of rumination. This indicates that the two groups began their participation at relatively similar states of mental health. All variables post-workshop significantly differed between groups, except for the reflecting subscale of rumination. This suggests that the workshop caused significant changes in the variables in comparison to the control group.

The mean scores suggest that similarly to the earlier analyses, the intervention group had significantly lower anxiety, worry, depression, and brooding, and significantly higher hope agency, hope pathways, gratitude, and life satisfaction.

Table 26*Independent samples t-tests between Group 1 and Group 2 (control)*

| Variable | T | Df | Sig. | Group 2 (Control) means | Group 2 (Control) Std. Dev | Group 1 Means | Group 1 Std. Dev |
|---------------------------------|-------|-------|------|----------------------------|-------------------------------|---------------|------------------|
| Anxiety Pre-Workshop | -1.58 | 12 | .141 | 15.25 | 4.33 | 12.33 | 1.37 |
| Anxiety Post-Workshop | -2.53 | 12 | .03 | 15.13 | 3.48 | 10.67 | 1.20 |
| Depression Pre-Workshop | -1.14 | 12 | .28 | 11.13 | 4.52 | 8.67 | 3.08 |
| Depression Post-Workshop | -3.44 | 12 | <.01 | 11.63 | 3.58 | 5.83 | 2.32 |
| Worry Pre-Workshop | .315 | 12 | .76 | 58.75 | 14.34 | 60.83 | 8.47 |
| Worry Post-Workshop | -3.97 | 12 | <.01 | 65.50 | 7.98 | 39.67 | 16.11 |
| Hope Agency Pre-Workshop | 1.29 | 12 | .22 | 18.63 | 4.63 | 22.00 | 5.14 |
| Hope Agency Post-Workshop | 7.16 | 12 | <.01 | 11.75 | 4.86 | 27.50 | 2.59 |
| Hope Pathways Pre- Workshop | 1.30 | 12 | .22 | 19.13 | 5.64 | 22.50 | 3.27 |
| Hope Pathways Post- Workshop | 7.75 | 8.67 | <.01 | 12.75 | 5.99 | 30.17 | 1.83 |
| Gratitude Pre-Workshop | .94 | 12 | .37 | 22.25 | 7.29 | 26.50 | 9.67 |
| Gratitude Post-Workshop | 9.33 | 12 | <.01 | 14.38 | 4.69 | 37.33 | 4.37 |
| Brooding Pre-Workshop | .717 | 10.34 | .49 | 14.38 | 4.50 | 15.67 | 2.07 |

| | | | | | | | |
|-------------------------------------|-------|------|------|-------|------|-------|------|
| Brooding Post-Workshop | -3.50 | 12 | <.01 | 15.63 | 3.58 | 8.17 | 4.40 |
| Reflecting Pre-Workshop | 3.09 | 6.96 | .02 | 12.00 | 1.60 | 16.33 | 3.14 |
| Reflecting Post-Workshop | -1.97 | 12 | .10 | 16.00 | 3.59 | 11.17 | 5.64 |
| Life Satisfaction Pre- Workshop | .18 | 12 | .86 | 16.25 | 6.65 | 16.83 | 5.19 |
| Life Satisfaction Post- Workshop | 8.95 | 12 | <.01 | 10.13 | 4.42 | 28.83 | 2.92 |

5.4.3 Variable Changes Across the Workshop

As the results suggest that the intervention significantly decreased worry, depression, and anxiety and increased hope, gratitude, and life satisfaction, analyses were run to determine when the biggest changes occurred. Two new sets of data were compiled from the original data sets for the experimental groups. The first calculated the changes in total variable scores between sessions 1, 2, 3, and 4, and the two follow-ups, referred to here as the 'Big Changes'. The Big Changes looked at the overall differences after each session and at one month and three months. The second set looked at the changes in total variable scores before and after each of the four sessions, referred to here as the 'Little Changes'. The Little Changes provided a closer look at the workshop sessions, examining the changes in scores before and after each session. ANOVA tests were performed to analyse both the Big Changes and the Little Changes.

5.4.3.1 Anxiety

When looking at the Big Changes, Mauchly's test of sphericity indicated that the assumption of sphericity was not violated ($\chi^2(14) = 19.15, p = .02$). The ANOVA revealed that the changes between sessions did not significantly differ from each other ($F(5) = .69, p = .64$), indicating that the change in anxiety was consistent across the workshop. This suggests that while the workshop was successful at decreasing anxiety overall, there was not a specific session that caused the decrease. Instead, anxiety gradually decreased across the intervention, except between Sessions 1 and 2 where

anxiety rose slightly. It then continued to decrease at both one month and three months, suggesting that the workshop continued to have an effect on anxiety post-intervention.

When looking at the Little Changes, Mauchly's test of sphericity was significant ($\chi^2(5) = 13.72, p = .05$), and therefore the Greenhouse-Geisser test was used. The ANOVA revealed no significant differences in how anxiety changed before and after each of the sessions, ($F(1.7) = .19, p = .80$), indicating again that anxiety decreased consistently across the workshop rather than a specific session.

5.4.3.2 Depression

A similar pattern was found with depression. When examining the Big Changes, Mauchly's test of sphericity indicated the assumption of sphericity was not violated ($\chi^2(14) = 21.48, p = .10$). The ANOVA was not significant ($F(5) = 1.37, p = .25$), suggesting that the changes in depression were consistent across the sessions, and no specific session caused an especially steep change. Depression continued to decrease for three months after the intervention finished, indicating that the workshop had a lasting effect post-intervention.

For the Little Changes, Mauchly's test indicated the assumption of sphericity was not violated ($\chi^2(5) = 4.20, p = .52$). The ANOVA was not significant ($F(3) = 1.26, p = .30$), confirming that no specific session was responsible for a sharp decrease of depression scores.

5.4.3.3 Worry

For the Big Changes, Mauchly's test indicated the assumption of sphericity was violated ($\chi^2(14) = 30.20, p = <.01$), so the Greenhouse-Geisser test was selected. The ANOVA was significant ($F(2.50) = 4.42, p = .02$), suggesting that there were differences between the changes in worry. Worry decreased continually over the intervention sessions but had a significantly larger decrease between Sessions 1 and 2. Session 1 focused on psychoeducation about worry and increasing gratitude, and therefore participants would be more aware of their worry and how to manage it. This may also suggest that the combination of psychoeducation about worry, and the introduction of the gratitude diary, was responsible for the largest decrease in worry. Once that steep decrease had happened, worry seemed to decrease more gradually over the following sessions. Worry continued to decrease at the one-month and three-month follow-ups, suggesting that the intervention had lasting effects post-workshop.

When examining the Little Changes, Mauchly's test was significant ($\chi^2(5) = 19.91, p = <.01$), and the ANOVA was not significant ($F(1.47) = .84, p = .41$). This indicates that there were no significantly steep decreases before and after each session.

5.4.3.4 Hope Agency

For the Big Changes, Mauchly's test of sphericity was significant ($\chi^2(14) = 26.37, p = .03$), and the ANOVA was also significant ($F(2.30) = 5.95, p <.01$). There was a significantly steeper increase in hope agency between Sessions 1 and 2. This was predicted as Session 2 focused on hope agency, and therefore the significantly larger increase in hope agency was expected to be found as a result of Session 2. Hope

agency continued to rise throughout the intervention at more gradual pace. However, when looking at the follow-up measures, hope agency appeared to slightly decrease at the one-month time point and then rise again at the three-month time point. This might indicate that the participants initially felt uncertain after the workshop ended but found their confidence in the exercises as more time passed.

For the Little Changes, Mauchly's test was also significant ($\chi^2(5) = 14.22, p = .02$), and the ANOVA was not significant ($F(1.73) = 3.14, p = .07$). This indicates that there were no significantly larger changes in hope agency before and after each session.

5.4.3.5 Hope Pathways

For the Big Changes, Mauchly's test was significant ($\chi^2(14) = 30.51, p < .01$), and the ANOVA was also significant ($F(2.61) = 11.06, p < .01$). This followed a similar pattern to hope agency, where the biggest change in hope pathways came between Sessions 1 and 2. This was unexpected, as Session 3 focused on hope pathways, and therefore a significantly bigger increase in hope was anticipated there. However, it is fair to assume that as hope agency increases, which is the motivation to achieve goals, hope pathways would also increase. At the one-month mark, hope pathways decreased, rising again at three months, suggesting that the participants may have felt less motivated to plan for their goals after the workshop ended but began planning effectively again as more time passed.

This was confirmed in the Little Changes. Mauchly's test was again significant ($\chi^2(5) = 16.00, p < .01$), and the ANOVA was also significant ($F(1.53) = 11.71, p < .01$). This

showed that again, hope pathways increased significantly more in Session 2 than the other sessions.

5.4.3.6 Gratitude

When examining the Big Changes, Mauchly's test was significant ($\chi^2(14) = 34.28, p = <.01$), and the ANOVA was also significant ($F(2.01) = 6.74, p <.01$). There were significantly bigger increases in gratitude between the pre-workshop measure and Session 1, and between Session 1 and 2. This confirms the hypothesis that gratitude would have a steeper increase around the first session, as that session was focused on gratitude. As seen with hope agency, gratitude continued to rise until the one-month point, where it decreased slightly, and rose again at the four-month mark, suggesting that participants may have felt less grateful after the workshop ended, but began to engage more with gratitude as time passed.

In the Little Changes, Mauchly's test was once again significant ($\chi^2(5) = 20.18, p = <.01$), and the ANOVA was also significant ($F(1.42) = 6.78, p = .01$). This indicated again that Session 1 caused a significantly higher increase than any of the other sessions.

5.4.3.7 Brooding

In the Big Changes, Mauchly's test was not significant ($\chi^2(14) = 22.17, p = .08$), and the ANOVA was also not significant ($F(5) = 2.08, p = .08$), suggesting that the changes in brooding remained consistent across the workshop rather than a specific session. Brooding appeared to decrease in small amounts over the workshop, amounting to a

larger decrease overall. It also shows that brooding increased slightly at the one-month point but improved again at the three-month point.

In the Little Changes, Mauchly's test was significant ($\chi^2(5) = 12.40, p = .03$), and the ANOVA was not significant ($F(1.81) = 4.14, p = .74$). The results also show that the decreases in brooding were consistent across the sessions.

5.4.3.8 Life Satisfaction

In the Big Changes, Mauchly's test was significant ($\chi^2(14) = 34.28, p < .01$), and the ANOVA was also significant ($F(2.30) = 4.96, p = .01$). This suggested that the changes in life satisfaction were significantly different across the workshop. Between Sessions 1 and 2 there was a steeper increase in life satisfaction, and then a more gradual increase across the rest of the workshop. It then decreased very slightly by the one-month mark and increased again for the three-month mark, suggesting that similarly to hope and gratitude, participants felt unsure after the workshop ended, but managed to find their confidence in their new skills as more time passed.

In the Little Changes, Mauchly's test was significant ($\chi^2(5) = 10.92, p = .05$), and the ANOVA was not significant ($F(1.91) = .494, p = .69$). This indicates there were no significantly bigger changes in life satisfaction before and after each session.

Overall, the Big Changes are depicted in Table 27 to show the patterns more clearly.

Table 27*Increases and decreases in variables across the intervention*

| Variable | Anxiety | Depression | Worry | Hope Agency | Hope Pathways | Gratitude | Brooding | Life Satisfaction |
|--------------------|----------|------------|-------------|-------------|---------------|-------------|----------|-------------------|
| Baseline-Session 1 | Decrease | Increase | Decrease | Increase | Decrease | L. Increase | Decrease | Increase |
| Session 1-2 | Increase | Decrease | L. Decrease | L. Increase | L. Increase | L. Increase | Decrease | L. Increase |
| Session 2-3 | Decrease | Decrease | Decrease | Increase | Increase | Increase | Decrease | Increase |
| Session 3-4 | Decrease | Decrease | Decrease | Increase | Increase | Increase | Decrease | Increase |
| Session 4-1 Month | Decrease | Decrease | Decrease | Decrease | Decrease | Decrease | Increase | Decrease |
| 1 Month – 3 Month | Decrease | Decrease | Decrease | Increase | Increase | Increase | Decrease | Increase |

L. = large

5.4.4 Comparisons of the intervention groups

The first group took part in the workshop during the very beginning of the COVID-19 pandemic, during which they were also preparing for their spring/summer exams and coursework. In comparison, the second group took part in the workshop six months after the start of the COVID-19 pandemic, when the lockdown had lifted, and were just entering their third year of university. These were considerably different periods of time, and therefore the two groups' results were compared to examine any potential differences.

5.4.4.1 T-tests

A series of t-tests were performed to compare the means of each variable between the two intervention groups, as shown in Tables 28 and 29. Separate t-tests were run for pre-workshop, post-workshop, one-month follow up, and three-month follow up. When Levene's Test for Equality of Variances was significant, the degrees of freedom were adjusted.

Before the workshop began, there were three variables that significantly differed; hope agency, hope pathways, and gratitude. All of these were significantly lower in the second intervention group. This suggests that the second group, beginning their third year of university, were less hopeful and less grateful. As exam results would have been given to them recently, it may have been that some participants received results they were unhappy with. The second group was also six months into the COVID-19 pandemic, and while lockdown had lifted, there was significant uncertainty about the future. The rate of COVID-19 cases was growing higher, and government guidance had

not yet been published for universities. Due to this, many students were being forced out of their university accommodation and made to live at home, isolating them from their established adult lives.

After the workshop had finished, the only variable that significantly differed between the intervention groups was anxiety, which was significantly lower in the second group. This may mean that while both groups had a significant decrease in anxiety after the intervention in comparison to the control, the intervention may target anxiety during less hectic periods of time. The participants in the second group had finished their second-year exams, and while they were still experiencing the pandemic, there had been time to adjust to a new routine.

While the decrease in anxiety was maintained at both follow-up points in both intervention groups, it was still significantly lower in the second group. The follow-up points were at one month and three months. At one month, the first group were in the midst of their exams, and the second group were still in the first semester of their third year. At three months, the first group were waiting for their exam results during their summer break, and the second group were beginning their winter exam period. This indicates that whatever the anxiety level was at the end of the workshop, it was maintained for at least three months despite the differing situations of both groups.

Lastly, reflecting was significantly higher in the second group at the three-month follow-up, which may indicate that the second group learned to be more self-reflective as a result of the workshop. As the group was just going into their next period of high stress, with their winter exams, it may be that they engaged in more self-reflection to manage their behaviour during this time. This may again indicate that the learning from the intervention was being applied at an appropriate time.

Table 28*Independent samples t-tests between the two intervention groups*

| Variable | T | Df | Sig. |
|---------------------------------|-------|-------|------|
| Anxiety Pre-Workshop | 1.09 | 8.663 | .36 |
| Anxiety Post-Workshop | 2.34 | 12 | .04 |
| Anxiety at One Month | 2.60 | 12 | .02 |
| Anxiety at Three Months | 2.22 | 11 | .05 |
| Depression Pre-Workshop | .02 | 12 | .98 |
| Depression Post-Workshop | -.51 | 12 | .62 |
| Depression at One Month | .82 | 12 | .43 |
| Depression at Three Months | .66 | 11 | .52 |
| Worry Pre-Workshop | .02 | 12 | .99 |
| Worry Post-Workshop | .17 | 12 | .87 |
| Worry at One Month | .87 | 12 | .40 |
| Worry at Three Months | -.68 | 8.72 | .52 |
| Hope Agency Pre-Workshop | 3.17 | 12 | <.01 |
| Hope Agency Post-Workshop | .29 | 12 | .78 |
| Hope Agency at One Month | -.09 | 12 | .93 |
| Hope Agency at Three Months | -.43 | 11 | .68 |
| Hope Pathways Pre-Workshop | 3.91 | 12 | <.01 |
| Hope Pathways Post- Workshop | .92 | 12 | .38 |
| Hope Pathways at One Month | -1.13 | 12 | .28 |

| | | | |
|--------------------------------------|-------|-------|------|
| Hope Pathways at Three Months | -1.51 | 11 | .16 |
| Gratitude Pre-Workshop | 2.20 | 12 | .05 |
| Gratitude Post-Workshop | .29 | 12 | .77 |
| Gratitude at One Month | -.98 | 12 | .35 |
| Gratitude at Three Months | -.05 | 11 | .96 |
| Brooding Pre-Workshop | 1.18 | 9.91 | .26 |
| Brooding Post-Workshop | -.11 | 12 | .91 |
| Brooding at One Month | 1.36 | 12 | .20 |
| Brooding at Three Months | .07 | 11 | .95 |
| Reflecting Pre-Workshop | 1.12 | 11.48 | .28 |
| Reflecting Post-Workshop | -.81 | 12 | .43 |
| Reflecting at One Month | .06 | 6.84 | .95 |
| Reflecting at Three Months | -3.37 | 11 | <.01 |
| Life Satisfaction Pre-Workshop | 1.82 | 12 | .10 |
| Life Satisfaction Post- Workshop | -.57 | 12 | .58 |
| Life Satisfaction at One Month | -1.08 | 12 | .30 |
| Life Satisfaction at Three Months | -.44 | 11 | .67 |

Table 29*Mean scores of total variables*

| Variable | Mean Pre-Workshop | Std. Dev. | Mean Post- Workshop | Std. Dev | Mean at One Month | Std. Dev. | Mean at Three Months | Std. Dev |
|--------------------------------|----------------------|-----------|---------------------------|----------|-------------------------|-----------|-------------------------|-------------|
| Anxiety (Intervention 1) | 12.33 | 1.37 | 10.67 | 1.20 | 10.33 | 2.50 | 9.80 | 2.17 |
| Anxiety (Intervention 2) | 10.50 | 4.47 | 7.13 | 2.70 | 6.38 | 3.02 | 6.38 | 2.97 |
| Depression (Intervention 1) | 8.67 | 3.08 | 5.83 | 2.32 | 6.67 | 2.42 | 5.60 | 2.07 |
| Depression (Intervention 2) | 8.63 | 4.34 | 6.75 | 3.92 | 5.50 | 2.78 | 4.63 | 2.83 |
| Worry (Intervention 1) | 60.83 | 8.47 | 39.67 | 16.11 | 36.50 | 14.71 | 28.00 | 2.55 |
| Worry (Intervention 2) | 60.75 | 10.01 | 38.63 | 6.50 | 31.63 | 5.60 | 30.25 | 8.84 |
| Hope Agency (Intervention 1) | 22.00 | 5.14 | 27.50 | 2.59 | 26.33 | 3.27 | 27.40 | .89 |
| Hope Agency (Intervention 2) | 13.00 | 5.35 | 27.13 | 2.30 | 26.50 | 3.82 | 28.00 | 3.02 |
| Hope Pathways (Intervention 1) | 22.50 | 3.27 | 30.17 | 1.83 | 25.83 | 4.62 | 26.80 | 2.68 |
| Hope Pathways (Intervention 2) | 16.00 | 2.93 | 28.75 | 3.41 | 28.13 | 3.00 | 28.75 | 1.98 |
| Gratitude (Intervention 1) | 26.50 | 9.67 | 37.33 | 4.37 | 34.17 | 7.03 | 35.80 | 2.59 |
| Gratitude (Intervention 2) | 16.00 | 2.93 | 36.75 | 3.20 | 36.75 | 2.43 | 35.88 | 2.07 |

| | | | | | | | | |
|------------------------------------|-------|------|-------|------|-------|------|-------|------|
| Brooding (Intervention 1) | 15.67 | 2.07 | 8.17 | 4.40 | 10.33 | 4.50 | 7.60 | 2.30 |
| Brooding (Intervention 2) | 10.19 | 4.27 | 8.38 | 2.62 | 7.75 | 2.60 | 7.50 | 2.67 |
| Reflecting (Intervention 1) | 16.33 | 3.14 | 11.17 | 5.64 | 13.00 | 4.52 | 8.80 | 1.92 |
| Reflecting (Intervention 2) | 13.75 | 5.39 | 13.13 | 3.40 | 12.88 | 2.23 | 12.50 | 1.93 |
| Life Satisfaction (Intervention 1) | 16.83 | 5.19 | 28.83 | 2.92 | 27.50 | 6.72 | 30.00 | 2.55 |
| Life Satisfaction (Intervention 2) | 11.63 | 5.40 | 29.63 | 2.26 | 30.13 | 1.64 | 30.50 | 1.60 |

5.5 Discussion

The experimental groups at baseline did not significantly differ in comparison to the control group, indicating that the groups started the intervention or waiting list at a similar state of mental health. However, the two experimental groups did slightly differ in hope agency, hope pathways, and gratitude, with the second group (post-transition period) showing lower results. This could indicate that the students after a transition period struggling more with feeling hopeless or being unable to find things to be grateful for. It could also be due to it taking place six months into the COVID-19 pandemic, where there was a lot of uncertainty about when the world would be able to return to normal.

Overall, the Worry Workshop proved successful for both experimental groups in comparison to the control. For the experimental group, there were increases in both the hope subscales, gratitude, and life satisfaction, accompanying decreases in depression, anxiety, and worry. The control group did not demonstrate these changes.

5.5.1 Changes in mental health across the workshop

ANOVA revealed that the changes in anxiety were consistent across the sessions, leading to a steady decrease in anxiety as the workshop progressed. This was similarly found with depression, showing that no particular session caused a larger or smaller decrease in depression, but rather it matched anxiety with a gradual decrease. Worry, however, decreased throughout the workshop at different rates, with a sharp decrease between the baseline and post-Session 2, indicating that the first two sessions were most effective at reducing worry. However, worry did continue to significantly

decrease for the rest of the sessions. Worry, anxiety, and depression all continued to decrease at the one-month and three-month follow-ups, indicating that the effects of the workshop were maintained and continued for three months. The brooding subscale of rumination also decreased, which was to be expected as rumination is often conceptualised as a part of worry, and this was also maintained at three months. The reflecting subscale of rumination did not differ between any groups at any time point, suggesting that it did not change significantly over the Worry Workshop. Reflection was, however, maintained at a high level from start to finish, which indicated that all the groups were continually reflecting on their mental health.

Hope agency rose dramatically between the baseline and Session 2, which logically followed the format of the workshop as hope agency was the focus for Session 2. Interestingly, hope pathways followed the same pattern, despite the specific session for hope pathways being Session 3. However, it is fair to assume that due to the strong overlap and association between hope agency and hope pathways, that one would naturally increase alongside the other. Gratitude also rose more steeply between the beginning and Session 2, which again makes sense due to gratitude being the focus of Session 1. However, both gratitude and the two subscales of hope continued to increase less dramatically throughout the following sessions, indicating that all four sessions were useful in increasing character strengths. The character strengths decreased very slightly at the one-month mark, but rose back up at the three-month time point, indicating that the effects of the Worry Workshop were maintained after three months.

When comparing the two intervention groups, the only variable that significantly different post-workshop was anxiety, which was significantly lower in the second

group. This may indicate that while both groups had lower anxiety after the workshop, the workshop may best target anxiety during less busy periods of time. The second group were in a comparably quieter time in terms of their academic lives, whereas the first group were in the middle of a transition period.

5.5.2 Implications

As seen previously among many positive psychology interventions, hope and gratitude have been shown to be vital when it comes to managing mental health (Anderson et al., 2017; Feldman & Dreher, 2012; Feldman et al., 2015; Kwon et al., 2015; Wood et al., 2010). While these studies predominantly focused on anxiety and depression, this intervention has shown the effect that hope and gratitude can have on worry, brooding, and life satisfaction.

Informed by a Study 1 (Chapters 3 and 4), the Worry Workshop was developed from a mixed methods exploration of student mental health and focuses on the transition periods students face throughout their academic lives. The workshop offered a short, 4-week set of sessions that benefitted students for months after the end of the sessions. It could be offered by student support services as a workshop to manage worry and anxiety through positive psychology, alongside existing self-help techniques such as mindfulness, or it could potentially be embedded into university courses as an optional workshop for students that want to take part. Decreases in mental health in students lead to problems in their lives, from social interaction (Hunt & Eisenberg, 2010) to academic performance (Bruffaerts et al., 2018). The stigma of mental health problems and receiving therapy is still very much an issue for students (McLafferty, et al., 2017). The Worry Workshop is designed in such a way that it is not advertised as

'therapy', but as a short series of sessions to help develop tools against worry. If the Worry Workshop was offered to students as part of their course, it may help to reduce the stigma attached to asking for help, as it would be seen as a normalised part of the university experience. As the intervention is designed to be given to groups, this would also hypothetically help ease the burden on student support services (Watkins et al., 2012). Rather than having to deliver support methods to students individually, the Worry Workshop is designed to be given to small-medium size groups of people at once.

5.5.3 Limitations

While the intervention seemed successful, it was limited by size. The sample size of participants that completed the intervention was 16, and ultimately two participants' data was incomplete and had to be removed from some analyses. This was due predominantly to difficulties in recruiting, as the intervention had to be altered quickly to account for the COVID-19 pandemic, as the instructions to stay at home began the same week the intervention was due to start. The power analyses indicated a sample size of 24 was needed for within-subjects analysis, and 82 for between-subjects analysis. The study was therefore underpowered and further research would be needed with larger sample sizes to retest the effects of the intervention.

Another limitation is the lack of a resilience measure. In Study 1, it was found that resilience was a mediating variable in the relationships between character strengths and mental health. However, the mediation analyses were performed after all three studies had completed. This led to a posthumous hypothesis that resilience may play a mediating role, but this was too late to inform the development of the materials for

the later studies. As the intervention study had already been completed, resilience had not been included as a potential factor as it had not directly predicted worry, anxiety, or depression in Study 1 at the time.

5.5.4 Conclusion

The Worry Workshop appears to have been successful in reducing anxiety, worry, depression, and brooding, by the increasing of hope and gratitude. The intervention is designed in a way to be easily deliverable to groups of students at a time. There are changes that would be recommended if the Worry Workshop was to be repeated, especially the inclusion of resilience as a potential mediating variable. However, the results show the effects of the workshop are maintained at three months, and this indicates that the workshop may be useful as a support system for students throughout transition periods.

6. Study 3: Qualitative Evaluation

The intervention study provided quantitative evidence for the effectiveness of the Worry Workshop on student mental health. To complement and expand upon these findings, a qualitative evaluation was conducted, following the unidirectional explanatory framework of mixed methods research. The aim of Study 3 was to extend and explore the results from Study 2 from the perspective of the participant, and to see whether or not the findings from Study 3 would support the results from Study 2. This chapter will detail the methods used in Study 3, then explain the coding and themes, and finally discuss each theme.

6.1 Methods

6.1.1 Data collection

Eight online semi-structured interviews lasting between 30 and 40 minutes were conducted. A list of questions guided the interview (Appendix C.4), but it was made clear to the participants that they could bring up any relevant subject at any time and were free to deviate from the questions where appropriate, provided it related to the research questions and if not, the researcher steered them back to the main questions. Participants were made aware of the nature of the questions in the information sheet. The interviews were recorded, transcribed, and anonymised, and upon completion the audio recording was deleted. Participants were made aware of their right to withdraw the data for one week after the interview.

6.1.2 Participants

The eight students were from the group of participants in Study 2. At the time of their participation in Study 2, they were second-year students in various undergraduate courses at Sheffield Hallam University. Four were recruited via email from each group and the interviews were held three months after their participation in the intervention. At the time of their participation in Study 3, the first half of the participants were still in the second year of their studies, and the second half of the participants had just entered their third year. Five participants were female, three were male. No identifying features of the participants have been included in the data collection.

6.1.3 Ethical considerations

Ethical approval was gained through the Sheffield Hallam University ethics board. To ensure anonymity and data security, the audio files were kept on a USB drive that was only accessed by the researcher. After the audio files were transcribed and anonymised, the audio files were deleted to ensure participant anonymity. As the sample consisted of eight participants who had all taken part in the intervention, and therefore knew identifying features of each other, all transcribed data was anonymised to omit identifying features such as gender, ethnicity, names, descriptions of appearance, and descriptions of conversations that had taken place within the group sessions. The right to withdraw was made clear to participants in the information sheet, consent form and during interviews; participants were able to withdraw their data for up to one week after the interview took place. After that, the data was anonymised and transcribed, and participants could not withdraw their data.

6.1.4 Quality and trustworthiness

6.1.4.1 Credibility

Credibility refers to the confidence in the ‘truth’ of the study and therefore the findings (Bitsch, 2005). The data was continually reviewed, questioning the conclusions and interpretations drawn from the data at each review. The anonymised, transcribed data was also reviewed by a colleague not involved in the research to identify any areas the researcher may have overlooked. The research also featured method triangulation (Carter et al., 2014; Polit & Beck, 2010), which involved combining

different research methods to address the same research. In this research, method triangulation was used by addressing the intervention through both the quantitative study in Chapter 5, and the qualitative evaluation in Chapter 6. This provided different data on the same subject, and therefore allowed for additional support for conclusions, strengthening the findings. Peer-debriefing (Creswell & Miller, 2000) was used to enhance the credibility of the study by providing external checks on the process, which involved an independent colleague reviewing the themes as they were generated.

6.1.4.2 Dependability

Dependability refers to the stability of the data and research over time (Bitsch, 2005). The interviews were conducted three months after the intervention ended, which meant that half of the interviews took place one month after the first group. The participants were at a similar point in the academic year, just beginning their third year of university, which meant that the participants were all in similar situations academically. There was one interview per participants, and therefore the data must be considered as a snapshot in time, as opposed to several interviews that would need to have stability over time.

There is no 'one size fits all' method for achieving data saturation (Kerr et al., 2010), but recommendations from the literature were taken as a guide. The recommendations were that data saturation was achieved when:

- There is enough information to replicate the study (Kerr et al., 2010).
- There are no new codes that can be drawn from the data (Birks & Mills, 2015).

- Reflective analysis is generating no new ideas or interpretations (Saunders et al., 2018).

The first point was achieved by creating a study that had each stage of analysis documented and explained in a reflexive journal (Koch & Harrington, 1998), to document the examination of the data and the process undertaken by the researcher for constant reflection. The second and third points were achieved by continuing to revisit the data until no new interpretations were generated.

6.1.4.3 Confirmability

Confirmability refers to the degree that the results of an inquiry could be confirmed by other researchers (Polit & Beck, 2010). The anonymised data was, as previously mentioned, examined by an independent colleague to confirm that the established themes were clearly derived from the data, and were thorough. Immersion-crystallisation was also used to repeat and confirm the themes generated from the data (Borkan, 2021). This involved repeatedly reading and analysing parts of the data, and then pausing the data analysis to reflect on the current themes and patterns. This allowed for confirmation of the patterns through repetition and objective reflection. Again, the use of a reflexive journal (Koch & Harrington, 1998) allowed the researcher to document the generation of themes over time, showing confirmation of the themes.

6.1.4.4 Transferability

Transferability in qualitative research is synonymous with generalisability, or external validity, in quantitative research. Transferability is established by providing readers with evidence that the research study's findings could be applicable to other contexts, situations, times, and populations (Korstjens & Moser, 2018). The findings of Study 3 about COVID-19 and the student experience of lockdown can be transferable between any student groups, as the experience would have been similar across universities. Similarly, student mental health is a concern globally, and findings from Study 3 about student mental health may therefore be applicable to other universities. However, findings about access to support may not be applicable to other universities, as there may be differences in support services between universities. The findings may also not be transferable between different demographics, such as age, ethnicity, and disability status.

6.1.5 Reflexive thematic analysis

The transcribed data was analysed using reflexive thematic analysis, which is a flexible interpretive approach to analysing qualitative data that results in identifying patterns and themes within the data (Braun & Clarke, 2013). Within a reflexive approach to thematic analysis, codes were used to represent the interpretation of the data from the perspective of the researcher. As opposed to other methods of thematic analysis that use a structured codebook, reflexive thematic analysis is more personal to the researcher (Terry & Hayfield, 2020), and therefore the measures discussed above were taken to ensure the dependability of the findings. The research was continually analysed and reflected on to ensure the themes generated were dependable, and that

data saturation had been achieved (Braun & Clarke, 2019). The involvement of supervisors in the analysis was used to provide multiple interpretations of the data and to provide richer analysis (Braun & Clarke, 2013).

The analysis followed an inductive process, generating codes and themes from the data and not the existing literature. Initial codes were generated by undertaking a thorough reading of the transcribed data, noting down patterns and words that represented what the participants had shared in their answers. Each code was written down separately with quotes from the transcriptions to show how frequently it arose within the data. This led to the creation of 54 initial codes (Appendix C.6). The codes were arranged into categories depending on similarities, for example codes outlining mental health prior to the workshop and codes outlining mental health after the workshop were grouped into a category about 'mental health'. These groups provided a framework for comparing data across cases, for example comparing one participant's reported mental health to another. During the analysis, semantic themes (Braun & Clark, 2019) were generated, for example 'embarrassment and discomfort' when participants reported feeling embarrassed by creating and sharing affirmations with their group. The themes were created at different times, with the researcher constantly revisiting the data to explore new ideas and interpretations. The final themes can be found below in Table 30.

Table 30*Themes and summaries*

| Theme | Summary |
|--|--|
| Perceptions of mental health | Participants discussed their perceptions of their own mental health and worry before and after the workshop and how the workshop changed their views. Prior to the workshop, participants perceived their mental health as uncontrollable and worry as a passive experience rather than an active behavioural choice. |
| The impact of COVID-19 | Participants discussed the impact of COVID on their mental health and life, as it was reported to have impacted all aspects of life including work, relationships, academia, finances, and health. Participants believed that COVID-19 impacted both the experience of the intervention and the effect of the intervention, due to it being a period of high stress. |
| Lack of support access and disappointment | Participants discussed their attempts to access support and disappointment in the NHS and university support systems. Participants reported that they often did not hope for help when applying, as they were frequently disappointed and had to manage their expectations. This was reflected in participants who were initially put on the 'wait list' condition of the study. |
| Challenging preconceptions of positive psychology | Participants explained that they had preconceptions of PP, and that they were challenged during the workshop. This was largely influenced by social media 'fads' about affirmations and gratitude diaries that were not guided or supported by information. |

| | |
|--|--|
| Inhibitors to engagement in the PPI | Participants reported feeling embarrassed about affirmations and not understanding the long-term impact of the gratitude diary. Some reported they would have preferred an in-person intervention, and others reported a preference for an 'icebreaker' session and an extra session at the end to consolidate information further. Some participants would have preferred a one-to-one format as they did not enjoy a group format. |
| Motivation beyond the intervention | Participants reported long-term use of the exercises and reported different reasons for each one. Some found the gratitude diary soothing and aided restful sleep, some found the hope exercises specific to goal management and used as the need arose. Recommendations were made by participants for digital versions of the exercises. |
| Group behaviours and shared experiences | Participants reported different opinions on group dynamics, with some enjoying sharing experiences with their group members, and some preferring a one-to-one format due to embarrassment, shyness, or finding other people's experiences irrelevant to their own. |
| Embedded interventions and alterations | Participants discussed the possibility of the intervention being embedded in undergraduate courses to provide students with optional support from the beginning of their course. This came with other recommendations for inclusivity among different student populations such as disabled students, international students, and mature students. |

6.2 Findings

The themes will be presented in the order set out in Table 31 along with their sub-themes and each theme will conclude with a discussion before continuing onto the next theme.

6.2.1 Theme: Perceptions of mental health

Participants discussed their views and opinions on their own mental health during the intervention. The sub-themes were:

- Changes in mental health pre/post workshop
- Perceptions of worry

6.2.1.1 Sub-theme: Changes in mental health pre/post workshop

Participants all indicated that prior to the Worry Workshop, they were experiencing fluctuations in their mental health. Participants reported sleep disturbances, symptoms of anxiety, excessive worry, and stress.

‘It was definitely more stress than the previous year, I mean it’s different because second year suddenly counts and you have to work harder and the work gets so much harder, but then you have the pandemic come on and suddenly bam, everything’s way more stressful.’ (Participant A, page 9).

Participants reported a variety of stressors within their lives, including the COVID pandemic, personal relationship problems, family emergencies, and academic

troubles. Participants reported more than two stressors each, indicating that they were in the midst of a difficult period prior to the workshop.

‘You name it, it was stressing me out. I’d just broken up with [name] because he was cheating on me, my nan was in hospital, COVID was messing everything up and I was stuck in my flat by myself, unable to even visit my nan. It was a really shit time.’ (Participant D, page 2).

The severity of changes in participants’ mental health varied, with some participants noting that it was not particularly intense, and some participants noting that it significantly altered their daily life. However, all participants noted that there had been a negative change in their mental health prior to the workshop, brought on largely by large periods of change and transition. Participants appeared to be facing a barrage of stressors that felt unrelenting, and that this was the main reason they felt the need to seek out support through the intervention.

‘The advert said it was for students who worry a lot and I thought that sounded relatable.’ (Participant A, page 2).

‘This is going to make me sound desperate, but I sign up for anything I can get my hands on for mental health. I’ll try literally anything to improve my mental health, I think it’s so important.’ (Participant E, page 2).

‘I think I was just hoping for help. I think I hadn’t pictured anything specific. Just that I wanted help and that this was offering it.’ (Participant A, page 3).

Participants did not necessarily sign up for the workshop due to it being specifically for reducing worry. Some signed up as it was a form of support, regardless of what it was supporting, due to feeling desperate for any kind of support.

Participants reported that after the Worry Workshop, they felt significantly more able to cope with the stressors. Often, participants mentioned that the stressors themselves had not vanished; the pandemic was still causing anxious feelings, and the academic pressure of third year was always providing new sources of stress. However, participants now felt capable of turning to a healthy coping strategy rather than ruminating on the possible outcomes of events:

‘The stress didn’t really change cause the things causing the stress were always happening, it just kept coming in. But I definitely noticed a change in how I dealt with it. I could handle it better because I had the motivation and the plans, and like I said, taking a few minutes at the end of the day for the gratitude diary, that was really nice and relaxing. So, it was like the stress didn’t change but the response from me did. I didn’t worry as much about it, it was easier to switch off from it because I knew I had the plan, and I knew I’d stick to it.’ (Participant A, page 9).

‘Sort of. I think it definitely helped make my anxiety better, but it’s not like the stressors went away. And it just kept on coming and coming, like things piled up really fast, and they’re still coming. But I think the sessions helped me sort of take a step back from the stress and think about how to deal with it better. So, I think it’s more that it gave me a better way to address the problems.’ (Participant C, page 8).

It helped take away some of the stress, I think. At the end of the day, I’d struggle more with worry, like right before bed I would be sat there thinking about all the stuff I could have done, or all the things that might happen. After the gratitude diary, I went to bed thinking about all the things I was happy and

thankful for instead. It was just way nicer. I noticed that I slept easier, too.'

(Participant H, page 6).

Participants mentioned that they worried less and felt less anxious, and that their mental health had seen improvements after taking part in the intervention. In turn, the worry that had been causing sleep problems in some participants had alleviated and participants were able to maintain a healthier sleeping pattern. This indicates that the worry had been the root of the sleep disturbances, and that the alleviation of worry not only improved mental health, but aspects of general health such as sleeping patterns.

6.2.1.2 Sub-theme: Perceptions of worry

The participants all experienced some degree of worry prior to the Worry Workshop. While the level of worry changed between participants, it was present to the point where participants mostly noticed themselves worrying more than usual. They also reported that they had linked it to being tired.

'It'd be easier to ask if I spent any time not worrying. I think I spent a solid week just thinking of all the possible outcomes of every single situation I was in. It was exhausting, I was knackered all the time.' (Participant D, page 2).

'I spent tons of time worrying. I'd be lying there at night ready to go to sleep and then a thousand intrusive thoughts would just blast me in the face. I think I worried more about the problems I had than I should have done, it wasted a lot of time.' (Participant A, page 3).

The worry was attributed by some participants as a response to the previously mentioned stressors. Some participants identified that worry was affecting their sleep and their engagement in their daily activities. Participants indicated their frustration with worrying excessively, reporting that it 'wasted time'.

Most participants reported that until the workshop, they assumed worry was a passive experience, rather than an active behavioural choice that they could change.

Participants also explained that they did not perceive worry to be a harmful behaviour when it became excessive.

'A lot, yes. Too much. I didn't really know it was a bad thing, though. Like, I knew worrying was stressful, but it felt more like a consequence of bad things, rather than a choice. I didn't think I was making a choice to do something harmful to me.' (Participant G, page 2).

'Yeah, like everyone worries. It's hard to know where the line is from that being okay to that not being okay.' (Participant G, page 2).

This indicates that prior to the education provided throughout the workshop, participants were unaware that they were making the active decision to worry about the situations in their life. This may be indicative of a wider problem; that worry may be so normalised as a 'part of life', people don't understand that they are choosing to worry.

After the workshop sessions, participants reported that their perceptions of worry had changed entirely. Most of the participants indicated that they felt they had control over their worry and could stop themselves from relying on worry as their default option.

‘I’m not really sure. I think it’s because I know what to replace it with. Before, I’d beat myself up for ruminating and say, ‘just stop worrying!’ but that doesn’t actually help anything, because obviously there’s nothing to replace it. The sessions gave me something to replace it with. And it felt like I had much more control over it that way.’ (Participant E, page 6).

‘Less time worrying, definitely. Once we did the session where you told us about worry and when to notice it, I realised just how much time I was spending going over and over things in my head, but not doing anything to fix the issue. After that, any time I noticed that I was worrying, I’d stop myself and say, ‘this isn’t healthy or helping me’, and then figure out something to change how I was acting.’ (Participant B, page 9).

Participants reported that they now perceived worry as a harmful behaviour when excessive and noticed when they were worrying much faster than before. This indicates that the psychoeducation about worry provided in the intervention is a vital part of changing the perspective of the participants. Participants also explained that they now had other options to replace worrying, which had also been provided through the intervention.

6.2.1.3 Discussion of theme

Overall, there was a clear difference in mental health between what the participants reported before and after the workshop. Before the Worry Workshop, participants identified their mental health as not just negative, but noticeably worse than it had been in the past due to ongoing changes in their lives. During the time of the

interviews, government guidance on university teaching had not been formally published, and so there was a significant amount of uncertainty about participants' education. Participants worried that their classes would be held remotely and that it would affect their learning significantly. Participants also seemed concerned about the future of their education, considering they were readying themselves to enter their third year and worried about the supervision for their dissertation. Typically, a dissertation project is a source of stress for many students, and therefore adding a layer of uncertainty to that experience provided another cause for worry (Sheykhi et al., 2013).

One of the models of worry discussed within the first chapter was the Intolerance of Uncertainty Model (Ladouceur et al., 2000), which suggests that worry and anxiety are induced due to the perception of ambiguous situations as threatening. Participants did seem to display this behavioural pattern, explaining that they would sit and think about all possible outcomes to a situation so that they felt more prepared for uncertain situations. As with all worry, this is understandable and helpful in smaller amounts; picturing all the questions that might be asked in a job interview, for example, can help someone prepare appropriately for the interview. However, with something as pervasive as the COVID pandemic, there are so many possible outcomes to every aspect of it, that a person could find themselves easily engaging in excessive amounts of rumination (Satici et al., 2020). Participants seemed to identify the stressors as threatening to their education and overall success at completing their third year, perceiving the stressors as threatening, similarly to the Intolerance of Uncertainty Model (Carleton et al., 2007).

However, while some participants had linked excessive worry to some of their problems, such as sleep pattern fluctuations, most of the participants prior to the workshop did not perceive their excessive worry as harmful, or even as something they could actively control. Several models of worry involve the perception of worry held by the individual, specifically the tendency to not perceive excessive worry as harmful, and the tendency to perceive worry as uncontrollable and involuntary. The cognitive-avoidance model posits that worry is perceived as positive due to being associated with a decrease in fear and anxiety (Behar et al., 2009), and bringing about a sense of relief when predicted negative outcomes do not happen (Craskes, 1999); the positive perception of worry comes from the individual feeling protected against an emotional contrast by worry perpetually sustaining a negative emotional state (Newman & Llera, 2011). Similarly, the intolerance of uncertainty model suggests worry is perceived as positive due to the individual experiencing less distress (Ladouceur et al., 2000). The models, despite their differences, all suggest that worry is often perceived as positive as in the short-term, it decreases the discomfort caused by anxiety and stress, and is reinforced. As discussed in Chapter One, therapies derived from the various models often included psychoeducation about worry and providing the individuals with tools to replace worry as their default coping strategy (Bauer et al., 2020; Behar et al., 2009; Fresco et al., 2013). This may not necessarily be a harmful behaviour at first, but with excessive, repeated use, worry becomes significantly more harmful (Ottoviani et al., 2014) and therefore the psychoeducation on worry included in the intervention is vital to change participants' perspectives on engaging in worry.

Participants reported after the workshop that their perception of worry had changed. This was a vital part of the intervention; the psychoeducation aimed to change

participants' beliefs about their worry. While the models of worry suggest that worry is perceived as a positive strategy, this research indicates that worry is perceived as a passive experience that happens to an individual, rather than an active behavioural choice. Educating participants about their worry allowed them to change how they reacted when facing stressors. Participants reported that after the intervention, they were easily able to notice when they began to worry and change their response to the situation accordingly. Interestingly, participants most often cited the hope pathways session as being most useful for the change in response; the participants found that being able to make an organised, competent, thorough plan was often enough to negate the need to worry about a situation. This might suggest that the gratitude diary and the affirmations were beneficial for mental health in general, but the hope pathways were most effective at replacing worry directly. Participants reported that the intervention had helped reduce symptoms of stress and anxiety, encouraged a healthier sleeping pattern, and improved their ability to cope with the persistent stressors in their lives.

6.2.2 Theme: The impact of COVID-19

Participants discussed their opinions on the impact of the COVID-19 pandemic on their mental health, life experiences, and the intervention itself. The sub-themes were:

- COVID-19 as a long-term stressor
- Effectiveness of intervention on COVID-19-related distress

6.2.2.1 Sub-theme: COVID-19 as a long-term stressor

The COVID-19 pandemic, at the time of the Worry Workshop, had only hit the UK 2-4 months prior at the start of the intervention. This was an unexpected transition period that everyone simultaneously had to undertake, with no preparation for such an event. This appeared to cause the participants a great deal of stress and anxiety, and they worried about the outcomes of the pandemic.

‘Health anxiety, yeah, that’s it. I worried all the time. I kept picturing all the ways I could get ill, or everyone I knew could get ill. My friends and family are really casual about it, they don’t seem to think it can even get to them. It’s really fucking stressful because I’ve got to run around making them use sanitiser and masks, and it’s like pulling teeth.’ (Participant E, page 2).

‘How much time do you have? COVID has affected everything. We were all extra stressed. We had extra pressure. It’s not letting up either. It’s like this is the new normal and we’re all freaking out about the future. So yeah, it’s probably affected the sessions a lot and it definitely affected us.’ (Participant D, page 8).

At the time of the interview, participants were 6-8 months into the pandemic, and the guidelines for universities had not been finalised. This was identified as a source of worry and anxiety for many of the participants, due to the uncertainty around classes and teaching for their third year.

‘We just didn’t have a plan, so it was hard to know what to even do with uni work and exams. We still don’t know if we’re going to be going in for classes in September.’ (Participant A, page 2).

‘Everyone’s adjusted and so it feels more normal now. Uni is definitely weird though. When COVID first hit we’d basically finished classes, I think I had two weeks of classes to go, and they basically just sent us the lecture slides and told us to get in touch if we had any questions. So, we didn’t have to get used to remote learning or anything. Now it’s like a week into term and we’re still working out all the kinks. Some people are not set up for internet classes. Teaching, I mean.’ (Participant H, page 2).

There was a significant period of adjustment during the first year of the pandemic, as teachers had to re-design their lectures to be delivered digitally, and there would have been inevitable problems with internet connections and accessibility. The first group interviewed was in August and they discussed still not knowing if they would be having remote classes or on-campus classes. The second group had begun remote learning and reported that there were issues being worked out in the transition to digital classes. This seemed to be causing frustration and stress among participants, as they were dealing with this on top of the usual stressors of their final year of university.

6.2.2.2 Sub-theme: Effectiveness of intervention on COVID-19 stress

Participants discussed the impact of COVID-19 on the intervention itself and their engagement in the sessions.

‘That’s a good question. I reckon it’s affected it in a hundred different tiny ways that we won’t even realise. Like, it caused us all to be just naturally more anxious and stressed out, and it made the future really uncertain, plus on top of that you’ve got the restlessness and boredom of being stuck at home with nothing to do. And then a thousand shitty things are happening around the world, and everyone’s developed this weird apathy where it’s like ‘okay, yet another horrendous thing is happening, I’m too tired to care’. It’s been a really weird time.’ (Participant C, page 7).

‘Definitely. I mean, it’s to be expected. I don’t think anyone wouldn’t be stressed about this. So yeah, I think the stress levels of everyone are really high. And what we learned in the sessions about worry – people will be worrying way more.’ (Participant G, page 8).

The participants explained that the COVID-19 pandemic had been a relentless barrage of stressors that increased their anxiety and stress overall, but also impacted every aspect of their lives. Participants believed that COVID would have raised the amount of stress, worry, and anxiety in all participants in the intervention, and therefore it may have meant the intervention was more necessary. Participants also explained that now they understood that worry was often perceived incorrectly, having been educated by the workshop, they could see how worry would be utilised more frequently by people during the pandemic.

Participants also discussed how the intervention has helped them cope throughout the pandemic.

‘Well, one of the things with worry was rumination. I think people will be ruminating on all the problems COVID causes. I catch myself doing it too, wondering what’s going to happen with third year, wondering what’s going to happen with work, what’s going to happen with the government, just going round and round on it. I’m able to stop myself because of what I learned in the sessions with controlling things you can control, but other people don’t know that stuff, so they’d just keep going with it.’ (Participant G, page 8).

The intervention helped participants to firstly identify that they were worrying, noticing when they did it more frequently, and secondly to stop themselves and replace it with a different coping strategy. Participants reported that the workshop had provided them with the tools to stop worrying about the outcomes of the pandemic and to focus on what they could control instead, and that people outside of the workshop would not have the same tools or knowledge.

6.2.2.3 Discussion of theme

The most consistent trigger of an increase in worry and anxiety in the interviews was the onset of the COVID pandemic and its impact on every aspect of daily life. The adjustment period to COVID can be considered a transition period itself, as the general population had to adjust to lockdown measures, social distancing, wearing masks, and preparing for vaccinations. Studies examining anxiety related to COVID-19 have found it to be greater than financial anxiety (Maaravi & Heller, 2020), associated with

decreases in general health (Yıldırım, Akgül, & Geçer, 2021), and resulted in sleep disturbances (Sher, 2020). Participants in this study also reported feeling anxious, worried, stressed, and having noticeable sleep problems. For many of the participants, this was a frightening and uncertain time for them to go through.

Participants were asked about their experience with the COVID-19 pandemic and how they felt about the impact it had on their mental health. This resulted in several discussions, largely based around overall stress. Participants noted various ways in which the pandemic had affected their lives, which ranged from academic changes to health anxiety to feelings of boredom and restlessness during lockdown procedures. It was generally summarised by participants as being a period of unexpected stress and discomfort, alongside feelings of uncertainty about the future. This has been reflected in many recent studies on the impact of COVID-19 on mental health. Studies have found increases in anxiety (Limcaoco et al., 2020), worry (Le & Nguyen, 2021), and emotional distress (Buckner et al., 2020) due to the many challenges people have faced throughout the pandemic. Participants reported that the workshop had helped them navigate the extended period of increased worry and anxiety caused by COVID-19 and provided them with the tools necessary to prepare for the uncertainty around the future. Due to the pandemic, participants were facing uncertainty about their university courses, as official guidelines for remote teaching had not yet been released. They were also facing extended periods of isolation, unable to rely on aspects of their support network, and the workshop provided them with alternative coping strategies to worry that would prevent them from ruminating on an uncertain future.

6.2.3 Theme: Lack of support access and disappointment

Participants reported varied opinions on being able to access support through the university and through the NHS. The sub-themes were:

- Management of expectations in seeking support
- Waiting lists for support

6.2.3.1 Sub-theme: Management of expectations in seeking support

While some participants signed up for the Worry Workshop due to finding the advert relatable some participants admitted they had no specific expectations for the workshop other than accessing some form of help.

‘The advert said it was for students who worry a lot and I thought that sounded relatable.’ (Participant A, page 2).

‘This is going to make me sound desperate, but I sign up for anything I can get my hands on for mental health. I’ll try literally anything to improve my mental health, I think it’s so important.’ (Participant E, page 2).

‘I think I was just hoping for help. I think I hadn’t pictured anything specific. Just that I wanted help and that this was offering it.’ (Participant A, page 3).

This seemed to be the participants protecting themselves against disappointment due to prior disappointment in mental health support. Several participants indicated that they had sought out mental health support from the university and the NHS and had been disappointed by the lack of help available. One participant confirmed they had

received support from the university, but that the NHS had not been able to provide anything:

‘I still did that, went to the doctors and the uni, and I did get some help from the uni. But I’m still on a waiting list for IAPT, and I think the waiting time is a year.’ (Participant B, page 2).

‘I tried to, but the doctor just wasn’t very sympathetic. He basically told me to Google mindfulness. Which, I’m not saying is a bad suggestion or anything, I’m sure it works. But I wanted someone to help me, not to just blindly delve into self-help.’ (Participant C, page 3).

After repeatedly feeling let down by mental health support systems, participants seemed to lower their expectations to avoid getting their hopes up for support. However, some participants explained that they were desperately searching for any support they could find and hoped the workshop could provide some form of help. As the workshop would be available to them a few weeks after signing up, it provided quick access to a source of support.

6.2.3.2 Sub-theme: Waiting lists for support

The four participants taken from the second group were asked about their experience with the waiting list. Participants seemed to agree that the waiting list was tolerable because it had a finite end date to it; had the waiting list been indefinite, they would have struggled much more with it.

‘Didn’t really bother me. I don’t mind waiting for something when I know it’s not going to last forever. I had other things to think about anyway.’ (Participant F, page 3).

‘Okay well, yeah, a bit frustrating. But at first, I thought it was an indefinite wait list, like I was going to be waiting for who knows how long and that just sounded really annoying, because I couldn’t plan for anything. When I saw it was a couple of months it didn’t sound too bad, really, because I had exams to focus on until then and I didn’t have a ton of free time.’ (Participant G, page 3).

Participant G reported that the waiting list condition suited them better as they were busy during the period of waiting. This may indicate that interventions may be best utilised during periods of calm for students, so that they have more time to focus on what they learn. This should be considered in the development of future interventions as it may impact the engagement of students in the exercises.

6.2.3.3 Discussion of theme

A problem identified by some of the participants was the lack of available support through the NHS and the university. Some of the participants signed up to the Worry Workshop because it was a quick and accessible way of getting support for their mental health. The Worry Workshop was advertised as a way to help decrease worry and increase coping strategies for worrying situations, and during the first session it was made clear that it was not a substitute for accessing university and NHS support for mental health. However, participants explained in their interviews that they had received inconsistent support from the university and the NHS, leading them to be

more reliant on other methods of support. Self-help measures were discussed, and their merits were praised, but participants felt they needed guidance in other areas of mental health support, and therefore signed up to the workshop. There is an ever-increasing burden on the NHS as more people are put onto waiting lists for the mental health services that are underfunded and understaffed. University support service are also underfunded, with few members of staff trained in appropriate treatments and therapies for those struggling (Watkins et al., 2012).

Participants often reported that they signed up to the workshop as a 'lifeline' of sorts, desperately trying to seek help and support wherever they could find it. This is reflected in how the participants replied when asked about the best time to participate in the workshop, with most students reporting that they would prefer to have the workshop during a calm, stable period, to prepare for future stressful periods. The workshop was advertised as both a way to cope with existing excessive worry, and to prevent future excessive worry. The intervention took place during the start of the COVID-19 pandemic, a very stressful time, but participants noted that it was in a period of social isolation and boredom, and the workshop was welcomed as a break in that boredom.

The participants in the second group were asked about the waiting list they were placed on. Participants agreed that the waiting list would have been frustrating had it been indefinite, but due to the specific date they were given for their first session, they found the waiting list did not contribute to their stress at the time. Waiting lists for NHS and university support can be very lengthy, and often the waiting time is not defined, meaning that people are waiting with no end in sight for long periods of time (Batchelor et al., 2020). Punton et al., (2022) found that people can wait up to 18

weeks after being referred before gaining any access to support, and that the waiting lists are viewed by people as a barrier to their support and a reason for exacerbation of mental health issues. Offering a workshop such as this as an optional part of a course could mean students receive fast access to support while they wait for additional support through the NHS. This could provide a necessary boost to student mental health throughout their academic journey, adding to their support network and demonstrating that support can be reliable and easy to access.

6.2.4 Theme: Learning about positive psychology

Participants discussed having prior experience with positive psychology and having formed preconceptions of the discipline, as well as learning new things about positive psychology. The sub-themes were:

- The impact of social media on perceptions of psychology
- Learning for enjoyment, not for exams

6.2.4.1 Sub-theme: The impact of social media on perceptions of psychology

Some participants reported having heard of some of the exercises before the sessions started; this was to be expected due to the popularity of affirmations and gratitude diaries across social media:

‘It was interesting. I’d never heard of character strengths before. I’ve heard of gratitude diaries; they were pretty big on Instagram for a bit.’ (Participant B, page 3).

‘Everyone knows what affirmations are, it’s not like we’d never heard of them before. So, at first, I thought ‘whatever, this is going to be boring’ and a few people were super awkward with giving themselves any kind of compliment.’ (Participant E, page 4).

However, participants reported that despite knowing the exercises, they still learned a lot within the sessions about why the exercises were useful. Participants also seemed to have not engaged with the exercises prior to the workshop as they believed they were a social media fad:

‘They were cool. I’d heard of gratitude diaries before, I think everyone’s heard of them. And everyone knows affirmations. But I hadn’t really given them much thought before because I thought it was just usual social media nonsense. After you told us about the psychology behind it, it had a lot more credibility.’

(Participant C, page 4).

‘Yeah. When you hear ‘affirmations’, you think of people posting on Instagram with crap like ‘I’m amazing, I’m fabulous’ and honestly, it’s just a major eye roll. But then you showed us how to make affirmations that were like ‘I’m capable of doing two hours of work today’ and ‘I’ve proved to myself that I can easily do this revision’, and that just made so much more sense.’ (Participant E, page 4).

Participants had preconceptions of the exercises due to versions of them circulating on social media. Participants found these versions of gratitude diaries and affirmations boring or embarrassing, indicating that they found them hollow and lacking in credibility. They reported that their opinions of these exercises changed once they begun the sessions, and participants were motivated by the end of the first session, suggesting that the session provided a positive start to the workshop. However, this may be indicative of a problem in future recruitment; if people were to view the workshop as a series of exercises that have no credibility, it might prevent them from signing up. This may be a consideration when designing the recruitment materials for future interventions.

6.2.4.2 Sub-theme: Learning for enjoyment, not for exams

Participants enjoyed learning about positive psychology as an area they had never studied before without the expectation of exams or coursework ahead.

‘Pretty interesting, like it was all brand-new stuff to me. I know a couple of people in the group knew what gratitude diaries were, but I had no idea. So yeah, it was all new stuff and I really enjoyed learning it. It felt like I was taking a class I actually wanted to take, not just one I had to take because I needed to pass my exams.’ (Participant D, page 3).

Participants enjoyed learning for the sake of enjoyment and self-benefit, rather than learning because they had to fulfil course credits or revise for an exam. The first session was commonly noted as especially interesting to participants as it taught them about character strengths. Included was a link to the Values in Action Inventory, a lengthy survey that measures all 24 character strengths in an individual and provides insight into your top five, named ‘signature strengths’. This was included as an additional extra in case participants wanted to pursue further information into the field and was enjoyed by several participants.

‘I went and did the character strengths quiz thing that you linked us to. It was fun.’ (Participant A, page 4).

‘Yeah, I remember that because I called my mum and talked to her about it. Nothing that would breach confidentiality or anything, just like told her what character strengths were. We did the signature strengths survey thing together, we had similar results.’ (Participant D, page 3).

‘Everyone was really nice and friendly, and I really liked the character strengths stuff. I won’t lie, I was getting really bored at home just sitting around waiting for things to happen. So, it was like a nice break. Everything felt just a bit more normal for a while.’ (Participant G, page 3).

The inclusion of the VIA-IS as an optional homework task was to encourage engagement with the subject of positive psychology and to serve as a more well-rounded introduction to character strengths. Participants reported completing the VIA-IS and examining their character strengths which demonstrates their enjoyment of learning something new and may suggest that future interventions should include more psychoeducation around positive psychology to encourage this engagement. Most participants had a favourite session, preferring one strength over another. Some participants explained that it was due to the session containing their favourite exercise, while others explained that they preferred the educational parts of the sessions to the group activities and exercises.

‘Oh, good question. So, session one was a favourite because it was where we learned about the character strengths and got the gratitude diary. That was definitely my favourite exercise.’ (Participant H, page 5).

‘I preferred the planning one. I think it was the second hope session. I get why the other two were important to go alongside it, but I like that the planning session was about problems that come up, rather than a daily thing to do. It felt like more of an actual lesson as well, like I was learning something rather than just practicing an exercise.’ (Participant F, page 5).

‘Oh, that’s hard, I really liked them all. I think my favourite was the gratitude session, though, I really just enjoyed learning about the character strengths and then doing the diary.’ (Participant G, page 7).

Participant F specifically mentioned that their favourite session felt like a lesson, and that they were learning something new, again indicating that the educational side of

the intervention was enjoyed by participants. Participants G and H also commented on enjoying the learning process and gaining new information about character strengths. This may indicate that psychoeducation should run throughout an intervention, rather than being the focus at the start and then moving onto exercises.

6.2.4.3 Discussion of theme

Participants reported that some of their favourite content was the initial psychoeducation on worry and positive psychology. Some participants identified their own preconceptions of positive psychology as 'cheesy'. This may be due to the existence of filtered-down versions of positive psychology making their way onto social media. While many online self-help resources are legitimate and created by psychologists, there are often versions circulating social media that are not. An example of this is the affirmations; when used in research, participants are encouraged to create specific, relevant affirmations that relate to a goal, and they are then encouraged to use it at specific times to build motivation for achieving that goal. On social media, as participants in the interviews noted, affirmations have become vague platitudes such as 'you can do anything!', which removes most of the original intention behind the exercise. This may contribute to the preconceptions of positive psychology. While there are legitimate criticisms of positive psychology as a whole (Seligman, 2019), such as the majority of PPIs being conducted in Western Educated Industrious Rich Democratic (WEIRD) populations (Hendriks et al., 2017), and the methodological inconsistencies between PPIs testing the same strength (Wood et al., 2010), the participants had not heard of positive psychology as a research area specifically before the workshop, and therefore it is unlikely that they would be aware

of the criticisms of the research itself. The opinions formed by the participants were based entirely in what they assumed the workshop would be like when they heard the term 'positive psychology'.

As the sessions progressed, participants clearly enjoyed the subject matter, and the experience of learning in general. Learning and education often lead to exams or coursework, to display that the individual has gathered enough knowledge of the subject that they can be awarded with recognition of that, rather than learning for the sake of learning and enjoyment (Roche, 2017). Participants identified that it was pleasant to learn something that was not attached to an exam or coursework, as it meant the learning was enjoyable and free of pressure. Many of the students had explained that exams and coursework were great sources of stress for them, especially in the first group as they were entering their spring/summer exam period. This was, of course, buffered by the COVID-19 pandemic, as it was affecting the structure of their academic lives, which has been seen throughout research into student stress during the pandemic (Agius et al., 2020; Majrashi et al., 2021). The simple break from stress and gaining of new knowledge without fear of an exam at the end of it provided the students with a pleasant learning experience, and they enjoyed the gaining of knowledge that was pertinent to their own mental health.

Some participants reported that they had heard of two of the exercises prior to the Worry Workshop; the gratitude diary and the affirmations. This was to be expected; gratitude diaries have increased in popularity to the point of being made into apps and sold in stationary shops (Cregg & Cheavens, 2021). Affirmations feature heavily on apps such as Instagram and Pinterest, often as images with text overlays. Both of these can often come across as a social media fad. However, participants also reported that

they did not know the exercises were based in positive psychology, nor were they aware of the psychological research behind the exercises. This resulted in some participants being surprised by their own enjoyment of the exercises; as one participant noted, they enjoyed learning about the mechanisms behind the exercises and why they worked, as it lent credibility to what they were doing. Others explained that they had tried the exercises in the past, but without guidance and knowledge, the exercises did not offer any benefit to them, whereas in the workshop they did.

This initially caused concern for two reasons. Firstly, that there may be performance bias from participants who had previously used a gratitude diary or affirmations.

Participants who had prior experience with exercises are often found to produce different results to those that are naïve to the exercise (Chandler et al., 2015).

However, this is largely applied to participants who are repeating an exercise within a study, whereas the participants in this study had prior knowledge of exercises from social media and apps. In addition, none of the participants reported having experienced any benefit if they had tried an exercise in the past, as a lack of guidance made it difficult for them to effectively utilise the exercise. This indicates that despite prior knowledge of the exercises, participants all gained new information and guidance on the use of the exercises, making their results comparable. The other concern was that participants with a prior negative assessment of the exercises would not fully engage with the exercises throughout the workshop. The participants that noted they had tried and found no benefit from the exercises may have had a bias against the exercises, and therefore affected their experience of the workshop. However, all participants interviewed again explained that they were pleasantly surprised to learn new information about the exercises and the evidence supporting them. In addition,

the participants all reporting that they still used at least one the exercises four months after the workshop indicated that their engagement with the exercises was strong.

6.2.5 Theme: Inhibitors to engagement in the intervention

Participants discussed the obstacles to their engagement in the intervention, including personal issues and problems with the structure or content of the intervention. The sub-themes were:

- Embarrassment and discomfort
- The challenges facing digital interventions
- Effective teaching methods of the session content

6.2.5.1 Sub-theme: Embarrassment and discomfort

Some participants were unsure about the content of the workshop, explaining that they worried that positive psychology would be embarrassing.

‘It was fine. It felt a bit cheesy at first, all the ‘love yourself’ stuff. I usually hate that kind of thing. But you explained it fine, and it got less cheesy.’ (Participant F, page 2).

However, after engaging with the content in the first session, potential preconceptions of positive psychology seemed to have changed.

Oh, really good. I felt a bit stupid actually for being so judgemental about it. I went in thinking ‘I bet this is just some ‘think positive’ bullshit’, and then I got there, and you were like ‘hi, here’s the psychology of why worrying is probably not great and here’s some coping strategies to replace it’ and I felt really bad for assuming I knew what was going to happen.’ (Participant E, page 3).

Participants may have been managing their expectations due to previous disappointment when accessing support, as previously discussed. Their prior experiences may have shaped their attitudes to support and given them understandable reason to not trust in support. The psychoeducation provided at the beginning of the intervention appears to have helped change participants' perception of the workshop and encourage their engagement.

Parts of the workshop seemed to cause the participants embarrassment and discomfort for a few reasons. Some participants felt uncomfortable sharing personal details about themselves in the group.

'It was a bit weird at first because you're sharing about your worries and stress with people. And it did feel a bit embarrassing at times, to share affirmations or even what we were grateful for – I didn't want people to think I was cringey or grateful for something silly.' (Participant A, page 8).

However, most of participants that felt embarrassed explained that it was caused by the affirmations. Some people felt uncomfortable sharing their affirmations in the group, while some participants felt embarrassed just creating the affirmations, finding it uncomfortable to compliment themselves:

'Some of them were fine. Sharing the gratitude stuff was fine. I wasn't as good at sharing the affirmations, like I said it makes me embarrassed. But I just shared some of the less personal ones. I just didn't want to show all my feelings to strangers.' (Participant B, page 6).

'I wasn't as good at that bit. I'm not very good at paying myself compliments. I get embarrassed at it.' (Participant B, page 6).

‘The affirmations, yes. I’m sort of the typical ‘ew no’ person when someone compliments me, and it’s way worse when it’s me doing it to me. I feel daft. But like I said, I’m really stubborn. So, I just got on with it.’ (Participant D, page 4).

There was also some discomfort around the first session, due to meeting a group of new people and conversing with them. This seemed to alleviate as the session progressed.

‘I was glad it was small groups because I get awkward in big groups. I just tend to shrink into a corner somewhere. I thought you were good at the whole settling in thing. All four of us were a bit uncomfortable and awkward with each other, but you were good at getting us to chat and open up.’ (Participant A, page 3).

‘I missed the first couple of minutes because my WiFi is pretty shit. So, when I came in, everyone was doing their introduction bit. That helped to break the ice a bit. I could tell people were nervous to be around other people, but I enjoyed it because I was so bored stuck at home.’ (Participant B, page 3).

While there was initial discomfort around strangers, the Worry Workshop took place during the lockdown in 2020, and participants identified that the workshop helped to break up the boredom surrounding that.

‘Well, it was nice to have an outlet for pent-up social neediness. I desperately just needed to talk to other human beings. I live with two, but they barely count if I’m totally honest, we never talk. And the group exercises were really fun.’ (Participant H, page 5).

‘Classes had ended so I was a bit bored just revising constantly for exams and writing coursework. It was nice to just learn something for the fun of it rather than for classes.’ (Participant C, page 3).

‘Everyone was really nice and friendly, and I really liked the character strengths stuff. I won’t lie, I was getting really bored at home just sitting around waiting for things to happen. So, it was like a nice break. Everything felt just a bit more normal for a while.’ (Participant G, page 3).

Participants reported that they had a lot of free time due to being isolated at home, and that the Worry Workshop allowed them to talk to new people and engage in new experiences. They also discussed again the enjoyment of learning for fun rather than for examinations or coursework.

Some of the participants found the hope agency session caused some embarrassment due to sharing their affirmations amongst the group. Other participants noted that the hope sessions helped them to build motivation.

‘So, when the hope sessions came along and the first one was about motivation and how to build it, that was really helpful cause once I’m motivated, I’m really good, I can just charge ahead. But if I don’t feel motivated it’s so hard, I can’t feel settled or get comfy in the work. So doing the affirmations really helped, especially the tips about making them specific.’ (Participant A, page 6).

‘Well, I kind of suck at motivating myself. I’m a big procrastinator. Like, I’ll sit down to do my coursework and suddenly I’ve cleaned my whole flat and done a clear-out of my wardrobe, but I haven’t written a single word of my

coursework. So, the hope pathways were really good at giving me motivation to keep going with small, manageable tasks.’ (Participant C, page 4).

Within each session of the workshop, participants were encouraged to engage in group activities, to help increase familiarity between participants and practice the exercises that would then be used between sessions. Participants initially found the exercises a bit uncomfortable, as they were practicing these exercises with the other participants, but enjoyable once they had settled into them. Participants reported that they found the activities useful to get inspiration for the exercises.

‘At first, they were a bit awkward because we were all nervous and shy, but I think we got into it more as it went on. You joined in with it which helped because it gave us an example. I think they were good, though, to get us into the swing of things.’ (Participant A, page 8).

‘They were good, I liked that I could hear what other people were thinking of. It helped with the gratitude diary, to get some inspiration on places I could look at in my own life for things I was thankful for.’ (Participant D, page 7).

‘Yeah, I always find it helpful to have other people giving their own examples of things, so that I can make sure I’m on the right track. Everyone in the group was really nice, and really putting in effort as well, so that did genuinely help so much. I think it was a good atmosphere, like everyone was there with the same problem and everyone wanted the same answers.’ (Participant E, page 7).

It seemed as though there was an initial awkwardness to break through before participants could properly engage with the material and the exercises. Once they had done that, they found the practice useful and inspiring. This may indicate that an ice-

breaker session at the beginning of the intervention may have aided the comfort of the participants.

Some participants reported initially struggling with the gratitude diary. One participant explained that they struggled to find anything to fill out the diary with, as they were experiencing so much stress in their life. Others reported that they initially felt strange scheduling time to feel grateful.

‘Yes actually, it felt weird at first to just sit and think and write down what I was grateful for, because it feels like something you would just do naturally, but I kind of realised that it wasn’t something I ever really did. I’d feel thankful for something when it happened, but I wouldn’t think about it again after that.’
(Participant A, page 4).

‘At first it was really hard. Like, what I said about everything just piling up, it was *really* difficult to find anything to be grateful for. I had to start with really, really little things, like just having a coffee or having a nice meal. It was a bit depressing because I had to scrape the bottom of the barrel just to find something. But it got easier, and your examples did help.’ (Participant D, page 3).

With each exercise, examples were provided by the researcher to aid the participants and provide them with inspiration. Participants were encouraged to explore a variety of things they might be grateful for, from small things such as ‘I’m thankful I had a nice lunch today’, to larger things such as ‘I’m grateful for having a supportive family’.

Participants seemed to find it uncomfortable at first to schedule in time to be grateful, and believed they felt gratitude when it was appropriate. After starting the diary, they

reported that they realised they rarely felt gratitude for longer than a fleeting moment, and the diary had given them the opportunity to savour the gratitude. This indicates that participants had assumed they were more grateful than they actually were, and therefore the intervention was successful at educating them and helping them to improve their gratitude.

6.2.5.2 Sub-theme: The challenges facing digital interventions

Due to the sudden arrival of the COVID-19 pandemic, the format of the workshop changed. Initially designed for in-person delivery, it was redesigned to be more appropriate for online delivery and was then carried out via Zoom. The response to this was mixed, as some participants preferred an online format, and some preferred an in-person format. There was a general consensus that the online format was more accessible as it did not involve travelling to the university and was easier to fit into a schedule. It was also noted that it was more appropriate for disabled students as their needs would be catered for in their own homes as opposed to the university where there may be inadequate resources for disabled students.

‘I prefer online, but that’s because I prefer everything to be online. If there’s an app for something, I’ll use the app. Even my lightbulbs activate from an app. I just like things online because I don’t have to think about travelling into uni, finding my way around, sorting out food while I’m out, then travelling home. It’s just easier for me to sit down at my desk, log on, do the thing, log out, and boom, it’s taken less time out of my day.’ (Participant G, pages 7-8).

‘Yeah. But I will say I do have chronic fatigue syndrome and so it is way easier to do online things if I’m having a flare up of symptoms. So, while I prefer ‘IRL’ I

would probably always opt for online just in case I have a flare up – that way I don't have to drop out.' (Participant H, page 3).

This may reflect a generational problem; the participants were in their second year of university and ranged in age from 19 to 21. This indicates that they most likely grew up with technology and would therefore use technology for many things. If the intervention were offered to mature students, who may have less experience with technology, the preference for online interventions may not apply. The Worry Workshop took place at the start of the pandemic, and if it were to be repeated in the present day, it is likely that any participants would be accustomed to online meetings and experiences, and more familiar with programs such as Zoom.

Within every interview, there was a discussion about the workshop being a group workshop as opposed to a one-to-one with the researcher. Some participants acknowledged that they would have preferred one-to-one as it would grant them more time personally with the workshop leader to tailor it to their specific needs.

'I think so, yes. I can see why the group is useful, but I prefer things being private. I still would have been embarrassed to share it with you, but I probably would have shared more with just you than I did with the group. Not that they weren't nice, they were lovely, I'm just a bit awkward around strangers.'

(Participant B, page 6).

'Yeah, definitely. I don't really like group things. I think it doesn't really help everyone individually, because you've got to let everyone speak and share their problems. I mean, everyone was really nice. But I just prefer one-to-one things so I can get everything out of it that I need. I knew I'd never speak to the others

again, so it felt like a waste of time to listen to their stuff.’ (Participant F, page 4).

The participants that preferred one-to-one sessions identified their issues as feeling uncomfortable around strangers and allowing time to other people instead of being able to focus on themselves. Participant F felt that it was a waste of their time, as they were unlikely to ever speak to the other group members again. However, most participants enjoyed doing the workshop with other people, and said that while one-to-one sessions would have been nice, the group format suited the workshop better.

‘I’ve never really done a one-to-one session thing with anything like therapy or self-help, so I can’t know for sure. But I think group is better for me, mostly because I like being able to see I’m not alone in what I’m doing, and it keeps me motivated if there’s more than just me in it. No offence, I know you’d be helpful, but it’s different when it’s the people doing the workshop in the same role. (Participant C, page 9).

‘I don’t really have a preference in general. I get why both of them are important. But I think for this workshop specifically, the group will have worked better than one-to-one. I think you need the group exercises to help people learn it all and practice it.’ (Participant E, page 7).

‘I like group things; I tend to learn better when there are other people contributing to something. Like in the discussions, it’s easier for me to understand the task if other people are giving their own examples. And it was nice because everyone was so bored during the lockdown that it was just nice to have some social time with people going through the same thing.’ (Participant G, page 9).

COVID-19 may have affected this consensus, as noted by Participant G, because all the participants were isolated during the time of the workshop and had grown bored and restless. As previously noted, they found the Worry Workshop useful in breaking up the boredom and gaining a sense of normalcy in a stressful time.

Some participants reported switching from paper to an app for their gratitude diary, as due to the popularity of gratitude diaries on social media, there are several apps available to log daily entries. Another participant also switched to a digital method, but just within a Notepad app on their phone. This was taken as a sign of engagement from the participants, as they found their own methods to incorporate the exercises into their daily lives.

‘I actually switched to an app as well, cause there’s tons of them for gratitude diaries. They send reminders, which helps me. I mean, I know they’re pretty easy to ignore as well, but I guess if you have the motivation.’ (Participant A, page 5).

‘I did it on my phone, just in my notes app. It wasn’t that I felt it should be done that way or anything, I just do everything on my phone. Makes it easier to keep up with it, too.’ (Participant B, page 4).

For future interventions, a digital version of the gratitude diary could be offered to prevent participants opting for an unrelated app. This may cause issues as the apps could contain their own approach to a gratitude diary, such as sending reminders, providing their own examples, or encouraging a different amount of entries per day. Providing participants with the choice of a paper or online version of the same diary may therefore encourage engagement.

6.2.5.3 Sub-theme: Effectiveness of teaching methods for the session content

One participant stopped engaging with the gratitude diary after the second session.

The participant explained that they did not believe the gratitude diary was beneficial, and therefore did not engage with it.

‘Sure, I think it’s because I don’t really get it. I think it’s nice to be grateful for things, but I don’t think it really does anything. I think some people feel all nice and happy after it, but I just didn’t get that. I just thought ‘okay now I’ve said what I’m grateful for, what was the point?’. I think it makes people feel good about themselves, but it didn’t do anything for me.’ (Participant F, page 6).

This may be due to the psychoeducation not being thorough enough, and therefore future interventions may want to extend the psychoeducation or make it a greater focus of the sessions. It may also be due to the argument not being convincing enough, and therefore the psychoeducation may need more evidence and examples of how important the gratitude diary is for mental health.

‘I just think it’s always better to focus on one thing and get it right. It’s not that the gratitude stuff isn’t helpful for some people, I know that some of the other people really liked it and you said you use it yourself. But I think it would have just been better if you picked one strength and focused all of the time on it, rather than mixing it up.’ (Participant F, page 9).

Participant F reported that the workshop may have benefitted from focusing on just the one strength and removing gratitude altogether. They recognised that the strength clearly helped other participants, but they preferred the hope sessions and did not

want to engage with the gratitude diary. In future interventions, it may be appropriate to offer a series of strengths-related workshops and have participants choose which strengths they would personally like to focus on after they have learned about each of them.

6.2.5.4 Discussion of theme

The sessions clearly caused discomfort in some participants due to the nature of the activities, and also the group format. Group workshops can cause discomfort at first due to everyone feeling vulnerable and awkward in front of strangers. While this cannot be fully avoided, as everyone has their own level of comfort conversing with strangers, it does suggest that a fifth session held as a potential icebreaker prior to the other sessions could have alleviated some of the discomfort. If an icebreaker session were designed, it should also include a start to the exercises and psychoeducation, as participants may not return if they did not experience any benefit or learning from the first session.

The nature of the activities is more difficult and complex to address. It was made clear to the participants that they did not have to share anything in the group activities if they did not want to. However, it is understandable that participants may not have felt comfortable with saying that they did not want to share, as it would draw attention to them as someone not participating in the activity. However, when participants did engage in the activities, they were often reported as being helpful and informative, along with providing social contact during a time when many were in isolation.

The affirmations were by far the largest source of discomfort and embarrassment; participants reported they did not often compliment themselves and struggled to accept compliments from others. This may be due to a variety of reasons, ranging from cultural, to generational, to individual self-esteem. Self-deprecation, especially in humour, is commonly seen across social media, especially in Millennial and Gen Z groups. Self-deprecation is often used to reduce the appearance of arrogance and bond with other people over shared self-deprecation (Austin et al., 2021). While some psychologists argue that self-deprecation is indicative of low self-esteem (Owens et al., 2006), anxiety (Kopala-Sibley et al., 2017), and can be damaging to relationships, others argue that self-deprecation is used as a linguistic technique for positive self-presentational purposes such as reducing perceptions of arrogance (Speer, 2019). It is likely that self-deprecation is often used in several different ways, some utilising it for gaining reassurance from others (Kopala-Sibley et al., 2017), and others using it to create humour and familiarity between people (Austin et al., 2021).

This culture of self-deprecation, regardless of reasoning behind it, could easily result in embarrassment when people were forced to drop that type of humour and give themselves genuine, honest compliments. Throughout the interviews, participants reported feeling embarrassed by the thought of complimenting themselves and struggling to do so in front of other people. While this cannot possibly all be addressed within one workshop, there should be an emphasis on practice within the sessions. With practice and time, the affirmations became easier for some of the participants that found it difficult, as it desensitised them to the embarrassment. In time, many participants reported enjoying the activities as it offered them the opportunity to

practice the exercises before doing them independently. It also provided inspiration for their own exercises and encouraged communication between the participants.

The digital nature of the intervention was an interesting point, as participants preferred an online version of the intervention. Participants reported that it was easier to schedule a digital intervention, as opposed to travelling somewhere for an in-person intervention. Santarossa et al., (2018) argue that the most important aspect of both digital and in-person interventions is the human support, and that person to person contact and support can be fostered in either format. The digital format of the intervention did not appear to be a barrier to human support for the participants. This may be due to the age range of the participants, as it indicates they would have grown up using technology. The same intervention delivered to middle-aged adults may result in more issues with the online format, as they may not have the digital knowledge to feel at ease with the format (Seifert et al., 2021). Participants reported switching from the paper gratitude diary provided to an app, as there are many gratitude diary apps available for free. The apps used by the participants were appropriate, as they did not contain any extra information about gratitude diaries or have a different number of entries per day. Other apps may have provided different instructions for the gratitude diary and altered the results, indicating that future interventions should consider creating an online version of the gratitude diary for participants to use.

The other barrier to engagement was the teaching method used in the intervention. While most participants reported enjoyment of the presentations and understood the exercises and activities, one participant reported that they did not engage with the gratitude diary as they did not believe it would be useful. While this was partially due

to personal preference, as the participant acknowledged they saw the gratitude diary helped other participants, this may also be due to inadequate teaching. Morgan et al., (2014) argued that despite the rising popularity of gratitude interventions, the pedagogical approach to gratitude-based psychoeducation was inadequate across many studies. This may suggest that the workshop was lacking in effective communication for gratitude, in comparison to hope, and that future interventions should focus on improving the gratitude session.

6.2.6 Theme: Motivation beyond the intervention

Participants discussed their motivations to continue the exercises after the intervention, and to continue changing their worry. The sub-themes were:

- Change in perspective
- Soothing and relaxing
- Feeling motivated through hope

6.2.6.2 Sub-theme: Change in perspective

All participants reported that they maintained using the affirmations and gratitude diary daily, and the Pathways Planning situationally, over the course of the four-week workshop. Some participants acknowledged that every so often they might miss a day, but generally that they kept up the exercises on a daily basis.

‘No, but most days. I forgot sometimes, but I set reminders to try keep it up.’

(Participant B, page 4).

‘Yeah, pretty much every day. I think I skipped two days over the four weeks

just because I forgot, but most of the time I did it.’ (Participant E, page 4).

In addition, all participants also reported that they still used at least one of the exercises at the time of the interview, which was four months after the Worry Workshop. Some participants still used all three exercises at the time of the interview, having developed them into habits they naturally used as part of their day.

‘Yeah, I switched to an app for the gratitude exercise, but I definitely still do that. It sends me reminders on my phone so it’s easier to keep up. And the

hope exercises are more situational, I'll use it when I want to achieve a goal, rather than every day. But I still keep up with both of them, I think it's been more of switch in mindset than thinking of them as exercises now.' (Participant A, page 10).

'I still do the affirmations and the hope pathways planning thing, so I think it might just be that I didn't click with the gratitude diary as much. Or maybe because it's more like a gentle background thing that builds over time, rather than something I whip out for a specific issue.' (Participant E, page 5).

'I've kept up with it for four months now. I do it every night just before I go to bed. It makes me really relaxed for going to sleep. I skip it occasionally if I'm exhausted and just need to sleep, but pretty much every night.' (Participant G, page 5).

As part of the sessions, participants were encouraged to employ habit bundling; participants would take a habit they had already established, such as brushing their teeth before bed, and combine that with the habit they wished to establish, such as doing the gratitude diary. This would therefore assist them in remembering to engage with the exercise daily. This seemed to be useful for participants.

'I thought it'd be really hard to keep up with, but it was actually not that difficult, I just did it after brushing my teeth, so it was more of a habit like how you said you do it with your bedtime routine.' (Participant A, page 5).

'Good, it was a bit weird at first because it's a new part of the night-time routine, but I liked it. I thought about it while I did my night-time skincare, like what you said about habit bundles.' (Participant C, page 6).

This reflected a change in perspective for participants; the exercises went from a conscious decision they made daily to engage with the exercises, to a habitual routine that they didn't have to fight to remember. This is similar to how the participants found their perspectives changed about positive psychology from 'cheesy' to 'credible' and worry from passive to an active behavioural choice. Participants appeared to undertake a series of changes in their beliefs throughout the sessions, and this may have provided motivation for them to engage fully with the exercises.

6.2.6.2 Sub-theme: Soothing and relaxing

Many of the participants found the gratitude diary to be a pleasant experience, some reporting it was relaxing and that it helped reduce sleep disturbances.

'I think it was relaxing, in a weird way. I'd sit there and sort of sift through the day to find the times where I felt grateful – and sometimes, it was that I hadn't actually felt grateful at the time, but I realised that I should have done, because I was genuinely really thankful for that moment or person. So, it was like I got to feel grateful in retrospect for it.' (Participant G, page 4).

'It helped take away some of the stress, I think. At the end of the day, I'd struggle more with worry, like right before bed I would be sat there thinking about all the stuff I could have done, or all the things that might happen. After the gratitude diary, I went to bed thinking about all the things I was happy and thankful for instead. It was just way nicer. I noticed that I slept easier, too.'

(Participant H, page 6).

Sleep disturbances were mentioned by participants when discussing their mental health, as they had noticed themselves struggling more with it. The gratitude diary appeared to have been helpful in reducing sleep disturbances by reducing the amount of time participants spent worrying at night. This indicates that worry was the cause of their sleep disturbances, and that gratitude had been successful in reducing night-time worry.

6.2.6.3 Sub-theme: Feeling motivated through hope

There were two hope exercises: the affirmations, and the Pathways Planning. The affirmations were, as discussed earlier, the most common trigger of embarrassment or discomfort for participants. However, the affirmations were also found to be useful for building motivation.

‘I use them more like when I get flustered or anxious to calm me down, rather than before a project or something. Maybe ‘you do not have to do everything all at once, you can do this small step’? I think that’d be what I’d tell myself.’
(Participant C, page 5).

The affirmations were designed to be linked to the Pathways Planning, to encourage participants in building motivation so they could take the steps necessary to reach their goals. This seemed to be useful for participants, as they frequently reported creating affirmations specifically linked to their Pathways Plan.

‘Yes, the ‘you can complete the first two steps of your plan today’ affirmation is because the first two steps of my pathways plan is to make sure I fully

understand the information around the coursework piece, and to email the tutor if there's a part that I don't really get.' (Participant A, page 7).

'Sure. I said things like 'you did the step yesterday, so you can do the step today'. You said that adding evidence to our affirmations could help, so I did that. I'd say, 'you did this, so you can do that'.' (Participant B, page 6).

'Oh, yeah, definitely. I'd always try to give myself a pep talk before things, like the affirmations, but it would be stuff like 'you can do this!' or 'be awesome!', it would never be like what you taught us. Now, I've done the affirmations so much that it's just habit to be like 'today I am going to plough through this discussion section of my essay'.' (Participant G, page 6).

Participants often explained that their affirmations and Pathways Plans were related to university coursework or exams. This was more present in the first group, as they were in the time period between their classes finishing and their exams beginning. The second group had finished their exams and were preparing for the start of their third year, so they discussed affirmations and Pathways Plans about their upcoming dissertation projects.

'Yes, the 'you can complete the first two steps of your plan today' affirmation is because the first two steps of my pathways plan is to make sure I fully understand the information around the coursework piece, and to email the tutor if there's a part that I don't really get. Once I've done those two steps, I've done the first chunk of the plan. It helps just to know I've got all the information and I can just go ahead knowing I'm on the right path.' (Participant A, page 7).

‘Thanks. With the hope pathways, I got to pick my dissertation title this week so I’m making plans for it, but I’ve used the hope pathways to keep it small and specific rather than focusing on the overall goal of ‘writing a dissertation’. So, my hope pathway for the first chunk is researching the subject, compiling a list of papers and journals I can use, and finding books. The obstacles are all around getting bored and losing motivation, and also because the goal is at the end of the year it’s so easy just to say ‘whatever, I’ll do it later’ and go do something else. So, I’ve written down different ways I can stop myself from getting off-topic.’ (Participant E, page 5).

However, some participants reported using the affirmations and pathways in other areas of their lives, such as keeping up with household chores and preparing for job interviews.

‘Tons of stuff. Exams, coursework, that sort of thing. I had a job interview, I used it for that. I think I used it for some personal stuff too, like keeping the house clean and stuff.’ (Participant F, page 5).

‘Okay, so this is Pathways 12, which is just because it’s the twelfth one I’ve done. It’s about household chores. Step one is to divide the chores evenly among the housemates. Obstacles there include people disagreeing about chores, or people not liking what they get. Possible solutions are to draw straws for things people hate, or to try and give everyone at least one chore they don’t mind doing.’ (Participant G, pages 6-7).

Participants were able to use the Pathways Planning method as a way to identify potential obstacles at every stage of their plan and come up with possible solutions for

these. This appeared to help them maintain the plan and reach their goals. It also helped them to adjust when external factors impacted the steps of their plans.

‘Yeah, the group revision ended up not being very useful, everyone got bored and we ended up going for food instead. It’s harder to stay disciplined when everyone is giving up. I got back on the plan the next day, so it didn’t feel like I was failing. Which is how I’d feel before the workshop, I’d feel like I failed and then I’d feel guilty. The plan just helped me get back on track and not just beat myself up about it instead.’ (Participant B, page 5).

‘Yeah, so I wrote down any obstacle for each step, which could honestly have been a lot of different things. Nan was in hospital, and she was due to leave at any point, and I might have had to go back home to help take care of her while my parents were at work. I get unwell easily as well, so I was trying to avoid a virus that was going around – as well as COVID, I mean. So, my contingency plans mostly rested on making sure I had flexibility in my schedule, so I could accommodate any surprise emergencies.’ (Participant D, page 6).

This appears to have been useful specifically for the COVID-19 pandemic, as participants were attempting to navigate a difficult transition period and required motivation and planning to feel in control. Participant D discussed the contingency plans as being particularly helpful as it provided them with flexibility, and therefore with the ability to deal with surprise emergencies during the height of the pandemic.

6.2.6.4 Discussion of theme

The gratitude diary caused some initial discomfort within the groups, mostly due to people struggling to find things they felt grateful for. This was alleviated by the researcher sharing their own entries in the gratitude diary and emphasising that the entry could be something simple and small. There was also some embarrassment over sharing the entries with the group, which again was shown to alleviate over time as the group became more familiar with each other. After the initial discomfort subsided, however, participants largely reported finding the gratitude diary to be pleasant and a relaxing experience. Participants were encouraged to do it before bed, as gratitude diaries have been found to help with sleep disturbances (Boggiss et al., 2020; Jackowska et al., 2016; Southwell & Gould, 2016). Participants explained that it was a soothing exercise to do before sleeping and that they did experience fewer sleep disturbances. Some of the participants admitted that at first, they didn't understand how the gratitude diary would help, as they believed they felt enough gratitude as each situation occurred. They were surprised to find that the gratitude they felt situationally was short-lived and often instantly forgotten, and that it was a pleasant experience to set aside time each day to be truly thankful for the experiences of that day. It did also seem to alleviate sleep disturbances in those that struggled with them prior, as it reduced the amount of time participants spent worrying at night and replaced it with a relaxing exercise.

As discussed previously, the affirmations caused discomfort in some participants. While some of those participants did continue to feel embarrassed by creating their affirmations, the others went on to find enjoyment in the affirmations. Participants did acknowledge that despite being embarrassed by them, they did find them useful for

building motivation, especially when combined with the Pathways. Most participants linked their affirmations to their Pathways to generate motivation for their plans. Prior research has indicated that combining agency and pathways is vital to achieving goals (Feldman & Kubota, 2015), and that hope agency was an important motivational factor in future goal achievement (Sung et al., 2013). Students often used the Pathways to create plans to reach academic goals, but some also used it for personal and work issues, such as organising household chores and preparing for a job interview. The workshop encouraged participants to create Pathways for a variety of goals in their lives, but at the time most participants were focused largely on school and were isolating during the first six months of the COVID-19 pandemic, which meant Pathways were often geared towards academic problems. Hope has been demonstrated as a predictor of academic achievement, as well as fewer cases of dropouts (Gallagher et al., 2017). This has been found to be consistent across various disciplines and types of education (Drysdale & McBeath, 2014).

It has been suggested that online interventions often require researchers to keep participants engaged with the material, as they are not physically engaging with it by going to a session (Kelders, 2019). Technology-based interventions are associated with high attrition rates and is often a concern for developing a digital intervention (Yeager & Benight, 2018). However, participants reported that not only did they maintain the habits throughout the workshop period, they also were still using at least one of the three habits in their daily lives four months after the workshop. Participants that used the gratitude diary reported that they still used it daily, whereas participants that used the hope exercises mostly opted to use them situationally as the need arose, rather than daily. Participants reported that habit bundling was useful for keeping up with the

daily activities. Habit bundling (also known as habit stacking) has been found to improve chances of establishing a new habit by combining it with an existing daily routine (Fiorella, 2020; Shnayder-Adams & Sekhar, 2021). Some participants reported doing the gratitude diary as a part of their bedtime routine, and the affirmations as part of their morning routine, which was suggested in the first session by the researcher. This seemed to result in a change in perspective for the participants, taking them from having to consciously choose to engage with the activities each day to having the activities established as a daily habit. This is a vital part of establishing any therapeutic exercise, as adherence to therapy recommendations can be very difficult for many people (Radomski, 2011). This may therefore demonstrate the effectiveness of habit bundling in establishing therapeutic techniques as new habits.

6.2.7 Theme: Group behaviours and shared experiences

Participants discussed their views on group interventions and the impact it had on their engagement. The sub-themes were:

- Shared experiences
- Social isolation during COVID-19
- Group cohesion

6.2.7.1 Sub-theme: Shared experiences

At first, participants reported feeling awkward or uncomfortable, but acknowledged that everyone seemed to feel the same.

‘Yeah. It was a bit weird at first because you’re sharing about your worries and stress with people. And it did feel a bit embarrassing at times, to share affirmations or even what we were grateful for – I didn’t want people to think I was cringey or grateful for something silly.’ (Participant A, page 8).

‘I was glad it was small groups because I get awkward in big groups. I just tend to shrink into a corner somewhere. I thought you were good at the whole settling in thing. All four of us were a bit uncomfortable and awkward with each other, but you were good at getting us to chat and open up.’ (Participant A, page 3).

Participant A explained that all four of the participants in their group were uncomfortable at first, indicating that they were first sharing the experience of discomfort and then sharing the experience of opening up. This may again

demonstrate that an ice-breaker session prior to the other sessions may be useful in aiding the participants' comfort.

Participants reported enjoying the group format of the intervention as it helped them to feel they weren't alone in their experiences.

'I think everyone else felt similarly. It's just nice to talk to people that aren't the usual people in your life, and have it been specifically about something that you all share.' (Participant G, page 9).

'Everyone had their own special experiences and people they were grateful for, and that made me happy. It just reminded me how much good there is in the world.' (Participant H, page 5).

Participant H reported feeling happy when they heard the other participants sharing their experiences and gratitude diary entries, as it appeared to help them savour the good. Part of the session on gratitude was about savouring the positive experiences in life, and this indicates that the group sharing their own experiences was a positive experience in itself. Participant G explained that the group intervention was pleasant for them because it was a gathering of individuals seeking the same goal and sharing the same problem, rather than relying on existing social support that might not empathise with the situation.

6.2.7.2 Sub-theme: Social isolation during COVID-19

The intervention took place during a time of social isolation throughout the pandemic, and participants reported enjoying the intervention as an outlet for social interaction.

‘Well, it was nice to have an outlet for pent-up social neediness. I desperately just needed to talk to other human beings. I live with two, but they barely count if I’m totally honest, we never talk. And the group exercises were really fun. I liked hearing about what everyone was grateful for because it was such a mix of things.’ (Participant H, page 5).

‘Oh god, no, I’m glad it was a group. No offence again. I was really alone and freaking out in life, so I looked forward to seeing the group every week for a few weeks. It was nice just to have some different company.’ (Participant D, page 7).

‘I was hoping for a few things. I was hoping for meeting new people and getting to talk to them, which I definitely got, and I think it kept me sane during the month. I was hoping for some help with reducing my worry and stress, which definitely happened. And I was hoping for something to help with the boredom, which also happened.’ (Participant H, page 4).

Participants indicated that the intervention helped their mental health not just by educating them about worry and providing them with new strategies, but by providing them with social interaction during a period of isolation. It appeared to help ground them in a period of stress and provided them with a reliable event that they could look forward to. This demonstrates the impact that COVID-19 had on participants’ mental health during the intervention and how that affected the experience of the intervention.

6.2.7.3 Sub-theme: Group cohesion

Participants reported feeling energised and motivated when finishing sessions, due to the other participants being so engaged in the session and exercises.

‘No, not at all. I came out of the first session feeling really energised and motivated, it was great. I didn’t feel tired at all. Everyone was really engaged in the subject and shared some nice things with each other. I thought it would have been a lot of effort and putting in tons of work but then you showed us the gratitude diary and it was so simple and easy to do that I felt relieved.’

(Participant G, page 4).

The nature of the participants in the group impacted the other participants’ experience of the intervention. As the participants were engaged and willing to share their own experiences, it made the group feel like a friendly, open space. Participants emphasised the importance of the participants being friendly and putting the effort into the exercises, and how much that helped them.

‘Yeah, I always find it helpful to have other people giving their own examples of things, so that I can make sure I’m on the right track. Everyone in the group was really nice, and really putting in effort as well, so that did genuinely help so much. I think it was a good atmosphere, like everyone was there with the same problem and everyone wanted the same answers.’ (Participant E, page 7).

‘I’m not sure, because there would be definite upsides to it; you’d get more one-to-one time with the person running the session, but really, I think it made more sense in a group. It makes you feel like you’re not alone in it and that helped more than I thought it would.’ (Participant A, page 8).

This may indicate that to ensure group cohesion, the right motivation and attitude is required for attending the workshop. Each participant signed up voluntarily to the intervention, and decided to attend every session, suggesting they were motivated to engage fully with the material. This may be important when considering potential applications of the intervention; if the intervention were offered as an embedded part of a university course, for example, it may be prudent to make it optional so that participants have the right motivation.

6.2.7.4 Discussion of theme

Participants generally enjoyed the group format of the intervention, with 6 of the 8 interviewed preferring a group intervention to a one-to-one intervention. This was partially due to the social isolation of COVID-19, as the intervention took place during a lockdown period. The participants reported feeling lonely and bored, and emphasised the importance of the intervention during a period of isolation. It provided both a sense of normalcy among an uncertain period of time, and social interaction with people that were different to their established social circle. Saltzman et al., (2020) found that social distancing and isolation lead to loneliness despite social support being a key part of healthy coping during times of crisis. While the intervention should not be considered a substitute for long-term support through social networks, it provided participants with something to look forward to as a reliable, weekly event that they could predict and control.

Typically, in group therapy, there is a period of adjustment while the participants build a connection with each other (Lopez et al., 2020) and this showed in the interviews.

Participants reported that they felt awkward around strangers, especially when it came

to divulging their personal affirmations and gratitude diary entries. This is an experience that often features in any type of group intervention, and the discomfort often eases as the sessions continue and participants build familiarity with each other (Berg et al., 2006). This was demonstrated in the interviews by participants, as they said the initial awkwardness subsided as the sessions continued. This indicates that in future interventions, it may be beneficial to have an introductory session in which participants become more familiar with each other and the researcher. The group cohesion may have been affected by the online nature of the intervention; Lopez et al., (2020) found that participants in online interventions reported feeling more distant from their fellow participants, and that affected group cohesion. However, it was also reported that the benefits of an online intervention outweighed the problems with group cohesion.

In the interviews, participants did not report struggling with group cohesion, and generally described the workshop as a pleasant experience. This was attributed by participants to feeling less alone in their experiences, sharing the same problems and goals with other people, and enjoying the connection with their fellow participants throughout the sessions. This appears to have been important to the participants as they reported that they were undertaking a deeply uncertain and alarming transition period during the pandemic and being able to share their experiences and problems with the other participants gave them a sense of comfort and togetherness.

6.2.8 Theme: Embedded interventions and alterations

Participants gave recommendations for future interventions, including the possibility of embedding the Worry Workshop in the course. The sub-themes were:

- Embedded interventions
- Inclusivity and diversity
- Recommendations

6.2.8.1 Sub-theme: Embedded interventions

Participants agreed that the Worry Workshop would be useful if offered to students as a part of their course, embedded into the structure of the course. However, participants also agreed that it would be best offered as an optional experience, as willingness and commitment are vital to ensure the workshop is effective.

‘Yeah definitely, I don’t know if people would all accept the option because I know some people just wouldn’t keep up with it. Some people really don’t have the discipline to keep up with daily exercises, but I think having the option would be really helpful for people that do.’ (Participant A, page 10).

‘Absolutely. Honestly, if you made it optional, you’d only get the students who were really committed to it working, I think. If you made it mandatory, I think tons of students wouldn’t do the work and then would complain when it didn’t fix their problems. I definitely think willingness to do the work is really important.’ (Participant H, page 8).

Participants emphasised the importance of willingness to put the effort in and do all the work, which is a key part of any therapy. If students were forced as part of their course to sit through a group intervention that they did not want, it would affect the experience of other participants and the impact of the exercises. This shows that any future intervention, including embedded ones, should be optional.

Participants were also asked about the time period in which they received the workshop. The first four received the intervention just after the COVID pandemic started, as they were going into their spring/summer exam period. The second four received the intervention a few months later, as they were starting the new academic year. Both groups were experiencing elevated levels of anxiety and worry, but the first group was within a stressful period, and the second group was preparing for a stressful period. The participants in the second group reported that they believed it was better to receive the workshop during periods of low stress, to prepare themselves for the future as a preventative method.

‘Yeah, I think it’s good to prepare you for future stress, so I think maybe it would work well at the start of the year, before everything gets overwhelming.’
(Participant G, page 3).

‘It didn’t affect how the workshop was, in terms of the sessions themselves. But I think in a way it was good because I had much more free time in June than I did when the first groups went. I didn’t have to slot it into my schedule in June because my schedule was just nothing. And it definitely helped fill the week out a bit and make me much less bored, so I think it timed well for me. I did feel probably a bit more stressed out in April, though, because it was when

everything kicked off with COVID, so it might have been more helpful during that time. I don't know, it's a mix.' (Participant H, page 9).

This suggests that the workshop could be offered to participants during the start of their academic year, to prepare them for future stressful periods. This might be best achieved at 1-2 months into their first semester, once their initial transition period of moving house and beginning new classes has settled down, and before their winter exams. That would give them strategies to cope with the transition periods ahead without adding more pressure during a transition period.

6.2.8.2 Sub-theme: Inclusivity and diversity

Participants reported that the workshop was appropriate for students, although one participant raised the point that the workshop may not be appropriate for mature students or students whose first language was not English.

'Personally, I found it fine for me, and I'm a student so I think it was good. Like, the examples you gave were all relevant to us, and you showed us how the pathways and affirmations could help specifically with student-related things, so I think it was good for students. Maybe not mature students, though, they might have different things to focus on, so you could run a group specifically for mature students? And maybe international students might struggle with a language barrier if they're still learning English.' (Participant G, page 10).

This suggests that the intervention should be tailored more effectively when delivered to different groups of people. Participants noted that the workshop itself was appropriate for students, and that it could easily be tailored to other groups of people.

This indicates that while it may need altering to be appropriate to mature students or international students, the bulk of the content was applicable to many types of people.

‘No, I think it was fine for students. You related stuff to things we’d be worrying about, like exams and coursework, and that was useful. I think it would be fine to use with other groups, though, like it wasn’t set up so only students could use it.’ (Participant D, page 10).

One recurring point that was raised was that students often felt they were being patronised by older lecturers, or even brands on social media, who tried to appeal to students by using slang or emojis in their presentations.

‘I really hate when lecturers use emojis in their stuff, it makes me feel like I’m being talked down to, and you didn’t do that. I liked the presentations because they were clear and gave enough information, but it wasn’t like massive chunks of text.’ (Participant A, page 11).

‘Yeah, they were fine. I think there’s a thing among some lecturers where they try to make it appropriate for students by adding memes and stuff, but it’s always really old memes or slang that’s really old, and it just gets a bit cringe. That sounds really mean, I know they’re doing it to try and connect with us, but it’s just a bit unnecessary.’ (Participant E, page 9).

This may indicate a generational divide, as lecturers may be attempting to appeal to students by struggling to correctly identify age-appropriate media and instead making students feel patronised. This suggests that instead of attempting to include slang or references to social media, researchers should focus on clear, formal presentations that communicate information effectively.

6.2.8.3 Sub-theme: Recommendations

Participant F noted that they would have preferred to just focus on hope and remove gratitude from the workshop. This was somewhat due to personal preference, as the participant did not enjoy the gratitude session, but the participant explained that focusing on one strength would have helped participants to practice that strength more rigorously.

‘I just think it’s always better to focus on one thing and get it right. It’s not that the gratitude stuff isn’t helpful for some people, I know that some of the other people really liked it and you said you use it yourself. But I think it would have just been better if you picked one strength and focused all of the time on it, rather than mixing it up.’ (Participant F, page 9).

Another participant suggested that two strengths was the maximum that could have been included in the workshop before it became confusing.

‘Maybe one more if you were doing more sessions, but I think it’d get too much after that. I guess you could do a session on the signature strengths for each person, but that might be too much too, because everyone’s strengths are different.’ (Participant C, page 9).

This might suggest that four sessions were not enough to ensure the participants felt fully confident in their new strategies. Participant C raised a point that most participants seemed to agree on; while four sessions were enough to give them the tools and habits they needed, they would have preferred to have more sessions. This was due to two reasons. Firstly, participants felt that an introductory session would

have been useful to break the ice with the other participants and to get to know each other first so that other sessions did not feel uncomfortable. Secondly, participants felt that an extra session at the end to practice exercises with the other participants would also be useful.

‘Maybe add a couple of sessions. I think people would be more likely to keep up with it if it was a bit longer. If there were more sessions, maybe we could talk about how we’ve been using the exercises in our lives more in the sessions.’ (Participant A, page 11).

‘Yeah, I just think that groups take a couple of sessions to get comfortable around each other anyway, so it’d just be better if there were more sessions. Maybe if there was just a session where we talked about worry and stress, and what it was we were struggling with, we’d find the common ground there? That way we can all start the rest of the workshop with a clear foundation with each other.’ (Participant C, page 9).

Participants appeared to want the extra session as the end to consolidate information and practice the exercises again before the Worry Workshop ended. This indicates that participants want to feel a certain level of confidence in their ability to use their new strategies, and that an extra session of practice may provide this confidence.

6.2.8.4 Discussion of Theme

Many of the participants reported wanting more than four sessions for the Worry Workshop, specifically including a pre-workshop session to get to know their fellow participants, and a post-workshop session to consolidate knowledge and practice the

exercises again. The four-session workshop was designed to be compact, so it could be a short-term commitment for the participants. Before the COVID-19 pandemic, the workshop was designed to be four sessions in order to limit how much time the participants would have spent travelling to the sessions, as this would increase the likelihood of participants dropping out mid-workshop. However, as the workshop then transferred to an online setting, and appeared to be well-liked as an online workshop, more sessions could have been added with no travel-related problems. The feedback shows that initially, an icebreaker session would have helped to alleviate feelings of discomfort and awkwardness around other people and may have encouraged the participants to engage more freely in the group activities, feeling less embarrassed by sharing their personal feelings. An introductory icebreaker exercise in the first session may be enough to facilitate this; a study investigating an online intervention reported that an icebreaker exercise at the beginning of the intervention provided participants with comfort in sharing their personal experiences (Kneeland et al., 2021). Jones and Finch (2020) used an icebreaker exercise at the beginning of every session of their mindfulness intervention and found that it fostered social interaction between participants and encouraged every participant to actively contribute. Additionally, an extra session at the end, for participants to discuss any issues they have encountered with the exercises in their day-to-day life and to bring up anything they would like to practice again, might help participants feel more supported and more likely to continue building this habit after the workshop ends.

Accessibility was another point brought up throughout the interviews. The workshop was aimed at students who spoke English as their first language, or at least as a fluent language, and did not account for international students who may have required other

languages. Accounting for this would require a much larger team with several translators, which was not appropriate for this research, but if the workshop progressed to a larger scale, it would be a consideration. It may also be a consideration to run separate workshops for international students despite speaking English fluently, as international students face different stressors and worries during their time at university (Bista, 2018; McKenna et al., 2017).

The workshop was also aimed at second-year undergraduate students in the usual age bracket of 19-21 and did not account for mature students as their university experience tends to differ greatly. While students and mature students have the same academic challenges, their personal lives vary and there are significant differences in the stressors they face (Christensen & Craft, 2021; Dawborn-Gundlach & Margetts, 2018). It would likely be more appropriate to run a workshop for mature students separately, so that they are with other participants that understand the issues they face. However, it would not be difficult to adapt the workshop for mature students, as it would mostly involve changing the examples given for the workshop exercises.

The workshop was noted as being accessible for a disabled participant, who explained that the workshop being online helped as their needs were met in their home, as opposed to the university where their needs often were not met. Online interventions are often found to be more accessible to disabled participants, ensuring that their time and energy is spent conservatively (Reilly et al., 2022). Participation is also not limited to those that can easily travel or those who live nearby to the researcher (Andersson et al., 2019), making online interventions accessible to disabled individuals who are confined to their home. However, the workshop was not built for anyone with special needs such as larger font sizes, text-to-speech options, or the need for sign language

interpreters. While some of these could have been met, such as having an option for larger font sizes, there were no requirements from any participant for text-to-speech or sign language, and therefore it was not considered. If the workshop was re-tested with larger groups of participants, then more disabled-friendly versions of the workshop would be designed to ensure accessibility.

While the group format seemed acceptable to most students, two of the participants would have preferred a one-to-one workshop in order to tailor it more specifically to their needs. Group interventions and one-to-one interventions are both invaluable when it comes to mental health support; however, the group format was chosen for the workshop as it involved several exercises and activities. These were suited to a group format, where participants could communicate and practice together. This was noted by several participants as being useful to inspire and motivate them to engage with the activities. A group intervention is also an excellent way to support multiple people at once, which would hypothetically cut down waiting lists for university student support much faster than one-to-one interventions. As university support services are currently under increased demand and have limited resources (Watkins et al., 2012), group workshops could be a way of providing support to more students. The intervention being online could also help encourage students to participate in the workshop, as they could participate more privately than having to physically turn up somewhere on campus (Barrable et al., 2018).

Participants agreed that the sessions were appropriate for students, with some participants comparing it to other things aimed at students, for example adverts that circulated on social media for young people. Participants explained that using outdated slang, emojis, or memes in adverts, or even lectures at the university, often made

them feel patronised. Students seemed to like the organisation of the workshop presentations (Appendix B.5) and thought they were appropriate for students.

Participants reported that the workshop could be useful for students if offered as an optional embedded part of their undergraduate course to prepare them for future stress. Research has suggested that part of why students do not turn to support services when they could benefit them is because they have lack of knowledge about the services (Waight & Giordano, 2018), and this could potentially be solved by the intervention being clearly offered as an optional part of their undergraduate course.

An emphasis was placed by participants on it being optional, as the workshop requires engagement and practice, and if someone was pushed into it, they would be less likely to fully commit to the workshop. Upsher et al., (2022) conducted a systematic review of embedded interventions in undergraduate students and found that interventions aimed at stress management, mindfulness, and clinical skills, had a positive impact on anxiety. Despite this, other interventions did not show a statistically significant impact on anxiety, indicating that the impact of the embedded intervention must be carefully evaluated. This could be due to interventions not being a 'one size fits all' experience, and therefore one intervention may not be appropriate for an entire undergraduate sample. This could potentially be addressed by using the intervention as a template and focusing on other strengths. In future research, several PPIs following the same design as the Worry Workshop could be tested for the impact on worry. This would provide students with a selection of workshops they could undertake optionally as part of their course, with them choosing the workshop they personally feel is most appropriate for their situation. Due to the compact nature of the workshop, two strengths were selected from the original four of hope, gratitude, curiosity and

optimism. This was to ensure the workshop was not over-crowded and participants could learn the exercises at a comfortable pace. Participants appeared to agree that two strengths were the maximum that would have felt feasible to learn within the four sessions, and that if any further strengths were to be used, several more sessions would be required.

6.2.9 Conclusion

During the interviews, participants reported a wealth of information, including their experiences with mental health, confirming that they believed the intervention improved their mental health and provided them with the tools necessary to cope in future periods of distress. Participants emphasised that there had been a change in perspective and situation, taking them from individuals that believed worry was a passive experience and that they could not cope with stressors, to individuals who saw worry as an active choice and believed they could interrupt a worry response and replace it with a more adaptive alternative. Participants explored their opinions on the format of the workshop, provided recommendations for how it might be changed, and explained the parts that they personally enjoyed or disliked. There was an emphasis on embarrassment, as participants explored feeling uncomfortable with some of the exercises due to struggling with being positive about themselves. However, participants reported settling into the exercises and becoming more comfortable with the exercises over time, indicating that an ice-breaker session at the start of the workshop would be useful. Participants also discussed and explored the impact of the COVID-19 pandemic, identifying it as an overwhelming series of stressors that resulted in health anxiety, social isolation, loneliness, and boredom. The intervention appeared to be useful in not just improving mental health but also providing social interaction for individuals that were struggling in isolation. The group nature of the intervention was generally seen as preferable to one-to-one interventions as participants felt comforted by the shared experiences with their fellow participants. In conclusion, the participants reported positive changes in mental health due to the workshop, and a positive experience of the workshop.

7. Discussion

The overall aim of this research was to investigate student mental health across transition periods, and to design and implement a positive psychology intervention named the Worry Workshop to help students with their mental health. This chapter will discuss the results of all three studies in relation to the literature, establish the contribution to knowledge, discuss the limitations of the research, analyse the mixed methods approach, and make recommendations for future research in this field.

The research in this thesis was undertaken to answer the following research questions:

1. How does anxiety, depression, and worry change in undergraduate students before and after a transition period?
2. Do character strengths predict mental health in undergraduate students before and after a transition period?
3. What are the main sources of worry for undergraduate students?
4. Is a positive psychology intervention effective at alleviating symptoms of worry, anxiety, and depression, through the increasing of character strengths, in undergraduate students?
5. How do undergraduate students perceive their mental health?
6. Do undergraduate students have adequate access to support within universities, and do they seek out support?

This discussion will demonstrate how the research answers these questions.

7.1 Student mental health

Questions 1 and 2 were:

1. How does anxiety, depression, and worry change in undergraduate students before and after a transition period?
2. Do character strengths predict mental health in undergraduate students before and after a transition period?

The first two were addressed in Study 1, where it was found that anxiety remained elevated before and after a transition period, and depression became significantly worse, while worry significantly improved. This suggests that depression evolved throughout and after the transition period, which may be due to the ongoing barrage of changes and adjustments needed from the student. Jayanthi et al., (2015) suggests that students with academic-related stress were more likely to suffer from depression; the results of Study 1 support this as students post-transition period had more symptoms of depression after facing a series of academic stressors. Study 1 also suggests that prior to a transition period, worry was elevated, and became less so after the transition period. In comparison, anxiety remained elevated, which was unexpected due to worry being a key component of anxiety. This indicates that while the cognitive component of anxiety settled after the transition period, the biological aspect did not, continuing to cause effects such as increased heart rate, dizziness, and restlessness. In addition, while worry significantly improved, the average score post-transition still fell within the 'moderate' category of worry, suggesting that it had not alleviated to a healthy, adaptive level. This may suggest that excessive worry during a transition period can persist after the transition period has passed.

Before the transition period, anxiety was predicted by hope, gratitude, optimism, extraversion, emotional stability, and openness. After the transition period, anxiety was predicted by curiosity, optimism, conscientiousness, and emotional stability. Before the transition period, participants were anxious about the uncertain future ahead. This may suggest that participants with higher optimism, hope, and gratitude may have felt less anxious about their future, as they focused on positive potential outcomes to the uncertain situations. Rand et al., (2020) suggested that hope and optimism impacted subjective well-being in students due to the participants having positive expectations of the future; the results of Study 1 suggest that the positive expectations may have been a buffer against anxiety. Participants that were extraverted and open to new experiences may have suffered fewer anxious symptoms because they were confident in their ability to navigate the uncertain future situations. Metts et al., (2021) proposed that extraversion and emotional stability predicted anxiety; however, this research suggests that extraversion only predicted anxiety before a transition period, whereas afterwards, extraversion was not a predictor. This may be due to the need for extraversion at the start of university; students would need to be confident in their communication and friendliness to establish new relationships with other students. After the transition period, students would be settled in their new friendships and feel less of a need for extraversion. This may be applicable to the other changed predictor variables after the transition period; students with higher levels of curiosity may have been more eager to explore their new surroundings and engage in new social experiences, and therefore would not feel as anxious in their new lives. Silvia (2017) suggested that curiosity is a counterweight to anxiety, as anxiety involves avoiding new experiences; however, this study suggests that curiosity is only a predictor of anxiety after the transition period had passed. This

may be due to students having no choice at the start of university but to engage in new experiences, such as moving into new residences, meeting new people, and starting new classes. Once the transition period had passed, students would then have to take initiative to maintain friendships, explore a new city, and engage in extra-curriculars. In addition, participants with high levels of conscientiousness may be more organised and disciplined in their new classes, navigating their academic lives successfully (Dumfart & Neubauer, 2016), which would be crucial for students coping with tests and coursework. Optimism remained a predictor of anxiety before and after the transition period, as did emotional stability, supporting previous research that consistent positive thinking was important for keeping anxiety levels low (Metts et al., 2021; Rand et al., 2019), but also suggesting that this holds true regardless of the differences in situation caused by a transition period.

Before the transition period, depression was predicted by hope, gratitude, extraversion, and emotional stability. After the transition period, depression was predicted by hope, gratitude, curiosity, and openness. Before the transition period, participants had low levels of depression, and elevated levels of anxiety and worry, suggesting that depression was not a major concern for participants pre-transition period. Depression was predicted by hope and gratitude at both times, indicating that participants who felt motivated to achieve their goals and participants that savoured the good were less likely to feel depressed. Iodice et al., (2021) conducted a meta-analysis showing overwhelming support for gratitude being negatively associated with depression, and the results of Study 1 extend this by suggesting that the associated between gratitude and depression is not affected by a transition period. Depression was also predicted by curiosity after the transition period had passed, suggesting that

participants who were more eager to explore new situations and embrace new experiences were less likely to feel depressed. Kawamoto et al., (2017) found that the relationship between curiosity and depression was mediated by rejection sensitivity, suggesting that individuals with high curiosity were less sensitive to rejection, and therefore less likely to be depressed. Similar to anxiety, curiosity was only present as a predictor of depression after the transition period had passed, suggesting that during a transition period, curiosity may not predict depression. This may be due to the fact that during many transition periods, individuals are pushed to engage in changes in their lives, for example a student transitioning from first-year studies to second-year studies would be pushed to select elective modules. This requires less curiosity and exploration in the student to engage with the world around them. After the transition period, students may be more reliant on their own motivation to explore new experiences or risk becoming isolated in their lives, leading to depressive behaviour. Before the transition period, depression was predicted by extraversion and emotional stability, suggesting that outgoing, stable participants would be less prone to depressive symptoms. After the transition period, this had changed to openness, suggesting that participants who were not open to new experiences and interactions were more likely to be depressed. Depression had increased after the transition period, implying that the transition period may have caused participants to become depressed. This is reflective of the broaden-and-build theory (Fredrickson, 2001), in which negative experiences and emotions lead to the narrowing of emotions and attention, and subsequently the reduction of engagement with the environment. This appears to be demonstrated in the Study 1 results; the negative experiences of the transition period may lead to a lack of openness afterwards, and subsequently result in depressive symptoms. It may also be that those who are more open find that openness

naturally buffers depression, as it encourages them to engage in the world around them, whereas those low in openness do not, and fail to stave off depressive behaviour. Study 1 results demonstrate that transition periods have a significant impact on depression, which is a cause for concern as future transition periods may therefore cause a worsening of symptoms. Future research in this area should focus on the development of depression throughout university to determine the impact of subsequent transition periods and the potential of character strengths and personality factors in preventing declines in mental health. This could be done through longitudinal studies on student mental health across the entirety of a degree, providing PPIs such as The Worry Workshop as part of the course to examine potential changes.

Before the transition period, worry was predicted by hope, optimism, extraversion, and emotional stability. After the transition period, worry was predicted by optimism, extraversion, agreeableness, conscientiousness, and emotional stability. This suggests that prior to the transition period, students that were motivated to achieve their goals and plan for them were less likely to worry. Hope has been found to be a significant predictor of depression and anxiety (Kwon et al., 2015), however less research has focused on hope as a predictor of worry, and this provides evidence for hope having an impact on worry prior to a transition period. This provides new knowledge on the impact of hope on student mental health and indicates that hope is essential in reducing worry in students. Hope not being a predictor after the transition period was an unexpected result, as it was anticipated that motivation to plan and achieve goals would be vital in reducing worry about exams and coursework. This suggests that hope is more useful in times of direct crisis. In Studies 2 and 3, students reported hope, both

agency and pathways, as being key for planning for academic goals and reducing worry, so it may be that hope predicts worry for students later in their academic journey, as Study 1 participants were in their first year of university, and Study 2/3 participants were in their second and third years of university. Future research would benefit from focusing on the development and evolution of mental health and character strengths over all three years of an undergraduate degree, to ascertain the changes in predictor variables. Optimism predicted worry before and after the transition period, indicating that participants that expected positive outcomes to situations did not worry as much. Extraversion and emotional stability predicted worry at both times, suggesting that outgoing, stable individuals were less likely to worry during and after a transition period. These findings imply that friendly, positive students were less likely to worry, potentially because they were able to engage in social situations and put themselves forward with the expectation of positive experiences, not ruminating on potential negative outcomes. After the transition period, worry was also predicted by agreeableness and conscientiousness. This indicates that students that are disciplined and organised, as well as friendly and trusting, are less prone to worry after a transition period has passed.

Similar to character strengths, there is a dearth of literature about personality factors and their impact on depression and anxiety, but very little about personality factors and worry. The results of Study 1 suggest that the impact of extraversion and emotional stability consistently predict worry throughout a transition period, but that after a transition period, interventions may also need to focus on conscientiousness and agreeableness. Worry significantly improved after the transition period, implying that once the immediate triggers for worry in the transition period had passed,

participants were less likely to worry. However, the level of worry remained within the 'moderate' category, indicating that participants did continue to worry after the transition period had passed, suggesting again that the transition period had long-term effects on participants' mental health. As suggested in the broaden-and-build theory (Fredrickson, 2001), if the worry is not addressed, it may continue to build over time, and this suggests that it could be exacerbated throughout future transition periods. This may be an explanation for why student mental health appears to decline throughout university, leading to the growing demand on mental health services (Watkins et al., 2012). The results from Study 1 suggest that mental health changes over time, and is significantly impacted by transition periods, highlighting the need for early intervention and the providing of support to students as they join university.

7.2 Sources of worry

Question 3, 'what are the main sources of worry for undergraduate students?', was answered through both Study 1 and Study 3. Study 1 featured qualitative data collected through text box questions, which were analysed through thematic analysis. Before the transition period, participants identified a wider variety of worries. While they were asked 'what are you most worried about when starting university?', students identified a range of worries pertinent to financial concerns, health concerns, and worries about their social life, indicating that they thought of university as the entire experience, rather than just the academic aspects. Students notably worried about the uncertainty of the future, picturing negative outcomes such as not being able to make friends, or being unable to cope with the workload at university. This is an aspect of the intolerance of uncertainty model (Carleton et al., 2007), in which

worry is focused on uncertain future outcomes and the potential negative outcomes. Students discussed worries about finances and working alongside studies. More and more students have to take part-time work while they attend university due to the rising cost of living and insufficient maintenance loans (Heckman et al., 2014). However, university courses are considered to require full-time hours of independent study, lectures, and seminars. This would understandably cause students to worry about balancing their studies. In the quantitative questions, participants were asked to select across a Likert scale to describe whether they were worried or excited about several upcoming situations. Participants identified finances as their biggest source of worry prior to the transition period, indicating that it was a bigger source of worry than academic or social concerns. This was sustained after the transition period had passed, with students reporting that they had to manage part-time work alongside university and their newly established social lives. This supports prior research that financial concerns are significant stressors for students (Fam et al., 2020; Heckman et al., 2014), and adds that financial worries remain the most commonly reported before and after the transition to university, thus significant efforts should be made by universities to support students with their financial needs and concerns. This may be financial support in the form of funding, or by helping students arrange part-time work around their class schedules.

As expected, some worries were only present before the transition periods, such as worries about making friends and fitting in, because after the transition period the students would be settled into their new lives. Some worries persisted across the transition period, as the stressors also persisted. Course content and examinations remained significant sources of worry for participants, despite the students having

experienced almost a full year of them. This is reflected in previous research, particularly exams, which have been found to make up as high as twenty percent of reported stressors (Hurst et al., 2013); however, this research demonstrates that financial stressors may be the biggest source of worry for students. Before the transition period, worries about examinations were based in the prediction that exams would be difficult, whereas after the transition period, the worries were due to having experienced difficult exams and worrying about future exams. This indicates that while a small amount of worry might serve as an adaptive behaviour to encourage studying and preparation, excessive worry appears to cause distress around coursework and exams, and a fear of the future exams. This again highlights the need for early intervention from the universities, as this may help students manage their worry early in their academic journey, and therefore prevent excessive worry.

Before the transition period, students were also asked to identify what they were most excited about when it came to starting university, and students identified a less varied number of sources of excitement in comparison to worry. While worry was based in academia, social situations, living situations, finances, jobs, fitting in, and health, sources of excitement were more limited to social life, course content, and personal growth. These were more generalised sources and bigger concepts, such as 'living independently', rather than the specific, smaller areas identified as worries. There is also a direct overlap between the worries and excitements; while students felt excited about the big changes in their lives, they worried about the smaller details of those changes. This suggests that students anticipated positive change and personal growth but predicted challenges and negative outcomes within the changes. Once again, early intervention providing support and education on worry may help students focus more

on the positive aspects of transition periods, rather than the challenges becoming a source of excessive worry.

In Study 3, participants discussed sources of worry, a main source being the COVID-19 pandemic. The pandemic altered almost every aspect of daily life and caused significant changes in mental health in many different groups (Maaravi & Heller, 2020; Sher, 2020), which was reflected in this study as students discussed the wide variety of changes made to their lives in the wake of the pandemic. Participants reported that COVID-19 had affected almost every part of their daily lives, and the uncertainty of the future was one of the biggest sources of worry for them. This reflects the intolerance of uncertainty model (Carleton et al., 2007), in which uncertain futures trigger periods of rumination about potential negative outcomes. Students also identified exams, university content, relationships, and finances as sources of worry, which mirrored the results from Study 1. This supported prior research into transition periods, as the same sources of worry were identified in prior studies (El Asnari et al, 2014; Cheng et al, 2014). However, the results of Studies 1 and 3 established that students place a similar value on both the academic and social sides of university, with both being a main source for worry and excitement. Studies 1 and 3 also demonstrated that students felt a mix of worry and excitement about every aspect of university, which should be considered when proceeding in future research about academic transition periods.

7.3 Intervention

The research questions were:

1. Is a positive psychology intervention effective at alleviating symptoms of worry, anxiety, and depression, through the increasing of character strengths, in undergraduate students?
2. How do undergraduate students perceive their mental health?

The questions were answered through the intervention study and qualitative enquiry, utilising a mixed methods approach to strengthen the conclusions made. In Study 2, mental health measures were recorded at pre-workshop, post-workshop, one month and three months, along with mid-session measures before and after each session to track how effective each session was. Group 1 received the Worry during a transition period, whereas Group 2 received the Worry Workshop after a transition period, during the summer and a calmer period of time. However, both groups were in the midst of the COVID-19 pandemic, and therefore there was likely an increase in mental health symptoms in general for both groups. Anxiety for both intervention groups was initially excessive and decreased consistently over the workshop except between Session 1 and Session 2, where it slightly increased. This may reflect an issue with Session 1 not being effective enough at reducing anxiety, which may be due to participants becoming more aware of their mental health due to the reflective nature of the workshop. This self-reflection was by no means bad, as the gratitude diary encouraged self-reflection and participants found this to be helpful in the long-term. Participants reported initial discomfort in the self-reflection in Study 3 but found this subsided quickly and was beneficial to them. After the workshop, the anxiety levels had reduced to moderate levels, and continued to decrease after the workshop. At three months, anxiety was moderate in Group 1, and low in Group 2. This suggests that Group 2 received more benefit from the intervention indicating that the intervention

may be more effective at reducing anxiety during periods of calm. Both groups received significant benefit, and had high levels of anxiety pre-workshop, suggesting that during the end of second year and in preparation for third year, student anxiety may be elevated, once again emphasising the need for early intervention to provide students with resources to manage this increase in anxiety. This also may be due to the COVID-19 pandemic exacerbating mental health problems (Fruehwirth et al., 2021), and so the results of this research should be contextualised in relation to the pandemic. Future research may want to further explore the impact COVID-19 has had on student mental health in the long-term, and any future interventions may want to address COVID-19 as a particular stressor.

Pre-workshop, worry was excessive in both groups and decreased throughout the workshop. There was a steep decrease between Session 1 and Session 2, which was likely due to the psychoeducation teaching participants about worry being an active choice. After the workshop, Group 1 had moderate worry, and Group 2 had low worry. At three months, both groups had low worry, suggesting that the intervention had long-term effects after the end of the sessions. The results show that while Group 2 gained more benefit post-workshop, both groups were at a similarly low level of worry by the follow-up, indicating that the intervention may be equally effective when given during or after a transition period. Group 1 may have had higher worry at 1 month because of the transition period they were experiencing, and therefore it was difficult to see the improvements until that transition period had passed.

Depression was initially at moderate levels for both groups, and increased between the baseline and Session 1, which may indicate that Session 1 was not effective in alleviating depression. This was the same pattern found in anxiety, suggesting that

participants experienced a slight increase in mental health symptoms before they alleviated, potentially due to them engaging in self-reflection more as their focus was drawn to their mental health. Reflection was found to be at a high level throughout the workshop, suggesting participants often reflected on their lives and mental health, which in Study 3 was reported to be beneficial for the participants. After the workshop, depression was low in both groups, and this was maintained at three months. The results suggest that depression was less elevated than anxiety and worry pre-workshop, which were both excessive, and therefore that student mental health by second year involved moderate depression but was characterised more strongly by anxiety and worry. In comparison, Study 1 demonstrated that post-transition period, in the first academic year, depression had worsened, and worry had improved, with anxiety remaining elevated. This suggests that again, future research is needed to examine the evolution of depression, anxiety, and worry over the full three years of an undergraduate degree, along with the potential impact of PPIs such as the Worry Workshop on student mental health across three years.

Before the Worry Workshop, life satisfaction was low in both groups, demonstrating that their contentment or happiness in life was inadequate along with their moderate-high levels of mental health symptoms. A large increase in life satisfaction was seen between Session 1 and Session 2, which mirrors the steep decrease in worry, implying that as worry decreased, life satisfaction increased. Life satisfaction post-workshop was high in both groups. At the one-month follow up it decreased slightly and then rose again at three months, still at a high level. This indicates that after the sessions, participants may have faltered slightly in their confidence and newly learned skills but regained it in time, indicating that the intervention was equally successful in both

groups, resulting in high life satisfaction before and during a transition period. The results demonstrate the effectiveness of the intervention not just alleviating worry, anxiety, and depression, but improving life satisfaction in students, which would contribute to their overall wellbeing and happiness. This could be used by universities to improve the lives of students not just by alleviating their mental health problems, but by improving the positive aspects of their lives.

In Study 3, participants were asked about their mental health in the interviews. Participants mostly described their mental health as sub-optimal prior to the Worry Workshop, explaining that they experienced excessive worry, sleep disturbances, stress, and emotional distress. Participants all indicated that prior to the workshop, their mental health was fluctuating and often difficult to cope with, and that it had been caused by periods of change and transition. Participants discussed worrying to the point where they actively noticed themselves worrying more than what they considered to be normal prior to the Worry Workshop, and they attributed it to the stressors they had identified. They described worrying to the point of it disturbing their sleep and impacting their engagement in daily activities. Participants explained that prior to the workshop, they perceived worry as a passive experience that happened to them, rather than an active choice that could be changed. Worry was perceived as uncontrollable and natural even in excessive amounts and was not perceived to be a harmful behaviour, which has been found to be a vital factor in prolonged usage of worry (Thielsch et al., 2015). After the Worry Workshop, participants reported that their perceptions had changed completely, and they were now aware of when they worried excessively and when it was best to intervene in their own behaviour. Participants reported that the stressors themselves had not alleviated, and they were

still faced with a barrage of concerns, but that they were better equipped to cope with the stressors and avoid defaulting to worry as a coping strategy. This was attributed to the workshop exercises, as participants found the new strategies useful when replacing worry, which demonstrates the necessity for providing students with helpful resources to manage their mental health, and the ease with which this can be achieved through the Worry Workshop.

In Study 2, the results clearly demonstrated that hope and gratitude were bolstered by the sessions, and that mental health improved as a result. The intervention proved to be successful for both intervention groups in comparison to the wait-list control group. There were some differences between the two intervention groups, with hope and gratitude scores being lower (but still improved from baseline) in the second group, suggesting that students might benefit more from the intervention being held during a transition period. This suggests that while it is still helpful to deliver the intervention to students in preparation for future transitions, they may find more benefit from experiencing it during periods of change where they can directly apply the exercises to their current problems. Wellbeing staff and mental health services may therefore consider implementing the Worry Workshop and other PPIs at the start of the academic year to prepare students for the time ahead, but also offer additional sessions and refresher courses as further support during transition periods.

The greatest amount of change in strengths happened between the baseline and Session 2, for all three strengths. This was interesting as the first two sessions were about gratitude and hope agency, and those were expected to rise more dramatically, but hope pathways also steeply increased despite being the focus of Session 3. All three continued to rise for the rest of the intervention, but at a more gradual pace.

This may suggest that the first two sessions were more beneficial for the participants, or that they had a sharper boost in strengths due to finally receiving support, and the more gradual decrease was a natural tapering of effects. Interestingly, the strengths decreased slightly at the one-month mark but rose back up at the three-month mark to the levels they had been at the end of the intervention. This indicates that shortly post-workshop, students' strengths decreased slightly, which could be due to them feeling the sudden lack of the workshop, or even their faltering in maintaining the activities such as the gratitude diary. However, the effect of the workshop was then restored at three months, potentially as a consequence of participants settling into the activities and gaining more practice navigating worry. This indicates that students may need further support post-workshop to continue the exercises, for example email reminders sent to them weekly. Future research may want to examine differences between groups that receive post-workshop support and groups that do not.

In Study 3, participants were asked about the exercises, and all of the participants confirmed that they at least maintained one of the daily exercises, if not both of them. Most of them also confirmed they used the 'Pathways Method' to navigate their goals and obstacles as they arose. The gratitude diary was described as 'relaxing' and 'nice' to do daily, and participants explained that they enjoyed setting aside time every day to feel grateful. Participants confirmed that they felt the gratitude diary helped them to feel more grateful naturally, and that they could savour good experiences more easily. Gratitude diaries are the main tool utilised in gratitude interventions and they have showed mixed results, with many studies yielding no significant increases in gratitude or improvements in mental health (Boggiss et al., 2020). Contradicting this, the results of Study 2 and Study 3 indicate that this gratitude diary was highly effective

at both. The interviews show that participants felt strange or 'silly' at first, and adjusted to the exercises as it progressed, indicating that future interventions may want to include an 'icebreaker' session to help participants feel more confident, and allow them to practice exercises within the sessions. The inconsistencies in gratitude intervention results may be due to inconsistencies in the exercises across different interventions due a lack of standardisation (Jans-Beken et al., 2020). Gratitude diaries are sometimes used as 'self-help' techniques, in which the diaries are distributed with instructions, whereas this gratitude diary ran alongside group sessions, which may have made the participants feel more enthusiastic about the diary. They were also guided with examples by the researcher, which was noted by a participant as useful for helping them to feel inspired about the diary. This demonstrates that the presence of the researcher as a guide was useful and reassuring to the participants; however, self-help versions of the workshop could be offered alongside the guided version to encourage students disinclined to group workshops to still seek help.

A surprising outcome of the interviews was the feeling of embarrassment about creating affirmations. Participants explained that they often could not say their affirmations aloud or even write them down because they were embarrassed about being positive about themselves. This may be due to low self-esteem and feeling as though the affirmations were not accurate (Austin et al., 2021). Participants felt more encouraged to create affirmations when they were linked to specific activities or goals they were pursuing, rather than affirmations about their actions or personality. It may also be cultural or generational. Participants noted that they did find the embarrassment and discomfort eased, although they would prefer to not speak the affirmations aloud in front of people. Participants described the 'Pathways Method' as

methodical, and that they found it useful mostly for academic goals, but some participants used it for household chores and when preparing for a job interview. This supports previous research (Feldman & Kubota, 2015) that indicates hope agency and pathways are needed in combination to achieve goals, as the results suggest that it can be applied to personal problems and organisation as well as academia.

Study 3 provided opinions from the participants about the structure, accessibility, and experience of the Worry Workshop. Participants experienced discomfort and embarrassment around creating affirmations and sharing them and noted that the workshop might benefit from an icebreaker session in which the participants get to know one another. Participants also reported that a final session in which the participants could practice the exercises further as a group might be appropriate.

Kneeland et al., (2021) investigated problems facing online interventions in the wake of the COVID-19 pandemic and found that providing an initial icebreaker session helped to establish rapport between participants and trust between the participants and therapist. Participants in Study 3 discussed how they did warm up to the other participants and by the end of the workshop, felt comfortable around them, but noted that an icebreaker session may have eased this experience. This may be relevant when considering larger groups for the intervention in the future, as it might become more challenging to establish rapport between larger groups of participants.

Participants generally found the Worry Workshop to be acceptable for the student population, noting that it was clear and did not pander to their demographic by using slang or emojis, which they often found patronising in other areas. This may demonstrate another barrier to student engagement in support services; if the services are perceived as patronising, students would be less likely to engage with them.

Participants discussed the creation of alternative interventions for accessibility and diversity; for example, mature students may face some of the issues that students face, such as coursework and exam stressors, but not others such as living in university accommodation and establishing themselves as new adults. This was seen in the qualitative questions in Study 1, as mature students worried about different things, such as balancing family obligations and being left out of the typical social life of a student. This may mean that future interventions should be altered to fit the group involved, including translations into different languages, and signed classes for deaf and hard-of-hearing participants, due to the different challenges facing their university experience (Ferguson & Henshaw, 2015). The digital nature of the Worry Workshop was noted as being accessible by one disabled participant, who explained that all of their physical needs were catered for in their home, whereas to attend a face-to-face workshop they would have had to rely on public transport, their mobility needs, and wheelchair access to buildings and streets. While some of this can be guaranteed by the researcher, by selecting wheelchair accessible places for the workshop, the actual workshop session would only be part of the challenge facing a disabled participant. The workshop being delivered online provides the same session content with significantly less effort required to attend and takes less time out of the participants' day. The digital format of the Worry Workshop was favoured by most participants, but two participants reported that they preferred in-person workshops as they connected more to the other participants by seeing their body language and physically interacting with them. This may suggest that, were the workshop to be offered to students across an entire course, in-person and online options might be appropriate to give the students a choice on their preferred method. Sweeney et al., (2019) found that online interventions were reported as beneficial as it reduced the stigma of attending

therapy, which may be another consideration in future interventions focused on students. Participants suggested that the workshop might be appropriate as an embedded part of undergraduate courses, optional for the students but encouraged as a normal part of their university life, and this might also help to reduce the stigma surrounding therapy. Study 1 demonstrated that students have an overwhelming lack of support for their mental health, especially if they did not have a diagnosis of a mental health disorder. Most mental health support services would naturally be tailored to those with mental health disorders, but this research suggests that students may still have moderate-excessive levels of anxiety, depression, and worry without qualifying for a diagnosis, and that they would benefit from support. Embedded, optional support through PPIs such as the Worry Workshop could therefore significantly benefit students.

Regardless of the digital or in-person nature, participants reported good group cohesion that built throughout the sessions. Participants initially described it as awkward or uncomfortable due to the other participants being strangers to them but found that as the sessions progressed, and as they practiced the exercises with the other participants, they built a connection. Participants noted that it was pleasant to share their experiences and know that the other participants understood and empathised. Participants reported that sharing the affirmations and the gratitude diary helped them to feel supported and less alone in their excessive worry. Fruzzetti & Ruork (2017) found that a quick way of establishing rapport between group therapy participants was to engage in validation of shared experiences, and the findings of Study 3 demonstrate that the hope and gratitude exercises were the mechanism by which this was achieved. This was reflective of results from Study 1, in which

participants reported similar worries to each other but may not have realised that all the other students were worrying about the same thing. Demonstrating through the Worry Workshop that students are not alone in their worry may assist students in controlling their worry and motivate them to change their response to stressors.

Participants had heard of some of the exercises prior to the Worry Workshop, particularly the gratitude diary and the affirmations. Initially, this was a barrier to their engagement in the sessions, as they had preconceptions about the exercises' effectiveness. After the first session, their preconceptions appear to have been proven false, as participants explained that after the first session, they felt confident in the activities and much less likely to worry. Participants reported that the psychoeducation about worry provided a shift in their perspective on worry, allowing them to change their response to stressors and stop worrying as often. This reflects and explains the results from Study 2, where the biggest decrease in worry was found between Session 1 and 2, suggesting that the first session was vital in demonstrating the effectiveness of the workshop.

Overall, the Worry Workshop was successful in educating participants about their mental health and changing their perceptions of worry from an uncontrollable, passive experience to an active behavioural choice. While COVID-19 may have increased mental health symptoms during Studies 2 and 3, the Worry Workshop was still overwhelmingly successful in reducing anxiety, depression, and worry, and increasing life satisfaction.

7.4 Access to support

The research question was:

1. Do undergraduate students have adequate access to support within universities, and do they seek out support?

In Study 1, participants were given the option to disclose any mental health diagnoses and treatments they had. At Time 1, 27% of students reported having diagnosed mental health problem. The majority of participants selected that they had no mental health conditions (65.1%), but the average results of the measures suggest that the participants were experiencing moderate levels of anxiety and worry. This indicates that students may be suffering from negative mental health symptoms, but either not qualify for, or not seek out, professional support. This could be due to the overburdened NHS and long waiting lists (Punton et al., 2022), or the stigma that still exists about seeking support for mental health problems (McLafferty et al., 2017). When asked what treatments had been received, participants reported antidepressants, CBT, or being on a waiting list for counselling or CBT. This indicates that many participants struggling with mental health problems did not receive treatment or support for their diagnoses. At Time 1, participants were not yet at university, and therefore did not have access to university student support; however, participants did not report accessing support at their secondary schools and sixth forms. Mental health support pre-university has also been found to be lacking (Thorley, 2016), and this may result in new university students beginning their first transition period at university without having received any mental health support in their adolescence or new adulthood, highlighting the importance of providing new adults with resources to assist the management of their mental health. At Time 2, 32% of students reported a diagnosed

mental health problem. Again, the majority of participants indicated that they had no mental health conditions (61.8%), but the average results of the measures implied participants had moderate levels of anxiety, worry, and depression, suggesting evolving mental health concerns. Participants reported taking antidepressants, counselling, with two of those participants indicating a combination of medication and counselling. No participants indicated they were accessing mental health support through the university support services. This could be due to a lack of awareness of the support services, the stigma of seeking mental health support, or a lack of faith in the support available (Punton et al., 2022). The findings of Study 1 suggest that students have an overwhelming lack of support for diagnosed mental health problems, and a complete lack of support for those without diagnoses, despite them still experiencing symptoms of moderate anxiety, depression, and worry. This supports the conclusion that early intervention would be useful to provide support for students and prevent their mental health from evolving into excessive levels, and the results of the Worry Workshop demonstrate that the use of PPIs could provide students with resources and education on their mental health and how to manage it.

In Study 3, participants acknowledged that they wanted more support for their mental health but noted the challenges facing them in doing so. Several of the participants explained that they had sought out support from both the NHS and the university but had been disappointed by long waiting lists and a lack of available help. In some cases, students had signed up for the Worry Workshop due to desperation, wishing to access any form of support possible. Participants also indicated that they purposefully anticipated disappointment and negative outcomes to accessing support, due to being disappointed prior. This is reminiscent of the contrast avoidance model of worry

(Newman & Llera, 2011), in which individuals purposefully maintain low emotional states in order to avoid going from a positive state to a negative state as it feels more dramatically impactful. This affected how they approached the Worry Workshop, as they purposefully expected it to be unhelpful so that they could avoid being let down by it. Participants appeared to have gained confidence in the Worry Workshop by the end of Session 1, however, so the engagement of participants did not appear to have been affected by their prior expectations. Participants that were placed on the waiting list explained that the waiting list would have been intolerable had it been indefinite, whereas a fixed, short waiting list was manageable because they knew when the support was coming. Prior research has suggested that lengthy waiting lists for mental health support actually exacerbate mental health symptoms (Punton et al., 2022), which is reflected in Study 3 as participants discussed being distressed by waiting lists. This suggests that when designing interventions, the length of time participants may have to wait should be considered as a factor that impacts engagement and mental health. The Worry Workshop is a flexible, online solution to providing students with fast access to support, and could easily be tailored into self-help guides that students could access at any time.

7.6 Strengths and limitations of the research

There were a number of methodological strengths in the research. Study 1 used a simultaneous bidirectional approach to combining quantitative and qualitative methods, as both were included in the same survey. This allowed participants to express more personal experiences within the confines of a text box. Due to the predominantly quantitative design of the survey, a larger sample was gathered which

revealed patterns across a group of students that could be generalised to the student population. The qualitative questions were optional, as the length of the survey was already substantial, but there was a varied, long list of the biggest sources of worry, which provided vital information on specific stressors in student worry.

Study 2 and 3 used a unidirectional explanatory approach to combining quantitative and qualitative work; firstly, a quantitative study was performed to gather data on an intervention, and then a qualitative evaluation was utilised to further explain the subject. Using mixed methods allowed for examining the intervention in two ways: the quantitative provided measures of mental health and character strengths across the intervention to compare results, and the qualitative provided the perspective of the participants. This use of mixed methods resulted in gathering a variety of data that has revealed interesting information about the perception of positive psychology, exercises, and how interventions could be more engaging for participants. The opinions, thoughts, and experiences of the participants is often not included in intervention studies, as they tend to be quantitative studies. The qualitative investigation of the intervention has led to useful findings and suggestions about future intervention designs for students. The qualitative and quantitative data triangulated to show the success of the intervention, strengthening the conclusion that the intervention successfully improved mental health.

The research was not without problems and limitations. Initially, the first study was intended to be longitudinal as it would have been excellent to establish the changes in the same participants over time. However, that was not possible in the end due to the steep volume of participants not responding to the follow-up survey. Ultimately, more participants were recruited for the follow-up measure, and the study became two

cross-sectional points of data collection that were compared. While this still provided valuable data, and the student populations at both times were similar in terms of age and year group at university, longitudinal data would have strengthened the analysis and conclusions.

A limitation of the research is the time frame allotted to the Worry Workshop. A longer time frame would allow for repeated instances of the intervention, using different groups of participants within different transition periods. Participants in Study 3 emphasised the need for diverse and inclusive versions of the Worry Workshop to ensure it was tailored for each group. They also made recommendations for providing icebreaker activities. If the intervention had been allotted more time, changes could have been made and the workshop run a second time to test the changes. This would have strengthened the support of the intervention. That would be my main recommendation for any future intervention development for transition periods. I would also suggest including further qualitative evaluations between interventions to improve on the intervention content and structure.

The intervention study took place in early 2020, just as the COVID-19 pandemic began in the UK. The intervention was delayed by two weeks so that an amended ethics proposal could be submitted to allow for a digital version of the intervention. The intervention itself ran smoothly and opened up areas of discussion in the interviews about the differences between online and in-person support. However, it is important to address that initially, the intervention was designed to be held in-person and had to be changed when the pandemic began.

7.7 Contribution to knowledge and implications

The research contributes several original findings to knowledge:

1. Study 1 provides a thorough examination of student mental health before and after a transition period, demonstrating changes in anxiety, depression, worry, hope, gratitude, curiosity, optimism, and resilience. Study 1 also provides information on personality factors and how they may alter across a transition period, and how the personality factors and character strengths may contribute to changes in mental health. The results also demonstrate that resilience is a vital mediating factor between character strengths and mental health. The qualitative data provides new information on the biggest sources of worry in students before and after a transition period and indicates that financial concerns are the largest source of worry for students regardless of transition periods. The qualitative data also demonstrates that students view their academic challenges and their social lives as equally worrisome, and that worry may persist long-term despite the stressors alleviating after the transition period.
2. While hope and gratitude are often selected for PPIs, Study 2 demonstrates the effectiveness of a short intervention delivered to non-clinical student groups. The data examining changes between sessions of the Worry Workshop confirms that the exercises used within the workshop were effective at bolstering the respective character strength, and decreasing anxiety, worry, and depression. The study also provides new information about when an intervention of this nature may be most effectively delivered, as the group that received the Worry Workshop after a transition period, during a calmer period

of time, experienced more benefit from the intervention. The results demonstrate the effectiveness of the exercises combined with psychoeducation on worry, showing that worry sharply decreased as early as Session 1, showing overwhelming support for the Worry Workshop.

3. The qualitative evaluation provides vital data on the perception of PPIs from the perspective of a participant, suggestions for future designs, and opinions on the effectiveness of the intervention itself. Study 3 also provides new information on student perceptions of COVID-19 and the impact it had on their mental health, demonstrating that COVID-19 had affected every area of student life, from academic, to financial, to personal. The findings demonstrate new evidence that psychoeducation is a vital factor in PPIs, as participants found it changed their perspective and opinions so significantly that they found it much easier to change their response to stressors. The qualitative evaluation also provided new information about barriers to engagement in interventions, suggesting that the digital nature of the intervention did not interfere with their engagement, but that embarrassment and discomfort caused by the creation and sharing of affirmations did. Additionally, new knowledge on the character strength exercises was provided, demonstrating that participants may find affirmations uncomfortable to create, and that being guided by the researcher was key to their engagement in the exercises, which may help to explain why they have had such varied effects in previous research, and why they were effective in this research.

The implications of this research are divided into theoretical, practical, and methodological. The theoretical implications are:

1. The data collected indicates that financial concerns and the COVID-19 pandemic have been the highest source of worry for students. This changes our understanding of student mental health; while exams, coursework, and other academic stressors still cause worry, external factors to the university, such as financial stressors, appear to affect students significantly more. This should be a consideration for researchers in the future, as declines in student mental health is often attributed to internal factors to the university.
2. The qualitative evaluation clearly demonstrates evidence supporting various parts of the models of worry discussed in Chapter 1, particularly the use of worry to avoid feeling distressed, the perception of worry as uncontrollable, the avoidance of contrasting emotions, and the metacognitive beliefs about worry. Chapter 1 proposed that the models of worry overlap, and the research here demonstrates that a combined model of worry is more appropriate. Future research may therefore focus on combining aspects of the models to explain worry more effectively.

The methodological implication is:

1. The use of mixed methods research within positive psychology is rarer than quantitative and qualitative research. This research shows the valuable information that can be gained from using mixed methods research and demonstrates the suitability of it within positive psychology. The results of the studies in this research were strengthened by using mixed methods, as the same conclusions were drawn from both types of data. Mixed methods research is recommended for future studies of PPIs as it can strengthen the conclusions of the findings and provide perspectives and findings that could not

be drawn from just qualitative or quantitative analysis. It can provide important suggestions from participants on how to improve interventions, as seen in Study 3 with participants suggesting extra sessions and recommending embedded versions of the Worry Workshop.

The practical implications are:

1. The Worry Workshop was effective in improving student wellbeing, and therefore universities may consider implementing it and other PPIs into both wellbeing services and courses as embedded workshops. This may be achieved separately, with wellbeing services providing support to students that request access, and course staff being trained to deliver the PPIs to students within their courses. It may also be combined, with wellbeing service staff providing the Worry Workshop and other PPIs as both embedded course workshops and in the wellbeing services.
2. The Worry Workshop is a flexible intervention, and while here it was fully guided, the resources used in the Worry Workshop could easily be tailored to be an online self-help guide with videos detailing instructions from the researcher. This can provide a time-effective, cost-effective area of support for students that can easily be altered to be available on different platforms and in different languages thus being inclusive and accessible. The Worry Workshop in any form could also be delivered multiple times, with refresher courses throughout the academic year to build confidence in students and reiterate the exercises to them.
3. The qualitative evaluation provides evidence that students may view positive psychology with a lack of credibility due to pop psychology circulating online.

Any future PPIs aimed at students and populations that use social media should consider this when designing advertisements and the content of the PPI. The doubt from the participants did not affect their engagement as the first session changed their views on positive psychology, due to the psychoeducation. This demonstrates the importance of psychoeducation in PPIs and the structure of the intervention.

4. This research highlights the importance for early intervention for all students. Student mental health policies throughout universities often focus on students with diagnosed mental health disorders or those without a diagnosis who are suffering from extreme symptoms. While this is vital, it overlooks students that struggle with their mental health without it reaching the severity for a diagnosis of a mental health disorder. The policies also focus entirely on supporting students through times when their mental health is bad, with little to no focus on preventative measures that could reduce the amount of students struggling. The current research demonstrates the necessity for early intervention across all student groups to better equip them for future stressors, and this should be considered by universities when amending their mental health policies.
5. Financial concerns were found to be the biggest source of worry for students, with many of them working part-time. This shows that there must be a change in perspective when organising and designing course structure; many students will work alongside their studies, and universities must accept this and alter expectations of students accordingly, for example offering remote studies for students with work schedules to accommodate. Universities may also consider providing additional financial help wherever possible to low-income students.

7.8 Future research

The recommendations for future research are as follows:

1. To examine the changes in mental health across all three years of university, as different transition periods may cause different effects on anxiety, worry, depression, character strengths, and resilience.
2. To repeat the intervention with a longer follow-up period, alternating the intervention studies with qualitative evaluations to identify improvements that could be made to the intervention.
3. To generate other versions of the intervention for inclusivity and accessibility. This could include other languages, versions for deaf or hard of hearing individuals, versions for mature students, versions for international students, and versions for disabled students.
4. To generate other versions of the intervention for different strengths, potentially exploring curiosity and optimism given the data from the first study.

7.9 Conclusion

This research demonstrates that universities overlook students that are struggling with non-pathological symptoms of anxiety, depression, and worry, as university mental health policies often focus on those with diagnosed or severe symptoms. The findings of this research show that students experience fluctuating mental health symptoms throughout transition periods at university, and that very few of them have been able to access support. It is crucial that universities implement student mental health

support from the very beginning and ensure every student is aware of the support services available. Universities have a responsibility to manage student wellbeing and decrease the stigma of seeking support, and are under more pressure to demonstrate their commitment to student mental health, with Office for Students running projects to develop innovative and effective methods of student mental health support (Office for Students, 2022). Students must be provided with support not just to alleviate symptoms of mental health, but to improve wellbeing and life satisfaction to make their university life, and the start of their adulthood, a pleasant experience.

The Worry Workshop provides a flexible, cost-effective source of support for students that can be tailored to different platforms and can be completed in four sessions. It could be repeated throughout the year, offered as an embedded part of the course, or accessed through student wellbeing services. It can be delivered online and in-person, and it not only alleviates symptoms of worry, anxiety, and depression, but improves life satisfaction, hope, and gratitude, providing students with valuable self-management resources for mental health. The Worry Workshop, if implemented throughout universities, could improve student mental health, and foster engagement in their degree and university life, helping improve progression, attainment, and happiness throughout their academic lives.

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Appendices

Appendix A: Study 1 Materials

A.1 Advertisement for Study 1 Time 1 and Time 2

Time 1 Advertisement to be distributed by email

Subject line: It's nearly time to start uni! Take part in a psychology survey about your experience!

Body of email:

Hello,

You are invited to take part in a psychology survey aimed at understanding the student experience of starting university. This study is open to new students, aged 18.

Participation involves completing an online survey and answering questions about yourself and your thoughts and feelings about beginning university. You will also be asked to complete a brief follow-up survey next January, once you're settled into university.

The survey should take 15-20 minutes to complete – to go to the survey, where you will be given more detailed information, please click **here**.

This survey has received ethical approval from the Sheffield Hallam University Ethics Committee.

Many thanks,

Mx. Imogen Pattinson

Time 2 Advertisement to be distributed by email

Subject line: Take part in a psychology survey about your university experience!

Body of email:

Hello,

You are invited to take part in a psychology survey aimed at understanding the student experience of university. This study is open to first-year students.

Participation involves completing an online survey and answering questions about yourself and your thoughts and feelings about university.

The survey should take 15-20 minutes to complete – to go to the survey, where you will be given more detailed information, please click **here**.

This survey has received ethical approval from the Sheffield Hallam University Ethics Committee.

Many thanks,

Mx. Imogen Pattinson

A.2. Information sheet for Study 1

Undergraduate Mental Health Survey

Please read the following information carefully before proceeding:

What is this survey about?

This survey is examining the mental health and well-being of undergraduate students, as well as other factors that may have an impact on student mental health. It should take about 15 minutes to complete.

Can I take part in this survey?

Yes, as long as you are going to begin university in the coming academic year and are currently **18 years of age or older**.

What will I have to do?

You will be asked questions about yourself, such as your age, and questions about how you feel about yourself and your well-being.

Are there any risks in taking part?

There are no anticipated risks in participating in this survey, however due to the personal nature of the questions you may feel a little uncomfortable at times. There will be contact information provided for the research team if you have any questions, and for support services at the university.

Has the survey been ethically approved?

Yes, the survey was approved by Sheffield Hallam's ethics committee.

Will my answers be anonymous?

Yes, your answers will be entirely anonymous. You will provide a Participant ID code so that your answers to this survey and your answers to the follow-up survey can be matched up. However, this ID code will only be personally identifiable by you, and the research team will delete it from their records once the answers have been matched up.

When you answer questions about yourself, such as your age and ethnicity, it may be coincidentally identifiable. However, none of this information will be shared outside of the research team, and will not be in the published results.

Will I be able to withdraw?

Yes, you can withdraw at any point during the survey, all you have to do is exit the window and your answers will not be submitted as a full data set. However, after you have submitted your answers, you will not be able to withdraw your answers. The same applies during the follow-up survey; you can withdraw during it, but not after you have submitted the answers.

There is **no penalty** for withdrawing and you will not need to give a reason.

What will happen to my answers?

Your answers will be included alongside hundreds of other answers, and will only be accessed by the research team for analysis. Data will be safely stored under password protection. The raw data will be retained for the duration of the thesis (until about

October 2020), and potentially afterwards for other research projects. The data that is retained will be entirely anonymous.

Who is doing the research/I have a question?

Do not hesitate to contact me if you have a question:

Mx. Imogen Pattinson (primary researcher): i.pattinson@shu.ac.uk

Alternatively, you can contact:

Professor Ann Macaskill (Director of Studies): a.macaskill@shu.ac.uk

Dr David Reynolds (Supervisor): d.reynolds@shu.ac.uk

PARTICIPANT INFORMATION SHEET: SUPPLEMENTARY INFORMATION

From 25 May 2018 the General Data Protection Regulation (GDPR) will replace the Data Protection Act and govern the way that organisations use personal data. Personal data is information relating to an identifiable living individual. Transparency is a key element of the GDPR and this Privacy Notice is designed to inform you:

- how and why the University uses your personal data for research,
- what your rights are under GDPR, and,
- how to contact us if you have questions or concerns about the use of your personal data.

Legal Basis for Research Studies:

The University undertakes research as part of its function for the community under its legal status. Data protection allows us to use personal data for research with appropriate safeguards in place under the legal basis of public tasks that are in the public interest. A full statement of your rights can be found at:

<https://www.shu.ac.uk/about-this-website/privacy-policy/privacy-notice-notice-for-research>

However, all University research is reviewed to ensure that participants are treated appropriately and their rights respected. This study was approved by the Sheffield Hallam University Ethics Board, code ER6928418.

Contact Details:

Details of who to contact if you have any concerns or if adverse effects occur after the study are given below:

| You should contact the Data Protection Officer if: | You should contact the Head of Research Ethics (Professor Ann Macaskill) if: |
|--|--|
| <ul style="list-style-type: none">• you have a query about how your data is used by the University• you would like to report a data security breach (e.g. if you think your personal data has been lost or disclosed inappropriately) | <ul style="list-style-type: none">• you have concerns with how the research was undertaken or how you were treated <p>a.macaskill@shu.ac.uk</p> |

- you would like to complain about how
the University has used your personal
data

DPO@shu.ac.uk

Postal address: Sheffield Hallam University, Howard Street, Sheffield S1 1WB.

Telephone: 0114 225 5555

A.3 Consent form for Study 1

Please make sure you fully understand the information above before you continue.

Please tick the boxes to demonstrate you consent to take part:

I have read and understand the above information. (tick box)

I understand that I can withdraw at any point during the survey. (tick box)

I understand that I will be given the follow-up survey in January to take part in. (tick box)

I understand that no personally identifiable information will be published. (tick box)

I consent to take part in this study. (tick box)

A.4. Debriefing form for Study 1 Time 1 and Time 2

Thank you for taking part in this survey!

What was this survey about?

This survey was examining the mental health and well-being of undergraduate students, as well as strengths and weaknesses that may have an impact on student mental health.

Please remember there will also be a follow-up survey that you will be sent in January to complete, which will examine the same things as this survey, but once you have been settled into university.

Will my answers be kept anonymous?

Absolutely, the data will be anonymised so that no identifiable information can be accessed.

Can I talk to someone about the research?

Do not hesitate to contact me if you have a question:

Mx. Imogen Pattinson (primary researcher): i.pattinson@shu.ac.uk

Alternatively, you can contact:

Professor Ann Macaskill (Director of Studies): a.macaskill@shu.ac.uk

Dr David Reynolds (Supervisor): d.reynolds@shu.ac.uk

Contact details for support services

If you feel this survey has affected you negatively, please do not hesitate to contact me on the email provided above. If you feel you need support after this survey, please note the following contacts for support services:

Monday, Tuesday, Thursday 8:45am - 5pm

Wednesday 10am - 7pm (5pm out of term time)

Friday 8:45am - 4:45pm

Phone: 0114 225 3813

Email: studenthelp@shu.ac.uk

Thank you again for taking the time to participate in this survey!

Debriefing form for the follow-up survey

Thank you for taking part in this survey!

What was this survey about?

This survey was examining the mental health and well-being of undergraduate students, as well as other factors that may have an impact on student mental health.

The survey was recording certain positive aspects of your character, such as hope, gratitude, and optimism, across two time points (before university, and when you were settled into university). These positive factors will be examined in relation to your worries to see how they might be able to help alleviate student worries and anxiety.

Will my answers be kept anonymous?

Absolutely, the data will be anonymised so that no identifiable information can be accessed.

Can I talk to someone about the research?

Do not hesitate to contact me if you have a question:

Mx. Imogen Pattinson (primary researcher): i.pattinson@shu.ac.uk

Alternatively, you can contact:

Professor Ann Macaskill (Director of Studies): a.macaskill@shu.ac.uk

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Friday 8:45am - 4:45pm

Phone: 0114 225 3813

Email: studenthelp@shu.ac.uk

Thank you again for taking the time to participate in this survey!

A.5 Data Management Plan

1. What data will you collect or create?

The data will be collected through an online survey on Qualtrics. It will be exported as an SPSS file. The data will consist of mostly numerical values measuring anxiety, worry, resilience, hope, curiosity, gratitude, optimism, and the Big 5 Personality Factors. It will also consist of two qualitative questions.

The data will initially be exported as one SPSS file, however other files may be created excluding or including specific variables.

2. How will your data be documented and described?

The data will be documented in SPSS files, and Word documents, with different copies for the raw data, the cleaned data, and the analysis files. These will be labelled clearly at each stage and stored under password protection.

The metadata for each of these files will be clearly documented in a Word document, with corresponding labels to match the metadata to each file. The metadata will include: title of the file, date of the creation of the file, description of the file, details of any analysis performed, and the outcome of those analyses.

3. How will your data be structured, stored, and backed up?

The data will be regularly backed up on a USB drive and stored in a locked desk drawer. The data will be structured neatly, with labels for each stage, and stored on a password-protected laptop. Each version of the data will be clearly labelled so that it is obvious which is the original copy, which files are the edited versions (and which order they are in) and which files are the final version.

4. How will you manage any ethical issues?

Confidentiality will be ensured by not collecting any personally identifiable data. Any coincidentally identifiable data will not be published – only included in the raw data which will be securely stored.

Informed consent is collected from the participants – if they do not consent they cannot take part. They are informed that the anonymised data may be shared with other parties for other research projects, and stored indefinitely. The identity of participants are recorded through a participant ID code, but this is only to match the first and second survey – after that, the ID codes will be deleted.

5. What are your plans for data sharing after submission of your thesis?

The data will be retained until at least the end of the thesis, which is estimated to be October 2020. The data may be retained indefinitely for other research projects and may be shared with other researchers for their own projects. The results of the analysis may be published in journal articles and will be published as one of the studies in a completed PhD.

6. What are your plans for the long-term preservation of data supporting your research?

Anonymised data may be stored in the University Research Data Archive indefinitely for other research projects, and for as long as a journal requests if the thesis contributes publishable papers to them.

A.6 Survey Time 1

First Survey

Q4 Please answer the following questions about yourself.

What is your age?

Q5 What is your gender? (If none of the following options are appropriate, please select other and type your gender).

☐ Male (1)

☐ Female (2)

☐ Trans - male (3)

☐ Trans - female (4)

☐ Trans - non-binary (5)

☐ Trans - genderfluid (6)

☐ Other (7) _____

Page Break

Q6 What is your current living situation (before university begins)?

- ☐ Living with parents/guardians (1)
 - ☐ Living alone - rented accommodation (2)
 - ☐ Living alone - homeowner (3)
 - ☐ Living with roommates - rented (4)
 - ☐ Living with roommates - homeowner (5)
 - ☐ Living with partner - rented (6)
 - ☐ Living with partner - homeowner (7)
 - ☐ Living in university accommodation (8)
-

Q7 What will your living situation be when you begin university?

- ☐ Living with parents/guardians (1)
- ☐ Living alone - rented accommodation (2)
- ☐ Living alone - homeowner (3)
- ☐ Living with roommates - rented (4)
- ☐ Living with roommates - homeowner (5)
- ☐ Living with partner - rented (6)
- ☐ Living with roommates - homeowner (7)
- ☐ Living in university accommodation (8)

Page Break

Q8 How would you best describe your ethnic origin?

☐ White: English/Welsh/Scottish/Northern Irish/British (1)

☐ White: Irish (2)

☐ White: Gypsy or Irish Traveller (3)

☐ White: Other (please describe) (4)

☐ Mixed race (please describe) (5)

☐ Asian: Indian (6)

☐ Asian: Pakistani (7)

☐ Asian: Bangladeshi (8)

☐ Asian: Chinese (9)

☐ Asian: Other (please describe) (10)

☐ Black: African/African British (11)

☐ Black: Caribbean/Caribbean British (12)

☐ Black: Other (please describe) (13)

☐ Other: Arab (14)

☐ Other: Hispanic (15)

☐ Any other ethnic group (please describe) (16)

Q9 What is your employment status?

- ☐ Self-employed (full-time) (1)
- ☐ Self-employed (part-time) (2)
- ☐ Employed (full-time) (3)
- ☐ Employed (part-time) (4)
- ☐ Unemployed (5)
- ☐ Disabled and unable to work (6)
- ☐ Currently on sick leave (7)
- ☐ Student and not working (8)

Page Break

Q10 Do you currently have a diagnosis of any of the following? Tick all that apply.

- ☐ General Anxiety Disorder (GAD) (1)
- ☐ Depression (2)
- ☐ Post-Traumatic Stress Disorder (PTSD) (3)
- ☐ Obsessive Compulsive Disorder (OCD) (4)
- ☐ Bipolar Disorder (5)
- ☐ Eating Disorder (6)
- ☐ Personality Disorder (7)
- ☐ Schizophrenia (8)
- ☐ Attention Deficit Hyperactivity Disorder (ADHD) (9)
- ☐ Any other mental, neurological or emotional condition or problem: (10)

- ☐ Prefer not to say (11)

☐

I do not have any diagnoses of mental, neurological, or emotional conditions or problems (12)

Q11 Are you receiving treatment for any of your diagnoses? (If you would prefer not to disclose, please leave this section blank).

End of Block: Demographics

Start of Block: The HADs

Q12 Tick the box to indicate the reply that is closest to how you have been feeling **in the last week**. Don't take too long over your answers, your immediate response is best.

Q13 I feel tense or 'wound up'

- ☐ Most of the time (1)
 - ☐ A lot of the time (2)
 - ☐ From time to time (3)
 - ☐ Not at all (4)
-

Q14 I still enjoy the things I used to enjoy

- ☐ Definitely as much (1)
 - ☐ Not quite so much (2)
 - ☐ Only a little (3)
 - ☐ Hardly at all (4)
-

Q15 I get a sort of frightened feeling as if something awful is about to happen

- ☐ Definitely, and quite badly (1)
 - ☐ Yes, but not too badly (2)
 - ☐ A little, but it doesn't worry me (3)
 - ☐ Not at all (4)
-

Q16 I can laugh and see the funny side of things

- ☐ As much as I could (1)
 - ☐ Not quite so much now (2)
 - ☐ Definitely not so much now (3)
 - ☐ Not at all (4)
-

Q17 Worrying thoughts go through my mind

- ☐ A great deal of the time (1)
 - ☐ A lot of the time (2)
 - ☐ From time to time, but not too often (3)
 - ☐ Only occasionally (4)
-

Q18 I feel cheerful

- ☐ Not at all (1)
- ☐ Not often (2)
- ☐ Sometimes (3)
- ☐ Most of the time (4)
-

Q19 I can sit at ease and feel relaxed

- ☐ Definitely (1)
- ☐ Usually (2)
- ☐ Not often (3)
- ☐ Not at all (4)
-

Q20 I feel as if I am slowed down

- ☐ Nearly all the time (1)
 - ☐ Very often (2)
 - ☐ Sometimes (3)
 - ☐ Not at all (4)
-

Q21 I get a sort of frightened feeling like 'butterflies' in the stomach

- ☐ Not at all (1)
 - ☐ Occasionally (2)
 - ☐ Quite often (3)
 - ☐ Very often (4)
-

Q22 I have lost interest in my appearance

- ☐ Definitely (1)
 - ☐ I don't take as much care as I should (2)
 - ☐ I may not take quite as much care (3)
 - ☐ I take just as much care as ever (4)
-

Q23 I feel restless as if I have to be on the move

- ☐ Very much indeed (1)
 - ☐ Quite a lot (2)
 - ☐ Not very much (3)
 - ☐ Not at all (4)
-

Q24 I look forward with enjoyment to things

- ☐ As much as I ever did (1)
 - ☐ Rather less than I used to (2)
 - ☐ Definitely less than I used to (3)
 - ☐ Hardly at all (4)
-

Q25 I get sudden feelings of panic

- ☐ Very often indeed (1)
 - ☐ Quite often (2)
 - ☐ Not very often (3)
 - ☐ Not at all (4)
-

Q26 I can enjoy a good book or TV program

☐ Often (1)

☐ Sometimes (2)

☐ Not often (3)

☐ Very seldom (4)

End of Block: The HADs

Start of Block: Penn State Worry Questionnaire

Q27 Read each item carefully, and select the option that best describes **you**.

| | Not at all typical of me (1) | A little typical of me (2) | Moderately typical of me (3) | Often typical of me (4) | Very typical of me (5) |
|---|------------------------------------|----------------------------------|------------------------------------|-------------------------------|------------------------------|
| If I do not have enough time to do everything, I do not worry about it (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My worries overwhelm me (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I do not tend to worry about things (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Many situations make me worry (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

I know I
should not
worry about
things, but I
just cannot
help it (5)

| | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|

When I am
under
pressure I
worry a lot
(6)

| | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|

I am always
worrying
about
something
(7)

| | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|

I find it easy
to dismiss
worrisome
thoughts (8)

| | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|

As soon as I
finish one
task, I start
to worry
about
everything
else I have
to do (9)

☐☐☐☐☐

I never
worry about
anything
(10)

☐☐☐☐☐

When there
is nothing
more I can
do about a
concern, I do
not worry
about it any
more (11)

☐☐☐☐☐

I have been
a worrier all
my life (12)

☐☐☐☐☐

I notice that
I have been
worrying
about things
(13)

| | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|

Once I start
worrying, I
cannot stop
(14)

| | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|

I worry all
the time (15)

| | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|

I worry
about
projects
until they
are all done
(16)

| | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|

End of Block: Penn State Worry Questionnaire

Start of Block: Adult Hope Scale

Q28 Read each item carefully, and select the option that best describes **you**.

| | Definit ely false (1) | Most ly false (2) | Somew hat false (3) | Slight ly false (4) | Slight ly true (5) | Somew hat true (6) | Most ly true (7) | Definit ely true (8) |
|--|--------------------------------|----------------------------|---------------------------|------------------------------|-----------------------------|--------------------------|---------------------------|----------------------------|
| I can think of many ways to get out of a jam (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I energetic ally pursue my goals (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I feel tired most of the time (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

There are
lots of
ways
around
my
problems
(4)
I am
easily
downed
in an
argument
(5)
I can think
of many
ways to
get the
things in
life that
are
important
to me (6)

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

| | | | | | | | |
|------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I worry | | | | | | | |
| about my | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| health (7) | | | | | | | |
| Even | | | | | | | |
| when | | | | | | | |
| others get | | | | | | | |
| discourag | | | | | | | |
| ed, I know | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I can find | | | | | | | |
| a way to | | | | | | | |
| solve the | | | | | | | |
| problem | | | | | | | |
| (8) | | | | | | | |
| My past | | | | | | | |
| experienc | | | | | | | |
| es have | | | | | | | |
| prepared | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| me well | | | | | | | |
| for my | | | | | | | |
| future (9) | | | | | | | |

| | | | | | | | |
|--------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I've been | | | | | | | |
| pretty | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| successful | | | | | | | |
| in life (10) | | | | | | | |
| I usually | | | | | | | |
| find | | | | | | | |
| myself | | | | | | | |
| worrying | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| about | | | | | | | |
| something | | | | | | | |
| (11) | | | | | | | |
| I meet the | | | | | | | |
| goals I set | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| for myself | | | | | | | |
| (12) | | | | | | | |

End of Block: Adult Hope Scale

Start of Block: GQ-6

Q29 Read each item carefully and select the option that best describes **you**.

| | Strongl y disagre e (1) | Disagre e (2) | Somewha t disagree (3) | Neither agree nor disagre e (4) | Somewha t agree (5) | Agre e (6) | Strongl y agree (7) |
|---|----------------------------------|-----------------------|------------------------------|---|---------------------------|-----------------------|---------------------------|
| I have so much in life to be thankful for (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| If I had to list everythin g that I felt grateful for, it would be a very long list (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

When I
look at
the
world, I
don't see
much to
be
grateful
for (3)

I am
grateful
to a wide
variety of
people
(4)

☐☐☐☐☐☐☐☐☐☐☐☐☐☐

As I get
older I
find
myself
more
able to
appreciat
e the
people,
events,
and
situations
that have
been in
my life
history
(5)



Long
amounts
of time
can go by
before I
feel
grateful
to
somethin
g or
someone
(6)

| | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|

End of Block: GQ-6

Start of Block: Life Orientation Test - Revised

Q30 Read the items carefully and select the option that best describes **you**.

| | Strongly disagree (1) | Disagree (2) | Neutral (3) | Agree (4) | Strongly agree (5) |
|---|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| In uncertain times, I usually expect the best (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| It's easy for me to relax (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| If something can go wrong for me, it will (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I'm always optimistic about my future (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I enjoy my friends a lot (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

| | | | | | |
|---------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| It's | | | | | |
| important | | | | | |
| for me to | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| keep busy | | | | | |
| (6) | | | | | |
| I hardly ever | | | | | |
| expect | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| things to go | | | | | |
| my way (7) | | | | | |
| I don't get | | | | | |
| upset too | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| easily (8) | | | | | |
| I rarely | | | | | |
| count on | | | | | |
| good things | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| happening | | | | | |
| to me (9) | | | | | |
| Overall, I | | | | | |
| expect more | | | | | |
| good things | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| to happen | | | | | |
| to me than | | | | | |
| bad (10) | | | | | |

End of Block: Life Orientation Test - Revised

Start of Block: The Curiosity and Exploration Scale

Q31 Read the items carefully and select the option that best describes **you**.

| | Very slightly or not at all (1) | A little (2) | Moderately (3) | A lot (4) | Extremely (5) |
|--|--|-----------------------|-----------------------|-----------------------|-----------------------|
| I actively seek as much information as I can in new situations (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am the type of person who really enjoys the uncertainty of everyday life (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

I am at my
best when
doing
something
that is
complex or
challenging
(3)

☐☐☐☐☐

Everywhere I
go, I am out
looking for
new things or
experiences
(4)

☐☐☐☐☐

I view
challenging
situations as
an
opportunity
to grow and
learn (5)

☐☐☐☐☐

I like to do
things that
are a little
frightening
(6)



I am always
looking for
experiences
that
challenge
how I think
about myself
and the
world (7)



I prefer jobs
that are
excitingly
unpredictable
(8)



| | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I frequently seek out opportunities to challenge myself and grow as a person (9) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am the kind of person who embraces unfamiliar people, events and places (10) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

End of Block: The Curiosity and Exploration Scale

Start of Block: The Brief Resilience Scale

Q32 Read the items carefully and select the option that best describes **you**.

| | Strongly disagree (1) | Disagree (2) | Neutral (3) | Agree (4) | Strongly agree (5) |
|--|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I tend to bounce back quickly after hard times (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I have a hard time making it through stressful events (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| It does not take me long to recover from a stressful event (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

It is hard for
me to snap
back when
something
bad happens

(4)

☐☐☐☐☐

I usually
come
through
difficult
times with
little trouble

(5)

☐☐☐☐☐

I tend to
take a long
time to get
over set-
backs in my
life (6)

☐☐☐☐☐

End of Block: The Brief Resilience Scale

Start of Block: TIPI

Q33 Here are a number of personality traits that may or may not apply to you. Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement. You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other.

I see myself as...

| | Disagree strongly (1) | Disagree moderately (2) | Disagree a little (3) | Neither agree nor disagree (4) | Agree a little (5) | Agree moderately (6) | Agree strongly (7) |
|---|--------------------------|----------------------------|--------------------------|-----------------------------------|-----------------------|-------------------------|-----------------------|
| Extraverted, enthusiastic (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Critical, quarrelsome (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Dependable , self- disciplined (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Anxious, easily upset (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Open to new experiences , complex (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

| | | | | | | | |
|------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Reserved, quiet (6) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sympathetic, warm (7) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Disorganised, careless (8) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Calm, emotionally stable (9) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Conventional, uncreative (10) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

End of Block: TIPI

Start of Block: Qualitative Questions

Q34 Soon, you will be undertaking a series of changes in your life as you begin university. Some of you may be living independently for the first time, some of you

may be balancing your finances for the first time. These changes can often be quite stressful and cause a lot of worry.

Please indicate below how you feel about each new situation you may be facing. If the situation isn't applicable to you, please tick 'N/A'.

| | Really excited about it (1) | Mostly excited, but a little worried (2) | Equally worried and excited about it (3) | Mostly worried about it, but a little excited (4) | Really worried about it (5) | N/A (6) |
|--------------------------------|--------------------------------------|---|---|---|--------------------------------------|-----------------------|
| Moving away from home (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Living independently (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Making new friends (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Starting classes (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Managing own finances (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Getting used to
a new
city/town/place
(6)

☐☐☐☐☐☐

Q35

Below, please write anything else about beginning university that might be making you worried.

Q36 What are you most excited about starting university?

A.7 Survey Time 2

Follow-Up Survey

Q5 Read each item carefully, and select the option that best describes **you**.

| | Definit ely false (1) | Most ly false (2) | Somew hat false (3) | Slight ly false (4) | Slight ly true (5) | Somew hat true (6) | Most ly true (7) | Definit ely true (8) |
|--|--------------------------------|----------------------------|---------------------------|------------------------------|-----------------------------|--------------------------|---------------------------|----------------------------|
| I can think of many ways to get out of a jam (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I energetic ally pursue my goals (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I feel tired most of the time (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

There are
lots of
ways
around
my
problems
(4)
I am
easily
downed
in an
argument
(5)
I can think
of many
ways to
get the
things in
life that
are
important
to me (6)

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

| | | | | | | | |
|------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I worry | | | | | | | |
| about my | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| health (7) | | | | | | | |
| Even | | | | | | | |
| when | | | | | | | |
| others get | | | | | | | |
| discourag | | | | | | | |
| ed, I know | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I can find | | | | | | | |
| a way to | | | | | | | |
| solve the | | | | | | | |
| problem | | | | | | | |
| (8) | | | | | | | |
| My past | | | | | | | |
| experienc | | | | | | | |
| es have | | | | | | | |
| prepared | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| me well | | | | | | | |
| for my | | | | | | | |
| future (9) | | | | | | | |

| | | | | | | | |
|--------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I've been | | | | | | | |
| pretty | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| successful | | | | | | | |
| in life (10) | | | | | | | |
| I usually | | | | | | | |
| find | | | | | | | |
| myself | | | | | | | |
| worrying | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| about | | | | | | | |
| something | | | | | | | |
| (11) | | | | | | | |
| I meet the | | | | | | | |
| goals I set | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| for myself | | | | | | | |
| (12) | | | | | | | |

End of Block: Adult Hope Scale

Start of Block: Penn State Worry Questionnaire

Q6 Read each item carefully, and select the option that best describes **you**.

| | Not at all typical of me (1) | A little typical of me (2) | Moderately typical of me (3) | Often typical of me (4) | Very typical of me (5) |
|---|------------------------------------|----------------------------------|------------------------------------|-------------------------------|------------------------------|
| If I do not have enough time to do everything, I do not worry about it (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My worries overwhelm me (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I do not tend to worry about things (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Many situations make me worry (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

I know I
should not
worry about
things, but I
just cannot
help it (5)

| | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|

When I am
under
pressure I
worry a lot
(6)

| | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|

I am always
worrying
about
something
(7)

| | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|

I find it easy
to dismiss
worrisome
thoughts (8)

| | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|

As soon as I
finish one
task, I start
to worry
about
everything
else I have
to do (9)

☐☐☐☐☐

I never
worry about
anything
(10)

☐☐☐☐☐

When there
is nothing
more I can
do about a
concern, I do
not worry
about it any
more (11)

☐☐☐☐☐

I have been
a worrier all
my life (12)

☐☐☐☐☐

I notice that
I have been
worrying
about things
(13)

| | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|

Once I start
worrying, I
cannot stop
(14)

| | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|

I worry all
the time (15)

| | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|

I worry
about
projects
until they
are all done
(16)

| | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|

End of Block: Penn State Worry Questionnaire

Start of Block: GQ-6

Q7 Read each item carefully and select the option that best describes **you**.

| | Strongly disagree (1) | Disagree (2) | Somewhat disagree (3) | Neither agree nor disagree (4) | Somewhat agree (5) | Agree (6) | Strongly agree (7) |
|--|-----------------------|-----------------------|-----------------------|--------------------------------|-----------------------|-----------------------|-----------------------|
| I have so much in life to be thankful for (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| If I had to list everything that I felt grateful for, it would be a very long list (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

When I
look at
the
world, I
don't see
much to
be
grateful
for (3)

I am
grateful
to a wide
variety of
people
(4)



As I get
older I
find
myself
more
able to
appreciat
e the
people,
events,
and
situations
that have
been in
my life
history
(5)



| | | | | | | | |
|-----------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Long | | | | | | | |
| amounts | | | | | | | |
| of time | | | | | | | |
| can go by | | | | | | | |
| before I | | | | | | | |
| feel | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| grateful | | | | | | | |
| to | | | | | | | |
| something | | | | | | | |
| g or | | | | | | | |
| someone | | | | | | | |
| (6) | | | | | | | |

End of Block: GQ-6

Start of Block: HADS

Q8 Tick the box to indicate the reply that is closest to how you have been feeling **in the last week**. Don't take too long over your answers, your immediate response is best.

Q9 I feel tense or 'wound up'

- ☐ Most of the time (1)
 - ☐ A lot of the time (2)
 - ☐ From time to time (3)
 - ☐ Not at all (4)
-

Q10 I still enjoy the things I used to enjoy

- ☐ Definitely as much (1)
 - ☐ Not quite so much (2)
 - ☐ Only a little (3)
 - ☐ Hardly at all (4)
-

Q11 I get a sort of frightened feeling as if something awful is about to happen

- ☐ Definitely, and quite badly (1)
 - ☐ Yes, but not too badly (2)
 - ☐ A little, but it doesn't worry me (3)
 - ☐ Not at all (4)
-

Q12 I can laugh and see the funny side of things

- ☐ As much as I could (1)
 - ☐ Not quite so much now (2)
 - ☐ Definitely not so much now (3)
 - ☐ Not at all (4)
-

Q13 Worrying thoughts go through my mind

- ☐ A great deal of the time (1)
 - ☐ A lot of the time (2)
 - ☐ From time to time, but not too often (3)
 - ☐ Only occasionally (4)
-

Q14 I feel cheerful

- ☐ Not at all (1)
 - ☐ Not often (2)
 - ☐ Sometimes (3)
 - ☐ Most of the time (4)
-

Q15 I can sit at ease and feel relaxed

☐ Definitely (1)

☐ Usually (2)

☐ Not often (3)

☐ Not at all (4)

Q16 I feel as if I am slowed down

☐ Nearly all the time (1)

☐ Very often (2)

☐ Sometimes (3)

☐ Not at all (4)

Q17 I get a sort of frightened feeling like 'butterflies' in the stomach

- ☐ Not at all (1)
 - ☐ Occasionally (2)
 - ☐ Quite often (3)
 - ☐ Very often (4)
-

Q18 I have lost interest in my appearance

- ☐ Definitely (1)
 - ☐ I don't take as much care as I should (2)
 - ☐ I may not take quite as much care (3)
 - ☐ I take just as much care as ever (4)
-

Q19 I feel restless as if I have to be on the move

☐ Very much indeed (1)

☐ Quite a lot (2)

☐ Not very much (3)

☐ Not at all (4)

Q20 I look forward with enjoyment to things

☐ As much as I ever did (1)

☐ Rather less than I used to (2)

☐ Definitely less than I used to (3)

☐ Hardly at all (4)

Q21 I get sudden feelings of panic

☐ Very often indeed (1)

☐ Quite often (2)

☐ Not very often (3)

☐ Not at all (4)

Q22 I can enjoy a good book or TV program

☐ Often (1)

☐ Sometimes (2)

☐ Not often (3)

☐ Very seldom (4)

End of Block: HADS

Start of Block: Curiosity and Exploration Scale

Q23 Read the items carefully and select the option that best describes **you**.

| | Very slightly or not at all (1) | A little (2) | Moderately (3) | A lot (4) | Extremely (5) |
|--|--|-----------------------|-----------------------|-----------------------|-----------------------|
| I actively seek as much information as I can in new situations (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am the type of person who really enjoys the uncertainty of everyday life (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

I am at my
best when
doing
something
that is
complex or
challenging
(3)

☐☐☐☐☐

Everywhere I
go, I am out
looking for
new things or
experiences
(4)

☐☐☐☐☐

I view
challenging
situations as
an
opportunity
to grow and
learn (5)

☐☐☐☐☐

I like to do
things that
are a little
frightening
(6)



I am always
looking for
experiences
that
challenge
how I think
about myself
and the
world (7)



I prefer jobs
that are
excitingly
unpredictable
(8)



| | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I frequently seek out opportunities to challenge myself and grow as a person (9) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am the kind of person who embraces unfamiliar people, events and places (10) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

End of Block: Curiosity and Exploration Scale

Start of Block: LOT-R

Q24 Read the items carefully and select the option that best describes **you**.

| | Strongly disagree (1) | Disagree (2) | Neutral (3) | Agree (4) | Strongly agree (5) |
|---|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| In uncertain times, I usually expect the best (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| It's easy for me to relax (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| If something can go wrong for me, it will (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I'm always optimistic about my future (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I enjoy my friends a lot (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

| | | | | | |
|---------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| It's | | | | | |
| important | | | | | |
| for me to | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| keep busy | | | | | |
| (6) | | | | | |
| I hardly ever | | | | | |
| expect | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| things to go | | | | | |
| my way (7) | | | | | |
| I don't get | | | | | |
| upset too | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| easily (8) | | | | | |
| I rarely | | | | | |
| count on | | | | | |
| good things | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| happening | | | | | |
| to me (9) | | | | | |
| Overall, I | | | | | |
| expect more | | | | | |
| good things | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| to happen | | | | | |
| to me than | | | | | |
| bad (10) | | | | | |

End of Block: LOT-R

Start of Block: TIPI

Q25 Here are a number of personality traits that may or may not apply to you. Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement. You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other.

I see myself as...

| | Disagree strongly (1) | Disagree moderately (2) | Disagree a little (3) | Neither agree nor disagree (4) | Agree a little (5) | Agree moderately (6) | Agree strongly (7) |
|---|--------------------------|----------------------------|--------------------------|-----------------------------------|-----------------------|-------------------------|-----------------------|
| Extraverted, enthusiastic (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Critical, quarrelsome (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Dependable , self-disciplined (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Anxious, easily upset (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Open to new experiences , complex (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

| | | | | | | | |
|-------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Reserved, quiet (6) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sympathetic, warm (7) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Disorganised, careless (8) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Calm, emotionally stable (9) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Conventional, uncreative (10) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

End of Block: TIPI

Start of Block: Brief Resilience Scale

Q26 Read the items carefully and select the option that best describes **you**.

| | Strongly disagree (1) | Disagree (2) | Neutral (3) | Agree (4) | Strongly agree (5) |
|--|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I tend to bounce back quickly after hard times (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I have a hard time making it through stressful events (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| It does not take me long to recover from a stressful event (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

It is hard for
me to snap
back when
something
bad happens

(4)

☐☐☐☐☐

I usually
come
through
difficult
times with
little trouble

(5)

☐☐☐☐☐

I tend to
take a long
time to get
over set-
backs in my
life (6)

☐☐☐☐☐

End of Block: Brief Resilience Scale

Start of Block: Block 10

Q27

You recently underwent a series of life changes by starting university, potentially including moving away from home, beginning to manage finances, working, and living in a new city.

Below, please use the scale to indicate how you felt during these changes. If the situation isn't applicable to you, please tick 'N/A'.

| | I was very excited (1) | I was mostly excited but I worried a little (2) | I was equally worried and excited about it (3) | I worried a lot but was a bit excited (4) | I really worried about it (5) | N/A (6) |
|--------------------------------|---------------------------------|---|--|---|--|-----------------------|
| Moving away from home (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Living independently (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Making new friends (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Starting classes (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Managing own finances (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

| | | | | | | |
|-----------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Getting used to | | | | | | |
| a new | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| city/town/place | | | | | | |
| (6) | | | | | | |
| Having a job | | | | | | |
| while also at | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| university (7) | | | | | | |
| Other (8) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other (9) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other (10) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Q28 Is there anything that has happened in the past few months that has been especially worrisome for you? Please include as many things as you want.

Q29 What has been the most exciting thing about university so far for you?

A.8 Raw qualitative data

Table 8

List of worries

| |
|--|
| English not being the student's first language |
| Being a mature student |
| Being a student with a child |
| The difficulty level of the course in comparison to sixth form |
| Navigating a new city |
| Navigating the university buildings |
| Worrying about the course they chose and whether it is the right one |
| Worrying that they may procrastinate |
| A family member being unwell |
| Mental health deteriorating throughout university |
| Disabilities limiting the amount of work they can do |
| Not being clever enough to manage the work |
| Struggling to budget |
| Having to work part-time during university |
| Maintaining a work-life balance |
| Missing family and friends |
| Having a long-distance relationship |
| Having no prior experience of the course |
| Not living in halls and therefore missing out |
| Struggling with exams and coursework |
| Fears around the first day |
| The grading system used |
| Feeling lonely |
| Not being friends with flatmates |
| The possibility of bad or messy roommates |
| Missing information about dates, times, and classes due to IT system unfamiliarity |
| Presentations and public speaking |

| |
|---|
| Making new friends or struggling to socialise |
| Falling behind in work |
| A lack of support for work |
| Failing assessments |
| Struggling to cook/clean |

Table 21

List of worries

| |
|--|
| Not enjoying the course |
| Changing the course during first year |
| Being bored |
| Relationship with family being affected negatively |
| Concerns about Brexit |
| Financial struggles |
| Conflict in romantic relationship |
| End of romantic relationship |
| Child beginning nursery |
| Part time work |
| Uncertainty around future career |
| Thoughts of self-doubt |
| Friend or family member unwell |
| Friend or family member passing away |
| Social life suffering |
| Suicide and self-harm |
| Taking a leave of absence |
| Struggling with studying independently |
| Struggling with assessments |
| Issues organising a placement |
| Maintaining a long-distance relationship |
| Having moved away |
| Had arguments with flatmates |
| Increases in workload |

| |
|------------------------------------|
| Persistent lack of sleep |
| Sexual harassment |
| Worries about starting second year |
| Parents getting divorced |
| Moving out of halls |
| Starting new medication |
| Being a mature student |
| Getting used to new roommates |

Appendix B: Study 2 Materials

B.1 Advertisement for Study 2

To be posted on social media (twitter, facebook, etc) in student groups, and also to be distributed during classes:

For all second year students!

You are invited to take part in four sessions designed to help worry and anxiety, as well as giving you valuable skills for improving mental well-being at university. Second year can be a huge increase in pressure and work and this research will evaluate a way to support students.

Participation involves once-weekly sessions for four weeks, alongside some surveys between sessions.

For an information sheet and details of how to sign up, please email:

c.pattinson@my.shu.ac.uk

Thank you!

For emails:

Message subject: Second year students – sessions to decrease worry and anxiety!

Message body: For all second year students!

You are invited to take part in four sessions designed to help worry and anxiety, as well as giving you valuable skills for improving mental well-being at university. Second year

can be a huge increase in pressure and work and this research will evaluate a way to support students.

Participation involves once-weekly sessions for four weeks, alongside some surveys between sessions.

For an information sheet and details of how to sign up, please email:

c.pattinson@my.shu.ac.uk

Thank you!

B.2. Information sheet for Study 2

Please read the following information carefully before proceeding:

What is this study about?

This study is part of a doctoral thesis examining mental health in undergraduate students. As part of the thesis, four sessions have been designed by the researcher. These sessions are designed to provide students with psychological tools to be able to cope with stressful situations and help to decrease their anxiety and worry.

The second year of study during an undergraduate course brings increased pressure and expectations. It can be difficult to adjust to, and there may be a lack of support available. This research aims to evaluate a new way of support that could be useful for students.

Can I take part in this study?

If you are currently over 18 years of age and in your second year of an undergraduate course, yes!

What will I have to do?

You will be asked questions about yourself, such as your age, and questions about how you feel about yourself and your well-being.

You will then come to four sessions, once a week, to learn valuable psychological skills (they will last a maximum of 1 hour). You will be asked to fill out survey questions between sessions (which should take a maximum of 10 minutes). This data will be anonymous. You will also need to fill these questions out one month and three months after the sessions have finished.

Are there any risks in taking part?

There are no anticipated risks in participating in this study, however due to the personal nature of the questions you may feel a little uncomfortable at times. There will be contact information provided for the research team if you have any questions, and for support services at the university.

Has the study been ethically approved?

Yes, the study was approved by Sheffield Hallam's ethics committee.

Will my answers be anonymous?

Yes, your answers will be entirely anonymous.

Will I be able to withdraw?

Yes, you can withdraw at any point during the study. However, the survey data you fill out between sessions is anonymous, so once it is submitted it is non-identifiable and will not be able to be withdrawn.

There is **no penalty** for withdrawing and you will not need to give a reason.

What will happen to my data?

Your data will be anonymous and will only be accessed by the research team for analysis. Data will be safely stored under password protection. The raw data will be retained for the duration of the thesis (until about October 2020), and potentially afterwards for other research projects. The data that is retained will be entirely anonymous.

Who is doing the research/I have a question?

Do not hesitate to contact me if you have a question:

Mr Cameron Pattinson (primary researcher): c.pattinson@shu.ac.uk

Alternatively, you can contact:

Professor Ann Macaskill (Director of Studies): a.macaskill@shu.ac.uk

Dr David Reynolds (Supervisor): d.reynolds@shu.ac.uk

From 25 May 2018 the General Data Protection Regulation (GDPR) will replace the Data Protection Act and govern the way that organisations use personal data. Personal data is information relating to an identifiable living individual. Transparency is a key element of the GDPR and this Privacy Notice is designed to inform you:

- how and why the University uses your personal data for research,
- what your rights are under GDPR, and,
- how to contact us if you have questions or concerns about the use of your personal data.

Legal Basis for Research Studies:

The University undertakes research as part of its function for the community under its legal status. Data protection allows us to use personal data for research with appropriate safeguards in place under the legal basis of public tasks that are in the public interest. A full statement of your rights can be found at:

<https://www.shu.ac.uk/about-this-website/privacy-policy/privacy-notice-for-research>

However, all University research is reviewed to ensure that participants are treated appropriately and their rights respected. This study was approved by The University Research Ethics Committee, code ER20211155.

Contact Details:

Details of who to contact if you have any concerns or if adverse effects occur after the study are given below:

| | |
|--|--|
| <p>You should contact the Data Protection Officer if:</p> <ul style="list-style-type: none"> • you have a query about how your data is used by the University • you would like to report a data security breach (e.g. if you think your personal data has been lost or disclosed inappropriately) • you would like to complain about how the University has used your personal data <p><u>DPO@shu.ac.uk</u></p> | <p>You should contact the Head of Research Ethics (Professor Ann Macaskill) if:</p> <ul style="list-style-type: none"> • you have concerns with how the research was undertaken or how you were treated <p><u>a.macaskill@shu.ac.uk</u></p> |
|--|--|

Postal address: Sheffield Hallam University, Howard Street, Sheffield S1 1WBT.

Telephone: 0114 225 5555

B.3. Consent form for Study 2

Please make sure you fully understand the information above before you continue.

Please tick the boxes to demonstrate you consent to take part:

I have read and understand the above information. (tick box)

I understand that I can withdraw at any point during the survey. (tick box)

I understand that no personally identifiable information will be published. (tick box)

I consent to take part in this study. (tick box)

B.4 Debriefing form for Study 2

Thank you for taking part in this study!

What was this study about?

This study was examining changes in your mental health and positive psychology factors (hope and gratitude) throughout the Worry Workshop. The aim of the study was to reduce your worry as well as symptoms of depression and anxiety through the exercises given to you, and provide support and education for excessive worry.

Will my answers be kept anonymous?

Absolutely, the data will be anonymised so that no identifiable information can be accessed.

Can I talk to someone about the research?

Do not hesitate to contact me if you have a question:

Mr Cameron Pattinson: c.pattinson@shu.ac.uk

Alternatively, you can contact:

Professor Ann Macaskill (Director of Studies): a.macaskill@shu.ac.uk

Contact details for support services

If you feel this study has affected you negatively, please do not hesitate to contact me on the email provided above. If you feel you need support after this survey, please note the following contacts for support services:

Monday, Tuesday, Thursday 8:45am - 5pm

Wednesday 10am - 7pm (5pm out of term time)

Friday 8:45am - 4:45pm

Phone: 0114 225 3813

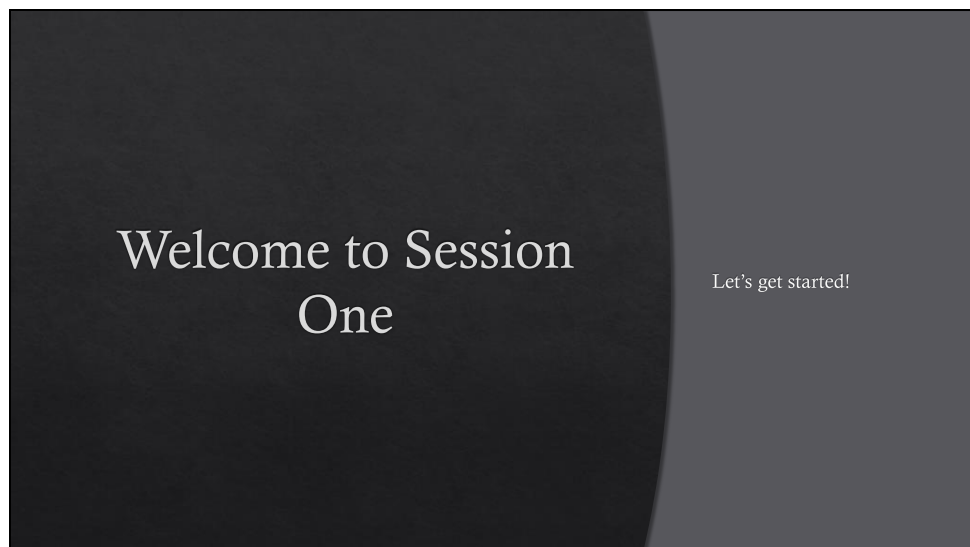
Email: studenthelp@shu.ac.uk

Thank you again for taking the time to participate in this study!

B.5. Intervention presentations

B.5.1 Session 1

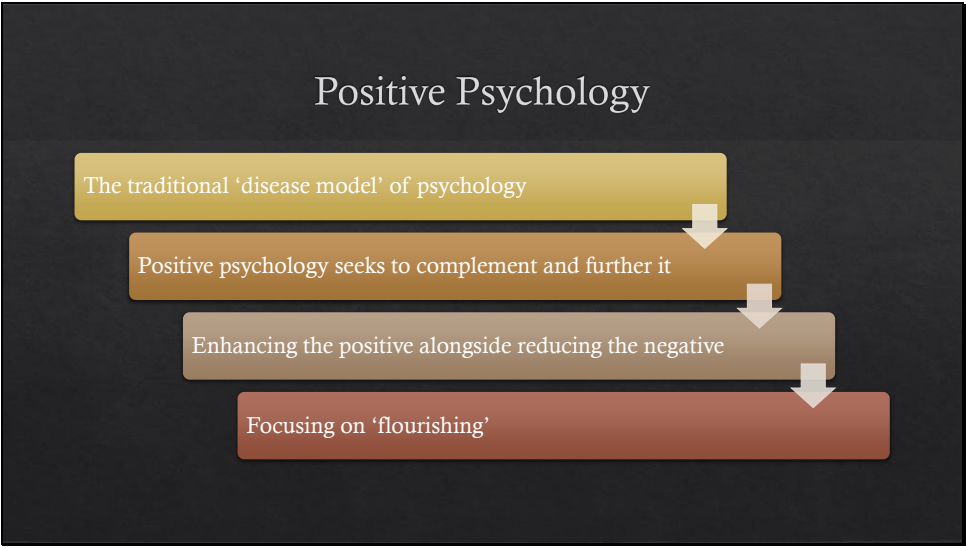
Slide 1



Slide 2



Slide 3



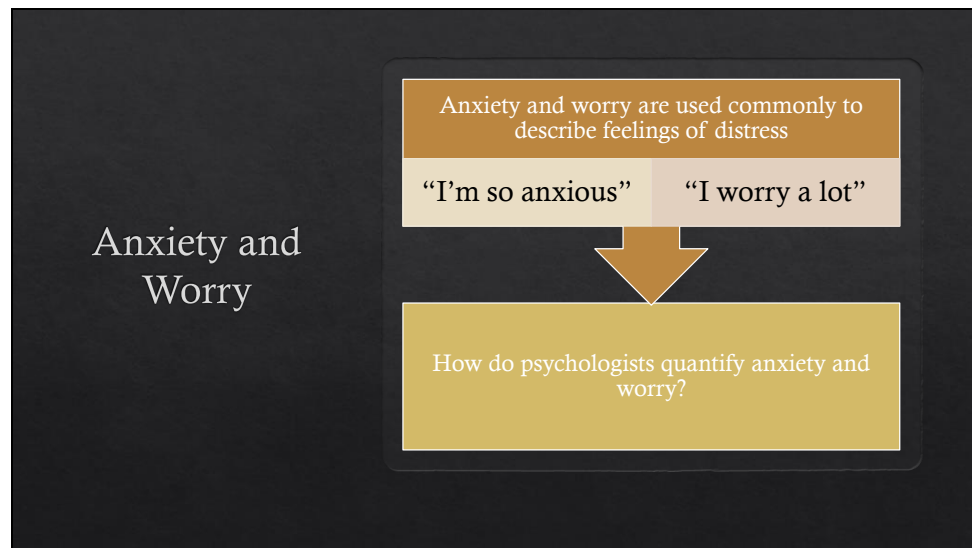
Slide 4

Character Strengths

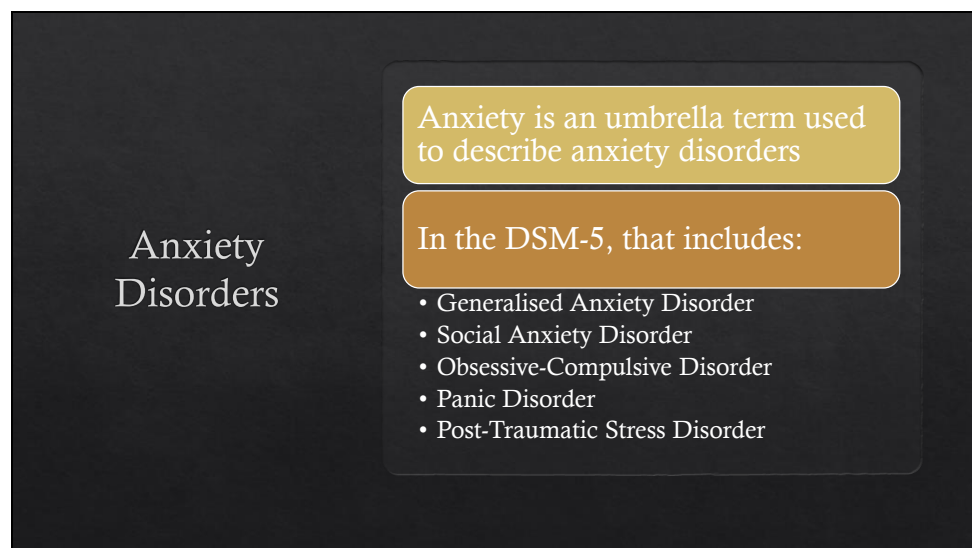
- ◆ A list of 24 strengths
- ◆ Strengths of an individual
- ◆ Everyone shows all of them to an extent
- ◆ Top five strengths can be referred to as your 'signature strengths'
- ◆ Some strengths are linked to lower levels of anxiety and worry



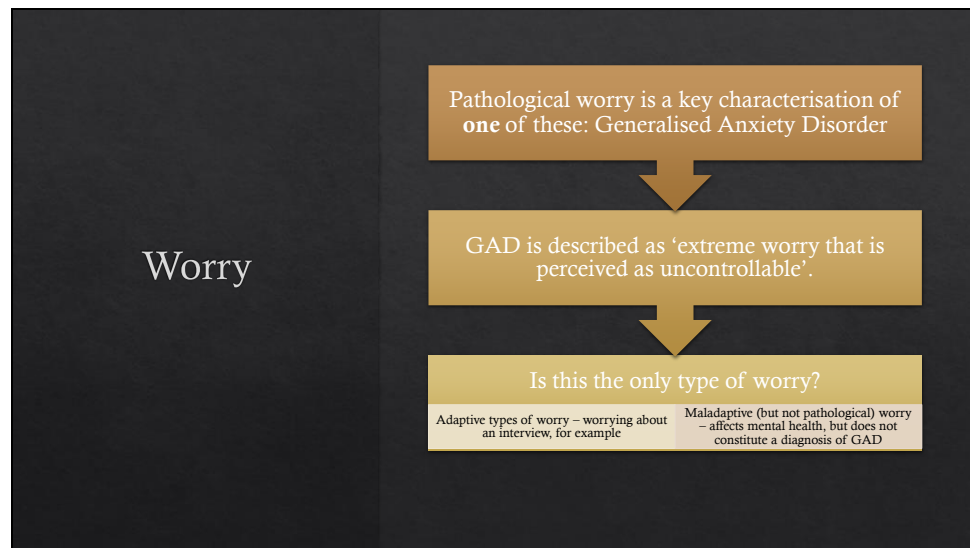
Slide 5



Slide 6



Slide 7



Slide 8

Maladaptive Worry

- ♦ Maladaptive worry is worry that does not serve an adaptive purpose
- ♦ For example:
 - ♦ Picturing countless outcomes to an event
 - ♦ Ruminating obsessively on an issue to feel 'prepared'
 - ♦ Being unable to stop worrying about a problem
 - ♦ Feeling that worry is the way to solve an issue

Slide 9



Slide 10



Slide 11

Second Year Worries

- ☹️ Second year is a lot of pressure – I remember it well!
- 📚 The increase in academic pressure
- 🏠 Moving house
- 🛏 Living with roommates outside of halls
- 💞 Maintaining friendships and romantic relationships
- 📋 Increase in exams and assessments
- 📊 Your grades are counted towards your degree
- 💡 You have to start thinking of dissertation projects

Slide 12

So why am I doing this research?

- 🔬 These workshops are a part of my doctoral research
- 💡 I have put together these workshops, combining established techniques to create a dual-focus intervention
- 👥 The aim of these sessions are to help you deal healthily with your worries, and provide you with resources for the future

Slide 13

Character Strengths Based Intervention

- ◊ The workshops will show you how to use your character strengths
- ◊ Specifically, hope and gratitude
- ◊ These two strengths were selected as:
 - ◊ They had clear therapeutic techniques that have been researched
 - ◊ They had clear measurements
 - ◊ They were clearly linked to reductions in anxiety and worry

Slide 14

What do you have to do?

Turn up to every session
– there are only four but they follow a structure



Between sessions: Fill out the surveys that will be emailed to you – this is how I gather the data



Homework: complete some homework tasks



Post sessions: fill out the surveys 1 month and 3 months post-sessions – this will show me long-term effects

Slide 15

Discussion Time

- ◆ Let's discuss worry
- ◆ What are your main worries about this academic year?
- ◆ They can be academic worries, or personal life worries



Slide 16

Gratitude

What is gratitude?

| | | |
|-------------------------|--------------------------------|--------------------------------------|
| Thankfulness to others? | Looking for the silver lining? | Being thankful for the good in life? |
|-------------------------|--------------------------------|--------------------------------------|





↓

Why is this so impactful?

| | |
|---|---|
| Gratitude means you can savour the positive in life | Gratitude has been found to decrease anxiety/worry and increase life satisfaction |
|---|---|

Slide 17

‘but it’s just gratitude’

-  Character strengths may seem like things you do everyday
-  However, there is a difference between randomly feeling grateful, and actively engaging in gratitude daily
-  Gratitude is arguably the most commonly used character strength for positive psychology interventions
-  The popularity of gratitude interventions means it is already available in many self-help interventions

Slide 18

So how do you use gratitude?

- ◊ Like every therapeutic technique, it is best to repetitively and actively practice it
- ◊ There are two gratitude techniques, and the focus of this will be a gratitude diary
- ◊ This consists of writing down 3-5 things per day that you are grateful for
- ◊ These can range from small things (I am grateful that my bus was on time) to larger things (I am grateful I am alive)
- ◊ Throughout the next four weeks, you will be keeping a gratitude diary as one of the three parts of this intervention

Slide 19

An example of an entry

I keep a gratitude diary myself, and an example of a day's entry may be:

I am thankful for having the opportunity to do a PhD

I am grateful for my partner's support


I feel grateful that I had one of my favourite iced teas in the fridge


As you can see, two of these are much more 'important' than the iced tea, but they all caused me to be thankful


Just writing these down has made me feel more appreciative of them

Slide 20

Let's do your first entry





 Think about what you feel grateful for today

 It may feel a bit unusual at first to select things – and you may even feel that the things you are grateful for are silly

 But these are **your** experiences, and they are valid feelings





Slide 21

Your tasks

-  Complete the gratitude diary every day
-  It's best to complete it at night before you go to sleep
-  Write 3-5 things daily
-  Complete the survey that will be emailed to you

Slide 22

Next session



Recapping gratitude and discussing the diary

Introducing the second technique

Focusing on hope

See you then!

If you have
any questions:



Please don't hesitate to contact
myself or my supervisor:



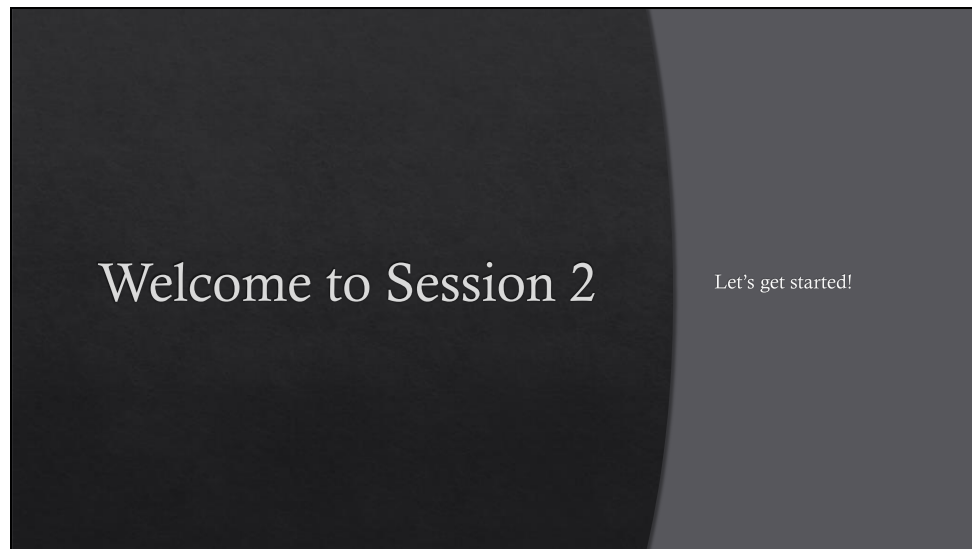
Cameron Pattinson:
c.pattinson@shu.ac.uk



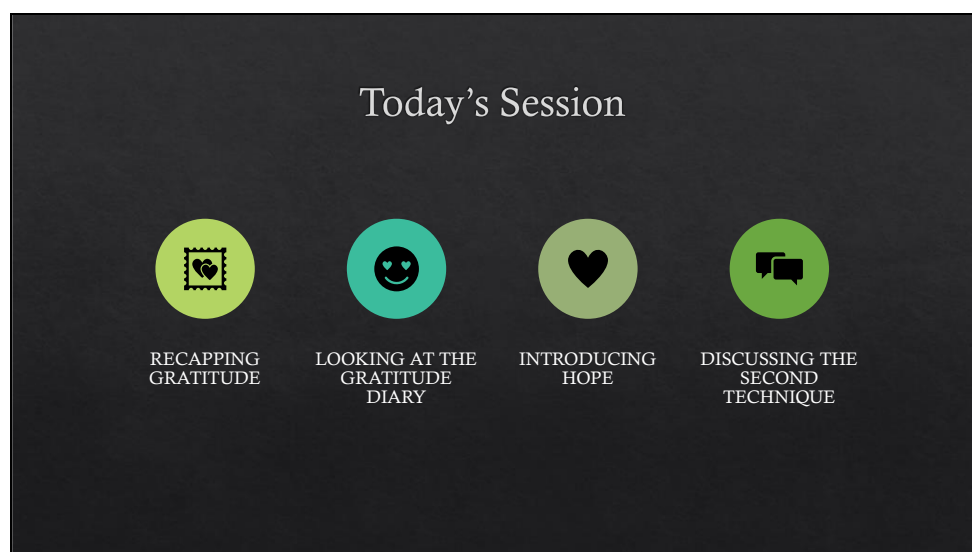
Professor Ann Macaskill:
a.macaskill@shu.ac.uk

B.5.2 Session 2

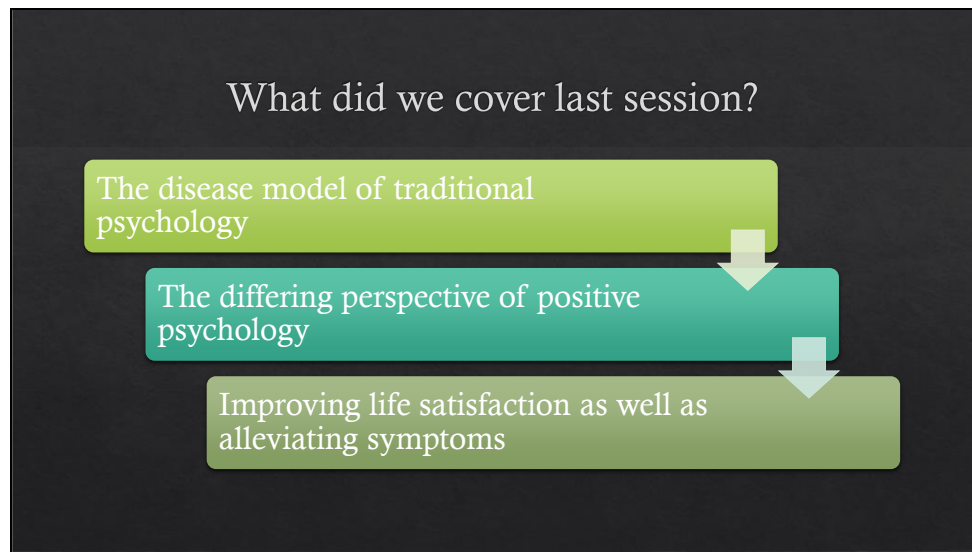
Slide 1



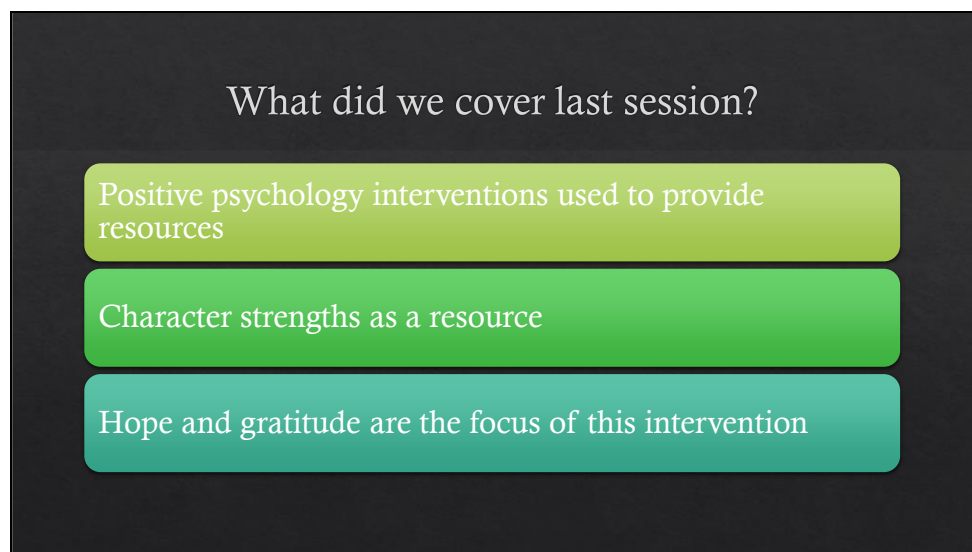
Slide 2



Slide 3



Slide 4




Slide 5


Your tasks since last week


- ◆ You will have been keeping a daily gratitude diary
- ◆ Every day there will be 3-5 things listed that you felt grateful for
- ◆ What sort of things did you list?
- ◆ Were they directed at people, experiences, objects?

Slide 6

Continuing the gratitude diary

 As part of this intervention, you'll be continuing to keep the gratitude diary


 This will be a daily activity

 In this session, we will be introducing another daily activity

Slide 7

Hope

- ◆ Hope is a character strength that is conceptualised as having two parts:
- ◆ Hope agency – being able to think of goals, and feel motivated to reach them
- ◆ Hope pathways – being able to make appropriate plans to reach these goals



Slide 8

Why is hope so important?



HOPE IS VITAL FOR YOU TO BE ABLE TO TACKLE THE PROBLEMS THAT ARISE



HOPE IS VERSATILE – IT CAN BE APPLIED TO PERSONAL WORRIES, ACADEMIC WORRIES, FINANCIAL WORRIES





OFTEN, PEOPLE HAVE THE WRONG METHOD OF PLANNING: "I WILL GET A GOOD GRADE IN THIS CLASS", "I WILL GET A JOB", "I WILL GET A 2.1"



ACTIVELY PRACTICING HOPE TECHNIQUES CAN HELP CREATE ATTAINABLE, REALISTIC PATHWAYS TO A GOAL


Slide 9

In this session


-  We will be focusing on hope agency and pathways separately
-  In this session, we will be looking at hope agency

Slide 10

Task



Please write down three things you worry about




These can be related to anything

Slide 11

Look at them

- ◊ We might be tempted to worry about these things, to think about them obsessively, to think about all the possible outcomes
- ◊ But this will not help
- ◊ Instead, let's try to poke some holes in these concerns
- ◊ Look at the root of them – why do these particular things cause you so much worry?



Slide 12

Affirmations

Affirmations are often used generally

| | |
|--|--|
| For example, 'I am a capable person', 'I have worth' | These are great, and worthwhile practicing |
|--|--|

↓

The affirmations we will be creating are more specific

↓

Focus on the things you worry about, find the root of them, and create an affirmation

Slide 13

Example

A common worry is 'I am going to fail my exam/assessment'

The root of this is that the individual feels they are not capable of passing the exam

This may be because they find the content really hard, or that they are procrastinating because they're afraid

Some affirmations for this person might be:



"I am able to do an hour of revision today"

"I am strong enough to email my tutor for help"

"I am creative and can find different ways to study"

Slide 14

Create your own!



Look at the things you worry about

Have a go at creating some affirmations

Slide 15





When to practice affirmations

- ◆ This is more of a morning/pre-activity exercise
- ◆ It is to give you the surge of hope agency necessary for you to reach your goals
- ◆ Don't underestimate how much affirmations can help
- ◆ It is also a way for you to interrupt the worry response
- ◆ This is vital for developing adaptive strategies

An icon showing a green silhouette of a person's head and shoulders. Above the head is a green speech bubble containing a white lightbulb, symbolizing an idea or affirmation.

Slide 16

How to practice affirmations

-  You don't need to stand in front of a mirror!
-  Speak your affirmations aloud – hearing them allows you to process it in a different way
-  Write them down, so that you can look at them any time you start to feel overwhelmed
-  You can even have specific daily affirmations that you do at specific points throughout the day

Slide 17

Tasks for the next week

- 

Please continue the gratitude diary – writing 3-5 things per day before you go to sleep
- 




Now add affirmations – three in the morning or before you start the relevant activity
- 

You can note your affirmations down in your gratitude journal if you would like to see any patterns
- 

Please also complete the survey I will email out to you

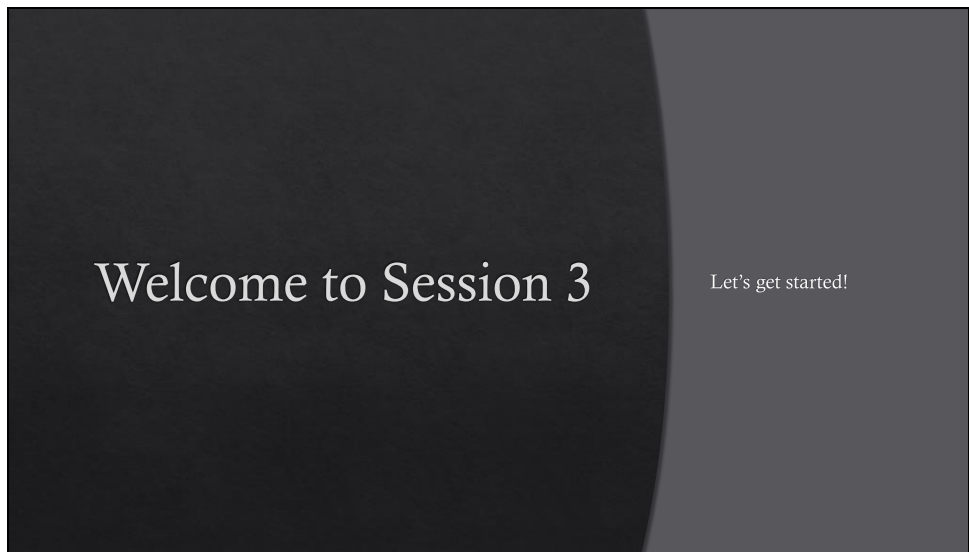
Slide 18

If you have any questions:

-  Please don't hesitate to contact myself or my supervisor:
-  Cameron Pattinson:
c.pattinson@shu.ac.uk
-  Professor Ann Macaskill:
a.macaskill@shu.ac.uk

B.5.3 Session 3

Slide 1



Slide 2

Today's Session



Recap hope
agency



Look at the
homework tasks







Discuss hope
pathways



Practice a new
technique

Slide 3

Last session

-  Recapped positive psychology, character strengths, and personal resources
-  Discussed the gratitude diary
-  Introduced hope agency
-  Looked at affirmations specific to different worries

Slide 4

Your tasks since last week

- ◆ Keeping up with the gratitude diary
- ◆ Have you started to notice any patterns in your entries?
- ◆ Did you find it easy to find things to write?
- ◆ Looking at the affirmations
- ◆ How did you feel after doing your affirmations?
- ◆ Have you been able to use them to stop a worry response?

Slide 5

Gratitude diary and affirmations

Keep going with these

Remember that these are tools that work in the background

The more you continue to do them, the more the habit will form

You're doing great!

Slide 6

Recapping

Positive psychology

- Seeking to complement traditional psychology
- Encouraging flourishing

Positive psychology interventions

- Using character strengths
- Hope and gratitude making up this intervention

Slide 7

Recapping

Gratitude


- Towards self and others
- Towards life experiences
- Finding the silver lining


Hope


- Hope agency – the motivation to pursue goals
- Hope pathways – the pursuit of goals


Slide 8

Hope Pathways

 Once you have done your affirmations and generated your feeling of motivation

 What next?

 Pursuit of goals – but this needs to be done systematically

 A lot of people falter here because they have the motivation, but don't know where to start

Slide 9

Setting Goals

- ◆ The first step is to set a goal
- ◆ People often make non-specific goals, that are vague and don't have a clear path
- ◆ This then stops them being able to actually reach the goal
- ◆ In turn, this stops them feeling motivated



Slide 10

How to set a goal



MAKE IT CLEAR, NOT VAGUE, AND SPECIFICALLY IDENTIFYING ONE GOAL



"I WILL PASS MY COURSE" IS REALLY MADE UP OF LOADS OF DIFFERENT GOALS



"I WILL PASS MY FORENSICS EXAM" IS A SPECIFIC GOAL FOCUSED ON ONE INCIDENT

Slide 11


How to reach that goal

- 🎯 Make clear steps to reach your goal
- 📋 For example, "I will pass my forensics exam" could have the following steps:
 - 🕒 1. Set aside one hour each day for study just for this exam
 - ✉️ 2. Email tutor today to see if there are any past exam questions to examine
 - 🗣️ 3. Set up a once-weekly study group with anyone else struggling
 - 📺 4. Look up lecture videos online for this subject

Slide 12


Contingency Plans

- 💎 Sometimes things don't go according to plan
- 💎 You may have an emergency, or catch a cold and need to take a few days off
- 💎 This is where contingency plans are crucial
- 💎 Make sure for each step, you consider alternatives if you find yourself unable to meet those steps
- 💎 This will help you achieve the goal and feel prepared to deal with issues that may arise



Slide 13


Practice – Short Term Goals



TIME TO PRACTICE
GOAL SETTING




THINK ABOUT
SOMETHING IN YOUR
LIFE THAT YOU WANT
TO ACHIEVE IN THE
SHORT TERM



HOW DO YOU MAKE
THAT INTO A SPECIFIC
GOAL?




WHAT STEPS DO YOU
SET FOR IT?




WHAT CONTINGENCY
PLANS DO YOU SET FOR
IT?

Slide 14


Practice – Long Term Goals




TIME TO PRACTICE
GOAL SETTING




THINK ABOUT
SOMETHING IN YOUR
LIFE THAT YOU WANT
TO ACHIEVE IN THE
LONG TERM



HOW DO YOU MAKE
THAT INTO A SPECIFIC
GOAL?








WHAT STEPS DO YOU
SET FOR IT?



WHAT CONTINGENCY
PLANS DO YOU SET FOR
IT?


Slide 15

How often to create these goals


-  You can use this technique whenever it is needed, rather than daily like the others
-  Remember this isn't just for academia
-  You can use this to map out problems at work, or with your personal life
-  Over time this will likely become a habit you can do internally
-  For now, physically map out the steps on paper until it becomes second-nature

Slide 16


Tasks for next time (final session)




CONTINUE THE GRATITUDE DIARY



CONTINUE YOUR AFFIRMATIONS



USE THE PATHWAYS METHOD TO FOCUS ON YOUR GOALS – WRITING THEM DOWN



COMPLETE THE SURVEY THAT WILL BE EMAILED TO YOU

If you have
any questions:



Please don't hesitate to contact
myself or my supervisor:



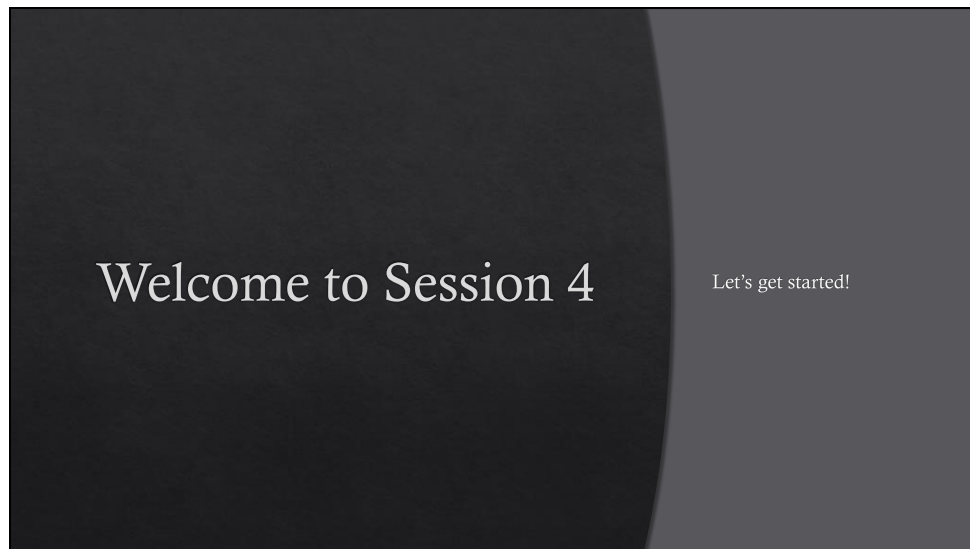
Cameron Pattinson:
c.pattinson@shu.ac.uk



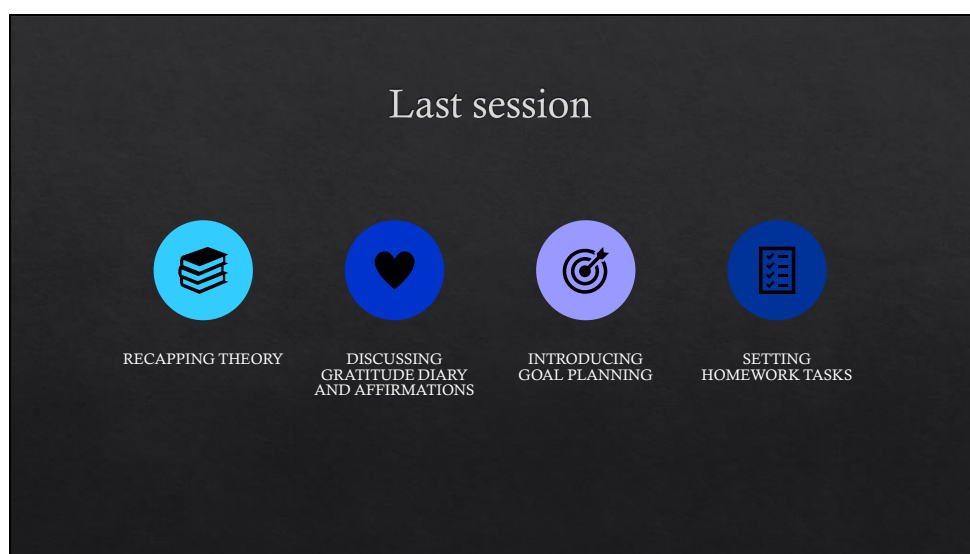
Professor Ann Macaskill:
a.macaskill@shu.ac.uk

B.5.4 Session 4

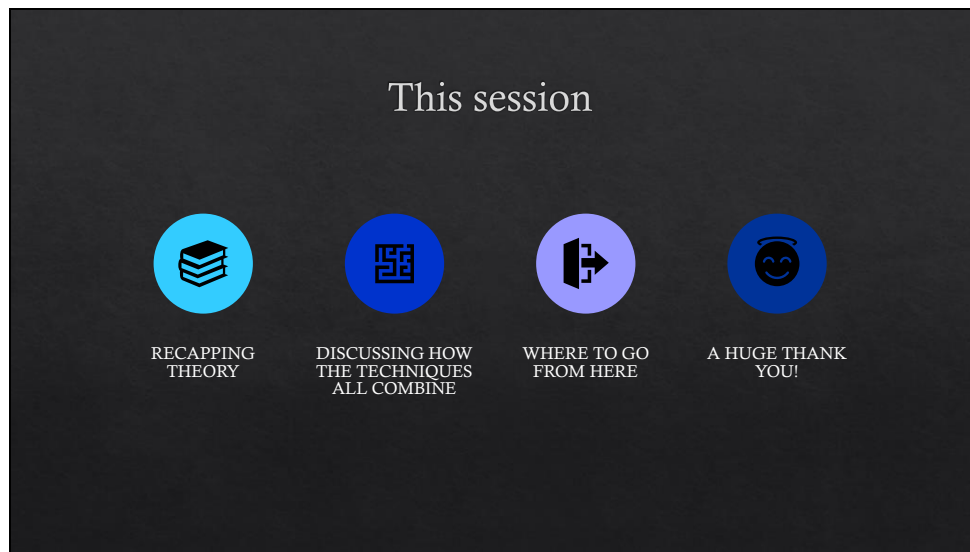
Slide 1



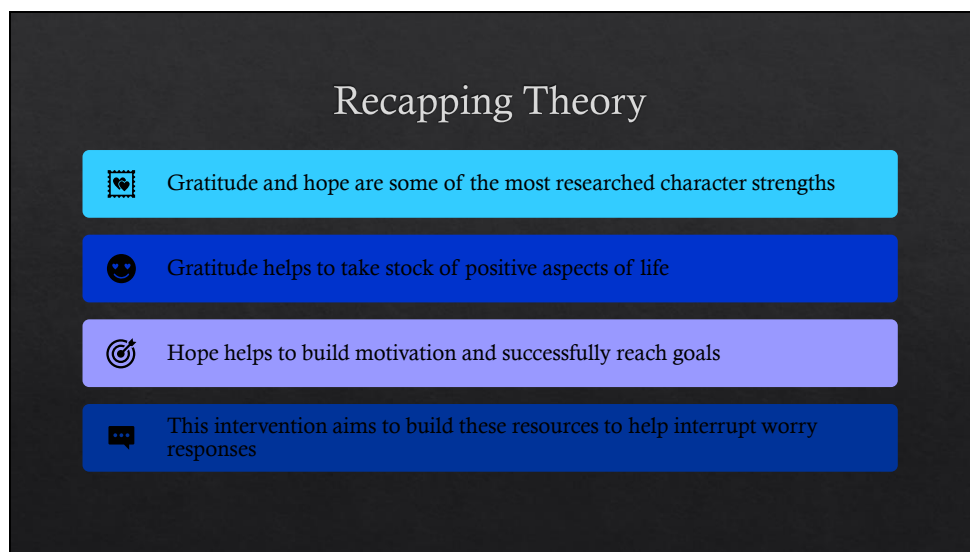
Slide 2



Slide 3



Slide 4



Slide 5

| | |
|---------------------|--|
| Recapping Theory | Worry can be good for you – in small amounts |
| | Adaptive worry encourages you to plan ahead, focus on goals, and make good decisions |
| | Maladaptive worry becomes its own coping mechanism |
| | Using worry excessively stops you processing your emotions |
| | In time, this means you become less tolerant of negative emotions such as fear |

Slide 6

| | |
|--------------------------------|--|
| The intervention techniques | ◆ The gratitude diary and affirmations are both daily, background techniques |
| | ◆ They encourage you to actively practice your strengths |
| | ◆ Instead of passively experiencing hope or gratitude, you set time aside to practice them |
| | ◆ The pathways method is for situation-specific goals |
| | ◆ It is versatile and can be used for many different situations |
| | |

Slide 7

One-to-one

I'd like each of you to look at your gratitude diary for the last three weeks

How has it progressed?


Were there any patterns you noticed about yourself?

Did you find you were grateful for others, or for life experiences? Both?


While you do this, I'm going to set up an individual call with each of you to discuss

Slide 8


Where do you go from here?




I would encourage you to continue with these practices



It's easy to stop doing daily exercises, but sticking with them will form them into a habit




Remember to write out your goal plans at least for a while



Complete the surveys that are emailed to you

Slide 9


In a few months



I will be conducting an evaluation of this study through interviews



You'll receive an email asking if you'd like to take part




This is vital for me to understand how you experienced the sessions




The interviews will be one-to-one and I would greatly appreciate the participation

Slide 10


Thank you!



Thank you very much for your participation in this study!



You have provided valuable information for my research



The research itself will be available to read once I have graduated



I am happy to email any of you the thesis once it is completed!

If you have
any questions:



Please don't hesitate to contact
myself or my supervisor:

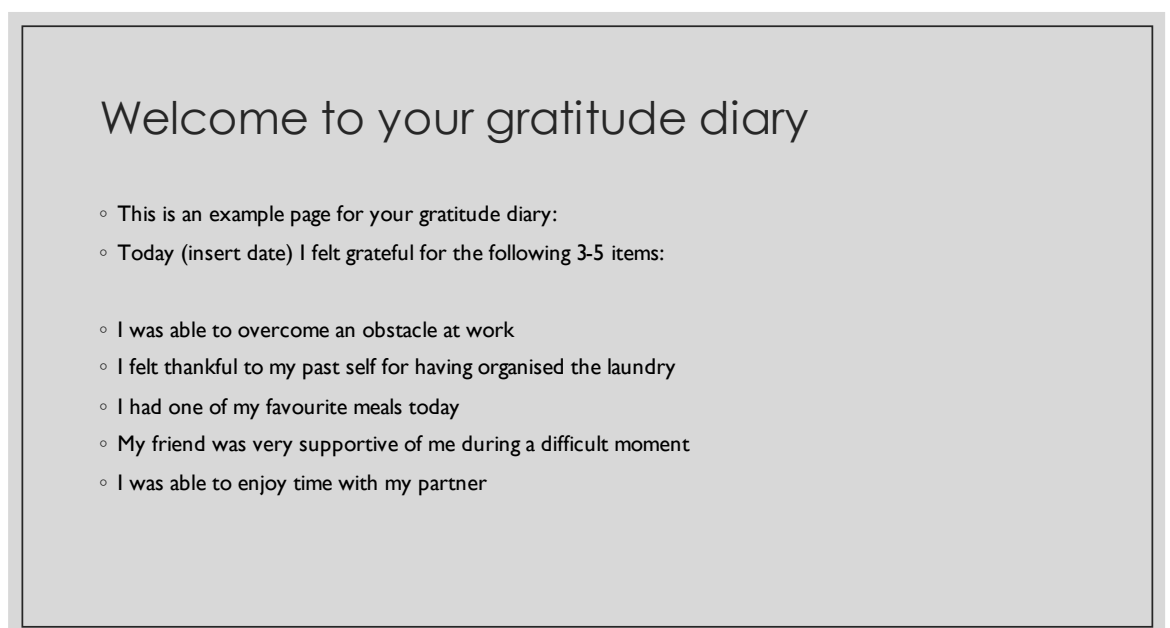


Cameron Pattinson:
c.pattinson@shu.ac.uk



Professor Ann Macaskill:
a.macaskill@shu.ac.uk

B.6. Gratitude diary example



Day 1



Today's Date:



Today I was grateful for the following 3-5 items:



1.



2.



3.



4.



5.

B.7 Survey Measures

Start of Block: ID Code

Q1 Please enter your ID code.

End of Block: ID Code

Start of Block: Time

Q2 Please select which time point you are filling out (dates to be filled out when finalised).

- ☐ 1: Before first session (1)
- ☐ 2: After first session (2)
- ☐ 3: Before second session (3)
- ☐ 4: After second session (4)
- ☐ 5: Before third session (5)
- ☐ 6: After third session (6)
- ☐ 7: Before fourth session (7)
- ☐ 8: After fourth session (8)
- ☐ 9: One month after sessions finish (9)
- ☐ 10: Three months after sessions finish (10)

End of Block: Time

Start of Block: Anxiety

Q4 Tick the box to indicate the reply that is closest to how you have been feeling **in the last week**. Don't take too long over your answers, your immediate response is best.

Q6 I feel tense or 'wound up'

- ☐ Most of the time (1)
 - ☐ A lot of the time (2)
 - ☐ From time to time (3)
 - ☐ Not at all (4)
-

Q8 I still enjoy the things I used to enjoy

- ☐ Definitely as much (1)
 - ☐ Not quite so much (2)
 - ☐ Only a little (3)
 - ☐ Hardly at all (4)
-

Q10 I get a sort of frightened feeling as if something awful is about to happen

- ☐ Definitely, and quite badly (1)
 - ☐ Yes, but not too badly (2)
 - ☐ A little, but it doesn't worry me (3)
 - ☐ Not at all (4)
-

Q12 I can laugh and see the funny side of things

- ☐ As much as I could (1)
 - ☐ Not quite so much now (2)
 - ☐ Definitely not so much now (3)
 - ☐ Not at all (4)
-

Q14 Worrying thoughts go through my mind

- ☐ A great deal of the time (1)
 - ☐ A lot of the time (2)
 - ☐ From time to time, but not too often (3)
 - ☐ Only occasionally (4)
-

Q16 I feel cheerful

- ☐ Not at all (1)
 - ☐ Not often (2)
 - ☐ Sometimes (3)
 - ☐ Most of the time (4)
-

Q18 I can sit at ease and feel relaxed

- ☐ Definitely (1)
 - ☐ Usually (2)
 - ☐ Not often (3)
 - ☐ Not at all (4)
-

Q20 I feel as if I am slowed down

☐ Nearly all the time (1)

☐ Very often (2)

☐ Sometimes (3)

☐ Not at all (4)

Q22 I get a sort of frightened feeling like 'butterflies' in the stomach

☐ Not at all (1)

☐ Occasionally (2)

☐ Quite often (3)

☐ Very often (4)

Q24 I have lost interest in my appearance

- ☐ Definitely (1)
 - ☐ I don't take as much care as I should (2)
 - ☐ I may not take quite as much care (3)
 - ☐ I take just as much care as ever (4)
-

Q26 I feel restless as if I have to be on the move

- ☐ Very much indeed (1)
 - ☐ Quite a lot (2)
 - ☐ Not very much (3)
 - ☐ Not at all (4)
-

Q28 I look forward with enjoyment to things

- ☐ As much as I ever did (1)
 - ☐ Rather less than I used to (2)
 - ☐ Definitely less than I used to (3)
 - ☐ Hardly at all (4)
-

Q30 I get sudden feelings of panic

- ☐ Very often indeed (1)
 - ☐ Quite often (2)
 - ☐ Not very often (3)
 - ☐ Not at all (4)
-

Q32 I can enjoy a good book or TV program

☐ Often (1)

☐ Sometimes (2)

☐ Not often (3)

☐ Very seldom (4)

End of Block: Anxiety

Start of Block: Worry

Q34 Read each item carefully, and select the option that best describes **you**.

| | Not at all typical of me (1) | A little typical of me (2) | Moderately typical of me (3) | Often typical of me (4) | Very typical of me (5) |
|---|------------------------------------|----------------------------------|------------------------------------|-------------------------------|------------------------------|
| If I do not have enough time to do everything, I do not worry about it (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My worries overwhelm me (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I do not tend to worry about things (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Many situations make me worry (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

I know I
should not
worry about
things, but I
just cannot
help it (5)

| | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|

When I am
under
pressure I
worry a lot
(6)

| | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|

I am always
worrying
about
something
(7)

| | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|

I find it easy
to dismiss
worrisome
thoughts (8)

| | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|

As soon as I
finish one
task, I start
to worry
about
everything
else I have
to do (9)

I never
worry about
anything
(10)

When there
is nothing
more I can
do about a
concern, I do
not worry
about it any
more (11)

I have been
a worrier all
my life (12)



I notice that
I have been
worrying
about things
(13)

| | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|

Once I start
worrying, I
cannot stop
(14)

| | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|

I worry all
the time (15)

| | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|

I worry
about
projects
until they
are all done
(16)

| | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|

End of Block: Worry

Start of Block: Hope

Q36 Read each item carefully, and select the option that best describes **you**.

| | Definit ely false (1) | Most ly false (2) | Somew hat false (3) | Slight ly false (4) | Slight ly true (5) | Somew hat true (6) | Most ly true (7) | Definit ely true (8) |
|--|--------------------------------|----------------------------|---------------------------|------------------------------|-----------------------------|--------------------------|---------------------------|----------------------------|
| I can think of many ways to get out of a jam (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I energetic ally pursue my goals (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I feel tired most of the time (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

There are
lots of
ways
around
my
problems
(4)
I am
easily
downed
in an
argument
(5)
I can think
of many
ways to
get the
things in
life that
are
important
to me (6)



I worry
about my
health (7)

☐☐☐☐☐☐☐☐

Even
when
others get
discourag
ed, I know
I can find
a way to
solve the
problem

☐☐☐☐☐☐☐☐

(8)

My past
experienc
es have
prepared

☐☐☐☐☐☐☐☐

me well
for my
future (9)

| | | | | | | | |
|--------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I've been | | | | | | | |
| pretty | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| successful | | | | | | | |
| in life (10) | | | | | | | |
| I usually | | | | | | | |
| find | | | | | | | |
| myself | | | | | | | |
| worrying | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| about | | | | | | | |
| something | | | | | | | |
| (11) | | | | | | | |
| I meet the | | | | | | | |
| goals I set | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| for myself | | | | | | | |
| (12) | | | | | | | |

End of Block: Hope

Start of Block: Gratitude

Q38 Read each item carefully and select the option that best describes **you**.

| | Strongly disagree (1) | Disagree (2) | Somewhat disagree (3) | Neither agree nor disagree (4) | Somewhat agree (5) | Agree (6) | Strongly agree (7) |
|--|-----------------------|-----------------------|-----------------------|--------------------------------|-----------------------|-----------------------|-----------------------|
| I have so much in life to be thankful for (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| If I had to list everything that I felt grateful for, it would be a very long list (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

When I
look at
the
world, I
don't see
much to
be
grateful
for (3)

I am
grateful
to a wide
variety of
people
(4)



As I get
older I
find
myself
more
able to
appreciat
e the
people,
events,
and
situations
that have
been in
my life
history
(5)



Long
amounts
of time
can go by
before I
feel
grateful
to
somethin
g or
someone
(6)



End of Block: Gratitude

Start of Block: Rumination

Q39 Please read the following statements and choose the option that best describes you when something bad happens or when you feel low.

| | Almost never (1) | Occasionally (2) | Some of the time (3) | Almost always (4) |
|--|-----------------------|-----------------------|-------------------------|-----------------------|
| I think 'what am I doing to deserve this?' (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I analyse recent events to understand why I am feeling down (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I think 'why do I always react this way?' (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I go away by myself and think about why I feel this way (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

I write down
what I am
thinking and try
to analyse it (5)

☐☐☐☐

I think about a
recent situation
and how it
could have
gone better (6)

☐☐☐☐

I think 'why do
I have
problems other
people don't
have?' (7)

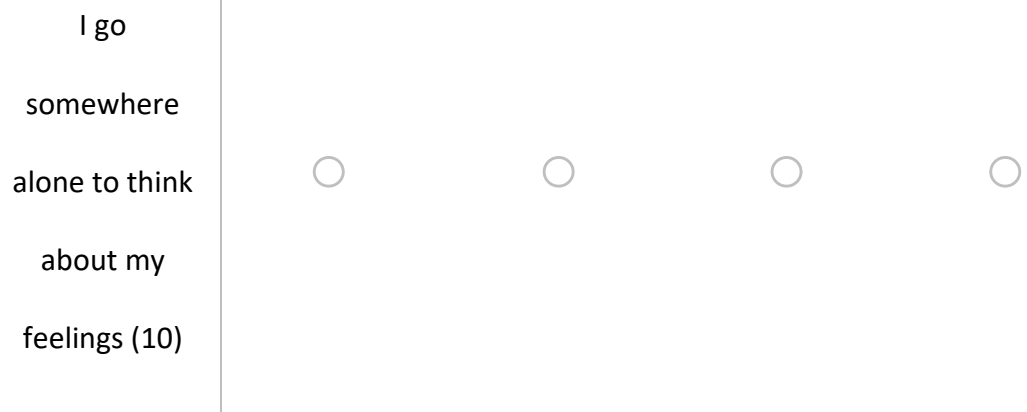
☐☐☐☐

I think 'why
can't I handle
things better?'
(8)

☐☐☐☐

I analyse my
personality to
understand
why I feel low
(9)

☐☐☐☐



End of Block: Rumination

Start of Block: Life Satisfaction

Q22 Please read the statements and select what best describes you.

| | Click to write Scale Point 1 (18) | Click to write Scale Point 2 (19) | Click to write Scale Point 3 (20) |
|--|--------------------------------------|--------------------------------------|--------------------------------------|
| In most ways my life is close to my ideal (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The conditions of my life are excellent (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am satisfied with my life (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| So far I have achieved the important things I want in life (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| If I could live my life over, I would change almost nothing (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

End of Block: Life Satisfaction

Start of Block: End

Q23 Thank you for taking part in this survey.

End of Block: End

Appendix C: Study 3 Materials

C.1 Information sheet for Study 3

Please read the following information carefully before proceeding:

What is this study about?

During the year, you took part in a study examining mental health in second year students. It is important for us to understand how useful the study was – not just from our perspective but from yours. It would be very useful for us to gain this understanding through an interview with you.

What will I have to do?

You will be asked questions by the researcher in a one to one interview that will be recorded and transcribed for analysis.

Are there any risks in taking part?

There are no anticipated risks in participating in this survey, however there will be contact information provided for the research team if you have any questions, and for support services at the university.

Has the survey been ethically approved?

Yes, the survey was approved by Sheffield Hallam's ethics committee.

Will my answers be anonymous?

Yes, your answers will be entirely anonymous. The recordings will be deleted once the interview has been transcribed, and any identifiable information in them will be redacted or changed.

Will I be able to withdraw?

Yes, you can withdraw at any point during the interview and up to one week after the interview.

There is **no penalty** for withdrawing and you will not need to give a reason.

What will happen to my data?

Your data will be anonymous and will only be accessed by the research team for analysis. Data will be safely stored under password protection. The raw data will be retained for the duration of the thesis (until about October 2020), and potentially afterwards for other research projects. The data that is retained will be entirely anonymous.

Who is doing the research/I have a question?

Do not hesitate to contact me if you have a question:

Mr Cameron Pattinson (primary researcher): c.pattinson@shu.ac.uk

Alternatively, you can contact:

Professor Ann Macaskill (Director of Studies): a.macaskill@shu.ac.uk

Dr David Reynolds (Supervisor): d.reynolds@shu.ac.uk

PARTICIPANT INFORMATION SHEET: SUPPLEMENTARY INFORMATION

From 25 May 2018 the General Data Protection Regulation (GDPR) will replace the Data Protection Act and govern the way that organisations use personal data. Personal data is information relating to an identifiable living individual. Transparency is a key element of the GDPR and this Privacy Notice is designed to inform you:

- how and why the University uses your personal data for research,
- what your rights are under GDPR, and,
- how to contact us if you have questions or concerns about the use of your personal data.

Legal Basis for Research Studies:

The University undertakes research as part of its function for the community under its legal status. Data protection allows us to use personal data for research with appropriate safeguards in place under the legal basis of public tasks that are in the public interest. A full statement of your rights can be found at:

<https://www.shu.ac.uk/about-this-website/privacy-policy/privacy-notice-for-research>

However, all University research is reviewed to ensure that participants are treated appropriately and their rights respected. This study was approved by the University Research Ethics Committee, code ER20211155.

Contact Details:

Details of who to contact if you have any concerns or if adverse effects occur after the study are given below:

| | |
|---|---|
| <p>You should contact the Data Protection Officer if:</p> <ul style="list-style-type: none">• you have a query about how your data is used by the University• you would like to report a data security breach (e.g. if you think your personal data has been lost or disclosed inappropriately)• you would like to complain about how the University has used your personal data <p>DPO@shu.ac.uk</p> | <p>You should contact the Head of Research Ethics (Professor Ann Macaskill) if:</p> <ul style="list-style-type: none">• you have concerns with how the research was undertaken or how you were treated <p>a.macaskill@shu.ac.uk</p> |
|---|---|

Postal address: Sheffield Hallam University, Howard Street, Sheffield S1 1WB.

Telephone: 0114 225 5555

C.2 Consent form for Study 3

Please make sure you fully understand the information above before you continue.

Please tick the boxes to demonstrate you consent to take part:

I have read and understand the above information. (tick box)

I understand that I can withdraw at any point during the survey. (tick box)

I understand that the interview will be recorded. (tick box)

I understand that no personally identifiable information will be published. (tick box)

I consent to take part in this study. (tick box)

Sign below:

C.3 Debriefing form for Study 3

Thank you for taking part in this study!

What was this study about?

These interviews aim to gather your perspective on the Worry Workshop, your mental health during the Worry Workshop, and to discuss personal opinions on your experience. The aim of this study is to provide new evidence and thoughtful inquiry into the perspective of students undertaking mental health support services.

Will my answers be kept anonymous?

Absolutely, the data will be anonymised so that no identifiable information can be accessed.

Can I talk to someone about the research?

Do not hesitate to contact me if you have a question:

Mr Cameron Pattinson: c.pattinson@shu.ac.uk

Alternatively, you can contact:

Professor Ann Macaskill (Director of Studies): a.macaskill@shu.ac.uk

Contact details for support services

If you feel this study has affected you negatively, please do not hesitate to contact me on the email provided above. If you feel you need support after this survey, please note the following contacts for support services:

Monday, Tuesday, Thursday 8:45am - 5pm

Wednesday 10am - 7pm (5pm out of term time)

Friday 8:45am - 4:45pm

Phone: 0114 225 3813

Email: studenthelp@shu.ac.uk

Thank you again for taking the time to participate in this study!

C.4 Interview guide

Semi-structured interview, this is a guide to ensure topics are covered, but if the interviewee discusses something interesting that is relevant to the research, that can be pursued.

Note: this guide may change as questions may arise during the intervention itself

Beginning of interview:

Introduce self and note that the participant has read the information sheet (including GDPR information) and signed the consent form

Remind the participant that any answers, no matter how critical they are, are helpful to making sure the course is the best it could be

Topics needed to cover:

Content of course:

- Was there a session you preferred over the others? Why do you think you enjoyed that session more?
- How was each session useful for you?
- Do you feel the course gave you ways to cope with anxiety or worry? If yes, how have you employed those skills since the course ended?
- Were there any ways you think the course content might be improved?
- Did you prefer the hope or the gratitude session? Why do you think that was?

- How did you find the educational parts of the sessions?
- Was everything well-explained? Did you find yourself confused about anything?

Acceptability of course/structure:

- How did you find the structure of the course?
- Do you think the sessions were organised well? If yes, why? If no, how do you think they could have been improved?
- How did you feel having the sessions in person was?
- How do you think it would change the experience of the sessions if it was one-to-one rather than groups?
- Were the sessions appropriate for students? If yes, why? If no, how do you think it could be changed to make it more relevant to students?
- Do you think the session homework was acceptable? Was it too much effort or too time-consuming for you between sessions?

Mental health:

- How do you think your mental health has changed since the sessions?
- What do you do when you have a problem in your life? Is that different from before the sessions?
- Do you think the sessions would be useful to be in universities as an option?
- Have you continued going with the gratitude diary and planning your goals out with the hope strategies? If not, why?

Other:

- Do you have any other points to raise about the intervention, the delivery and the effectiveness?

End of the interview

Thank the participant for doing the interview and explain their right to withdraw their data.

C.5 Transcriptions

C.5.1 Interview with Participant A

Participant of first intervention group

Interview taken 4 months after intervention

Interviewer – I

Participant – A (name replaced with A in the appropriate places)

[Pleasantries and introductions omitted]

I: So, this interview is just to get a feel for how you found the sessions, and it's a place for honest feedback. So please don't hold back, negative feedback is useful too. And if you don't want to answer anything that's absolutely fine, just let me know.

A: Okay.

I: And can you just confirm that you read the information sheet and the GDPR sheet, and that you signed the consent form?

A: Yes, I did all of that.

I: Great! Are you okay if I just dive right in?

A: Yes, go for it.

I: Okay. So, you were part of the first workshop group. If you think back to before the sessions started, how would you describe your mental health?

A: It wasn't great. It wasn't the worst I've been at, but I was really stressed with everything. COVID had only just really started a month before, so everything was really confusing. We didn't know if we were even going to be going in for classes or exams or whatever. I was really stressed about exams.

I: COVID was really stressful especially at the start when everything was unclear.

A: Yeah definitely. We just didn't have a plan, so it was hard to know what to even do with uni work and exams. We still don't know if we're going to be going in for classes in September.

I: That does sound stressful. How did you typically cope with the stress?

A: I'm not really sure that I did. I kept it very bottled up, definitely. I was pushing it all down and hoping it wouldn't just spring up ten times worse. I knew it wasn't healthy to just ignore everything and hope it got better, but that was the only option I really had.

I: Did you have much support around your mental health?

A: Do you mean like friends and family, or professional support?

I: Just anywhere you drew support from.

A: I didn't have any professional help. Honestly, I've thought about going to my doctor for anxiety a few times, but I know that it can be years of applying and waiting. I just don't really have the energy for it.

I: It can be a really difficult and lengthy wait at the moment for any kind of counselling. What made you sign up for the workshop?

A: The advert said it was for students who worry a lot and I thought that sounded relatable. Me and a friend signed up, she was in a different group and had it later though, so we didn't do it together.

I: Yes, I did a couple of different groups. You said that you found worrying a lot quite relatable, how often would you say you worried?

A: I spent tons of time worrying. I'd be lying there at night ready to go to sleep and then a thousand intrusive thoughts would just blast me in the face. I think I worried more about the problems I had than I should have done, it wasted a lot of time.

I: We can definitely spend a lot of time worrying, it does tend to suck up time.

A: Yeah, and it's pointless at the end of the day. Picturing all the problems I had and then all the possible ways it could get worse, there was no point to it. I just made myself feel worse and worse.

I: Ruminating on our problems can be a problem in itself when it makes everything feel worse. Were you hoping that the workshop would help you worry less?

A: I didn't hope that because at the time I didn't really notice I was doing it a lot, if that makes sense. Like obviously I knew I spent a lot of time thinking about my problems, but it didn't really connect that that was worry and that it was harmful. I just thought I was being dramatic.

I: Well, you certainly weren't being dramatic, it's a really common thing to do. What were you hoping to get out of the sessions?

A: I think I was just hoping for help. I think I hadn't pictured anything specific. Just that I wanted help and that this was offering it.

I: That's perfectly valid. So, thinking back to the first session, that was the one teaching about character strengths and gratitude. What were your first impressions of the session?

A: I was glad it was small groups because I get awkward in big groups. I just tend to shrink into a corner somewhere. I thought you were good at the whole settling in thing. All four of us were a bit uncomfortable and awkward with each other, but you were good at getting us to chat and open up.

I: Groups can be a bit awkward at first while everyone settles in around each other, but you all did really well with turning up and putting yourselves out there.

A: Thank you. I liked the presentation at the start too, I thought it was useful for settling us into everything. I went and did the character strengths quiz thing that you linked us to. It was fun.

I: Yes, that one is fun. I like to do it every six months to see if anything has changed, I definitely recommend that. What was it about the character strengths that interested you?

A: I don't know, I think it's about seeing a different perspective. It's fun to see that it's a normal thing to be how you are, like other people are the same as you, it makes you feel less alone. I think it shows you bits of yourself you might not have realised. Like mine was love of learning, I think, as my first one, but gratitude was really low on the list, which we'd obviously just learned about in the session as well. I think even spirituality was higher, and I'm atheist.

I: I think it can be really odd to see what's really low on the list. At the end of the day, one of those strengths is always going to come last, it's just interesting to see which ones you prioritise as part of yourself.

A: Yeah, some of them weren't surprising but I was actually quite surprised at some.

I: Did you find that doing the gratitude exercises was quite strange for you at first, if you found that it wasn't one of your top strengths?

A: Yes actually, it felt weird at first to just sit and think and write down what I was grateful for, because it feels like something you would just do naturally, but I kind of realised that it wasn't something I ever really did. I'd feel thankful for something when it happened, but I wouldn't think about it again after that. That makes me sound horrible.

I: No, it's really normal for people to not take the time to look back. Self-reflection can be really difficult to do if you're not in the habit.

A: Yes, definitely. Every night I did the gratitude diary, and it was really nice just having those two minutes to think about what had happened that day that I was thankful for. I thought it'd be really hard to keep up with, but it was actually not that difficult, I just did it after brushing my teeth, so it was more of a habit like how you said you do it with your bedtime routine.

I: Yeah, I swear by habit bundling. It's the only way I managed to remember to take my evening meds.

A: I actually switched to an app as well, cause there's tons of them for gratitude diaries. They send reminders, which helps me. I mean, I know they're pretty easy to ignore as well, but I guess if you have the motivation.

I: That's good. I also do an app for mine; I think it's definitely more useful for me personally. Do you think an online version of the diary would be better received?

A: I think it depends on the group. Some people prefer not to use their phones at night for better sleep, but I found the app better than paper. Maybe if you had the option to choose between paper and online, it might be better to have the choice.

I: Online versions of things are often a very useful option to have. Do you think the other exercises would have worked well with online versions?

A: Yeah, but honestly, I spend so much time on my phone that everything in my life sort of has an online version. I think the reminders are really good for people who tend to forget things easily. And it's just easier to use than paper, you don't need to remember where you put it.

I: There's definitely a lot of benefits to online versions of things. I use my phone a lot too, and I know what you mean about apps for everything. Just going back to the sessions-

A: Sorry, I keep going on tangents.

I: No, it's fine, it's all useful information for me. Tangents are good.

A: Okay, good, I just don't want to derail everything.

I: It's honestly fine. Did you have a preference between the hope and gratitude sessions?

A: Not really, because they both did really different things.

I: What sort of things did they do?

A: I think the hope sessions were really useful for building motivation and helping with work, which was stressing me out at the time, so I think the hope sessions were more useful for me at the time. But the gratitude sessions gave me some time each day to feel happy and thankful and that was more valuable than I thought it would be long-term.

I: Do you mind elaborating on what you found useful about the hope sessions?

A: Yeah sure, it's just like during the beginning of COVID we were all taken out of our classes, and we didn't know when we'd be going back, and we didn't have tons left because it was like April or May or something, but we had exams coming up and it was so stressful just not knowing what was happening. So, when the hope sessions came along and the first one was about motivation and how to build it, that was really helpful cause once I'm motivated, I'm really good, I can just charge ahead. But if I don't feel motivated it's so hard, I can't feel settled or get comfy in the work. So doing the affirmations really helped, especially the tips about making them specific.

I: Can you give an example of an affirmation that helped you?

A: Yeah! One sec I've got mine written down – on my phone, typical. 'You are capable of doing two hours of work today' is one and 'you can complete the first two steps of your plan today'. Like they match the plan and the goals from the second hope session.

I: So, it was better for you to match up the affirmations with specific aspects of your pathways?

A: Yeah, because it helped the motivation be specifically about the pathways. But I definitely use the affirmations outside of my pathways because I don't use the pathways for everything.

I: That's great that it helped! What kind of things did you apply the pathways planning to?

A: Pretty much everything to do with work honestly, it was really useful. What you said in the session, that people make vague broad goals and then get frustrated when it doesn't work out, that was definitely me, I would get so annoyed at myself for not being able to do what I wanted to do. And I'm still not perfect at it but I'm definitely better.

I: Can you give me an example of where you used the pathways alongside one of your affirmations?

A: Yes, the 'you can complete the first two steps of your plan today' affirmation is because the first two steps of my pathways plan is to make sure I fully understand the information around the coursework piece, and to email the tutor if there's a part that I don't really get. Once I've done those two steps, I've done the first chunk of the plan. It helps just to know I've got all the information and I can just go ahead knowing I'm on the right path.

I: That's a great example of a specific, relevant goal. You seem to have really understood the session content – was there anything about the sessions that you didn't really understand, or thought could be clearer?

A: Not really, it was all really clear, the presentations were clear too. I liked that you gave examples of everything, it helped to really get what we had to do.

I: That's good to hear. Did you notice anything else about the presentations that might be useful for me to know?

A: Sorry, I'm drawing a blank. Although I did like that they weren't too long. Sorry, that sounds horrible. I just mean that it wasn't the whole session, we had discussions and activities and things, so it broke up the session.

I: I take no offence, don't worry. I didn't want to just talk for forty-five minutes and hope you absorbed it. Speaking of the activities, how did you find the group activities?

A: At first, they were a bit awkward because we were all nervous and shy, but I think we got into it more as it went on. You joined in with it which helped because it gave us an example. I think they were good, though, to get us into the swing of things.

I: Do you think the workshop would have been better as a one-to-one kind of session?

A: I'm not sure, because there would be definite upsides to it; you'd get more one-to-one time with the person running the session, but really, I think it made more sense in a group. It makes you feel like you're not alone in it and that helped more than I thought it would.

I: I get what you mean. It's nice to share the experience sometimes, especially when it's new.

A: Yeah. It was a bit weird at first because you're sharing about your worries and stress with people. And it did feel a bit embarrassing at times, to share affirmations or even what we were grateful for – I didn't want people to think I was cringey or grateful for something silly.

I: I hope that no one made you feel that way.

A: No, not at all. It was all in my head. I get easily embarrassed.

I: Well, none of your experiences were silly or cringey, you were a great participant in the workshop.

A: Thanks, that's nice.

I: How do you think it would change the experience if the workshop was in person, rather than online?

A: Well, I've never done a group thing like that in person so I can only really say hypothetically. I think it would be easier to get to know each other in the group, because on screen it's a bit hard to see body language and there are some delays, but it also was much easier being online because of the pandemic, and it also meant no one had to travel in.

I: Yes, originally it was going to be an in-person workshop, but COVID meant that we had to make it happen through Zoom. It did make it more accessible to people, but perhaps put some people off.

A: I mean it was happening during the time where everyone was doing online pub quizzes and stuff, so I think it was good timing. It broke up the week a bit too, I was stressed all the time, but I was also really restless and bored. I'm not used to being stuck in the house, and when it first happened, I didn't think it'd be that difficult, but it really was.

I: When the workshop was developed, COVID hadn't actually started yet, and so it ended up coming to you all at a time where stress was much worse than it was predicted to be. How do you think COVID affected the sessions?

A: It was definitely more stress than the previous year, I mean it's different because second year suddenly counts and you have to work harder and the work gets so much

harder, but then you have the pandemic come on and suddenly bam, everything's way more stressful. I have asthma and that makes COVID really dangerous for me, so I've been isolating completely, and I was pretty lonely. So, it was definitely more stress than it would have been normally, but it still would have been a stressful time anyway.

I: It sounds like you had a lot of things to worry about. You said that at the start, before the sessions happened, you felt very stressed and worried. How did this change, if it did change, over the sessions?

A: The stress didn't really change cause the things causing the stress were always happening, it just kept coming in. But I definitely noticed a change in how I dealt with it. I could handle it better because I had the motivation and the plans, and like I said, taking a few minutes at the end of the day for the gratitude diary, that was really nice and relaxing. So, it was like the stress didn't change but the response from me did. I didn't worry as much about it, it was easier to switch off from it because I knew I had the plan, and I knew I'd stick to it.

I: That's great to hear that it helped you respond to it in a healthier way. Did you find any differences in the amount of time you spent worrying?

A: Yeah. I definitely noticed when I was worrying more, I was more aware of when it was happening. It made it easier to interrupt myself and stop worrying and focus more on the affirmations and the pathways. I think over time, that became a habit as well, because at the moment I don't really worry about things anymore, and when I do I manage to stop it quickly and change what I'm doing.

I: That's great. Do you think the sessions could be useful if they were provided to students as a standard option during their time at university, to try and help with their worries?

A: Yeah definitely, I don't know if people would all accept the option because I know some people just wouldn't keep up with it. Some people really don't have the discipline to keep up with daily exercises, but I think having the option would be really helpful for people that do.

I: You said you used the hope and gratitude exercises a lot during the sessions – do you still use them?

A: Yeah, I switched to an app for the gratitude exercise, but I definitely still do that. It sends me reminders on my phone so it's easier to keep up. And the hope exercises are more situational, I'll use it when I want to achieve a goal, rather than every day. But I still keep up with both of them, I think it's been more of switch in mindset than thinking of them as exercises now.

I: So, you find the hope pathways more like a habit you've formed to approach your problems, rather than an exercise you've got to sit down and plan out?

A: Yeah exactly. It happens more naturally now, especially as the one for my coursework and exams follows the same structure each time, so it's easy to just repeat it but tailor it a bit for each piece of work. A lot of my coursework and exams are similar, it's a lot of essays.

I: I can relate to that. I've just got a few more questions and then I'll let you go. Were the sessions tailored well for students? Is there anything you can think of that would make it more student-friendly?

A: Just the online thing I think, making the gratitude diary online and maybe having some form of app for the pathways. The presentations and everything were fine. I really hate when lecturers use emojis in their stuff, it makes me feel like I'm being talked down to, and you didn't do that. I liked the presentations because they were clear and gave enough information, but it wasn't like massive chunks of text.

I: Yes, I don't like big chunks of text in a PowerPoint either. We're coming to the end now – I just want to know if you have any other comments or suggestions about the workshop and how it was delivered?

A: Not really! I think just put stuff online a bit more, and people will probably keep up with it better than they would on paper. Maybe add a couple of sessions. I think people would be more likely to keep up with it if it was a bit longer. If there were more sessions, maybe we could talk about how we've been using the exercises in our lives more in the sessions.

I: That's really useful, thank you.

A: No problem.

I: Well, that's all my questions.

A: Awesome.

I: Thank you for coming to the sessions, and for signing up for an interview, I really appreciate your input on this. It's been really helpful for my research and hopefully it'll continue to help you.

A: Thanks for running it, I hope it goes well for you.

I: Just to reiterate from the information sheet – if you change your mind about participating in this interview, please let me know within the next week so I can withdraw the data. After that, I'll be transcribing it with all identifying details removed and then deleting the audio file, so it'll be completely anonymous.

C.5.2 Interview with Participant B

Participant of first intervention group

Interview taken 4 months after intervention

Interviewer – I

Participant – B (name replaced with B in the appropriate places)

[Pleasantries and introductions omitted]

I: So, this interview is just to get a feel for how you found the sessions, and it's a place for honest feedback. So please don't hold back, negative feedback is useful too. And if you don't want to answer anything that's absolutely fine, just let me know.

B: Sure okay.

I: And can you just confirm that you read the information sheet and the GDPR sheet, and that you signed the consent form?

B: Yes, can confirm.

I: Great, thank you. I'm just going to dive right in, if that's okay with you.

B: Works for me.

I: Good! So, if you think back to before the workshop, how would you describe your mental health?

B: Pretty shit, if I'm honest. I'm not usually the type to sign up for this kind of thing, but I was so stressed out I'd have tried anything. No offence.

I: None taken, don't worry. What was stressing you out so much?

B: Exams mostly, but coursework too. Nothing had happened or anything. I'd just been pretty lazy, so everything was piling up and I was really stressed. I knew it was my own fault, but that just made me feel guilty.

I: It can be a really stressful time for students, exam time was very overwhelming when I was a student. It's easy to let things pile up.

B: Yeah, it is, it feels like they don't give you enough time to do everything in.

I: It can be very overwhelming. Were you worrying a lot?

B: Oh yeah, a lot. I was losing sleep, literally. Couldn't sleep properly because I just kept thinking about everything I had to do. And when I did some of the work, I couldn't feel happy about it, I just kept thinking of everything else left to do. It felt like I had no control over it. I just couldn't stop worrying about everything. It was draining.

I: That sounds horrible, and really stressful.

B: Yeah, it was. So yeah, my mental health was pretty bad.

I: It sounds like a bad time for you. What were you hoping to get out of the workshop?

B: Honestly, just anything would have been good. I was really at the end of my line. I just wanted anything to help, and it was way faster than going through the doctors or

the uni. I still did that, went to the doctors and the uni, and I did get some help from the uni. But I'm still on a waiting list for IAPT, and I think the waiting time is a year.

I: The NHS waiting times can be very difficult to cope with, I've been on a few of them across the years and it can be very stressful.

B: Yeah, and it's not their fault, but it is really hard. I know you obviously said this isn't therapy or a replacement for seeking out help, but it was available really fast and just gave me a lifeline.

I: I'm glad it could give you something to keep you going. I hope things have improved for you.

B: They have, thanks. It helps that my exams are all over and coursework is done. Not that I get much of a break, it'll all start up again soon.

I: Are you worrying about that?

B: Nowhere near as much. I still worry but it's easier to stop it now and move onto something else.

I: I'm really glad that you've managed to stop worrying as much. So, as you know from the debriefing form, you were in the first group of the workshop – which sounds like it was a relief to you. What were your first impressions of the first session?

B: I missed the first couple of minutes because my WiFi is pretty shit. So, when I came in, everyone was doing their introduction bit. That helped to break the ice a bit. I could tell people were nervous to be around other people, but I enjoyed it because I was so bored stuck at home.

I: Yes, the pandemic definitely had people restless at home.

B: Super restless, yeah. I was in the baking bread stage I think, or the cycling stage.

Either way, it was nice to get a break from just sitting around stressing about uni. I was surprised you were the leader or whatever it is, no offence. You were just a lot younger than I thought you'd be.

I: Did that affect your engagement at all, with having the group leader younger than you'd expected?

B: At first, I thought it might be a bit weird because you were so close in age to us, but you were really professional, so that stopped feeling weird.

I: Okay, that's good to know. In the first session, we covered character strengths and gratitude. How did you find the content?

B: It was interesting. I'd never heard of character strengths before. I've heard of gratitude diaries; they were pretty big on Instagram for a bit. I liked the thought that we were focusing on positive things, rather than focusing on all the stress of uni. It was nice to get a break and just think about stuff I'm good at, rather than all the stuff I sucked at.

I: How did you find the gratitude diary, as a daily exercise?

B: I liked it. I mean, it was easy to do, which was surprising because I thought I'd struggle to find things I really felt grateful for. But you gave us the examples of being grateful for your friends, but also feeling grateful for just having iced tea, so that got the ideas flowing.

I: Did you manage to do it every day?

B: No, but most days. I forgot sometimes, but I set reminders to try keep it up.

I: Reminders are helpful, I do mine when I take my medication at night to try and bundle the habits together. Did you do the paper version or keep one digitally?

B: I did it on my phone, just in my notes app. It wasn't that I felt it should be done that way or anything, I just do everything on my phone. Makes it easier to keep up with it, too.

I: Do you think the workshop might have benefitted from the diary being offered as an online app?

B: Sure, I think apps make everything easier, but that's cause the workshop was for students. If it was different age groups, I'd say don't do it online. Plus, it depends on what phone you have – some phones don't have access to the same apps. And some people can't afford phones.

I: Good point. Did you have a preference between any of the sessions?

B: I liked the hope pathways one.

I: What did you like so much about it?

B: I'm not very organised, so the planning part of the hope sessions was useful for me. It gave me a routine to get into with dealing with my uni work. It was all stuff that was common sense, but until you pointed it out, I just wouldn't have done it. Like when you showed us how to do contingency plans and small goals, that makes sense, but I'd never have thought about doing that without the workshop.

I: Sometimes we all need a bit of guidance. Can you give me an example of one of your hope pathways plans?

B: Yeah, I've got them on my phone. My first one was about exam revision, so it's by itself but it also works into a bigger plan for all my other exams. They all link together so I could balance the work timetable out. The first step is that I would do an hour of revision on that subject every other day for one week, and then each hour has a specific category of revision. Then after one week I build it up to one hour every day and keep that going for two weeks. Then I've got steps about doing practice essays, and group revision too.

I: Did you face any obstacles in doing that?

B: Yeah, the group revision ended up not being very useful, everyone got bored and we ended up going for food instead. It's harder to stay disciplined when everyone is giving up.

I: It's very easy to get out of your good routine when everyone around you is encouraging you to. Did you have a contingency plan for it?

B: No, but I then put one in, in case it happened again. I just hadn't expected everyone just suddenly deciding not to do the work. I probably should have expected it.

I: You can't anticipate every obstacle every single time. That's why it's so important to set the goals to be small and realistic – that way, if one step goes wrong, it doesn't throw your entire plan out.

B: I got back on the plan the next day, so it didn't feel like I was failing. Which is how I'd feel before the workshop, I'd feel like I failed and then I'd feel guilty. The plan just helped me get back on track and not just beat myself up about it instead.

I: It can be really hard to get back into a plan when you don't have small, manageable tasks to complete. How did you find the hope agency part of the sessions?

B: I wasn't as good at that bit. I'm not very good at paying myself compliments. I get embarrassed at it.

I: That's okay, I think everyone finds it a bit awkward at first. Were you able to go ahead with it, despite feeling embarrassed?

B: Yeah, but only in my head. I didn't write them down; it felt a bit much. I did them in my head, though.

I: It's not necessary to write them down, whatever works best for you is best. Do you mind sharing one of your affirmations? No pressure if it's too personal.

B: Sure. I said things like 'you did the step yesterday, so you can do the step today'. You said that adding evidence to our affirmations could help, so I did that. I'd say, 'you did this, so you can do that'.

I: That makes sense to me. How did you find the group activities in the sessions?

B: Some of them were fine. Sharing the gratitude stuff was fine. I wasn't as good at sharing the affirmations, like I said it makes me embarrassed. But I just shared some of the less personal ones. I just didn't want to show all my feelings to strangers.

I: That is entirely understandable. Do you think you would have preferred one-to-one sessions?

B: I think so, yes. I can see why the group is useful, but I prefer things being private. I still would have been embarrassed to share it with you, but I probably would have shared more with just you than I did with the group. Not that they weren't nice, they were lovely, I'm just a bit awkward around strangers.

I: That's perfectly valid. The sessions were originally planned to be in-person, not over Zoom, but once COVID started spreading globally the research had to change to ensure the safety of everyone. Do you think the sessions being online changed much in terms of your engagement in the sessions?

B: I probably wouldn't have signed up if it was in person, to be honest.

I: Because of COVID?

B: No, even without COVID. With it being online I could be at home, in my own space, so it felt easier than going to a classroom with a bunch of strangers. I felt way more likely to turn up to all the sessions, and to open up with everything. It also made it easier for my schedule because I didn't have to factor in travel times, so I could just turn up.

I: I understand, it can be much nicer to do things we're uncomfortable with when we can control the environment. When the workshop was first planned, it was just before COVID really hit. How do you think COVID affected the sessions?

B: Well, the sessions were about worry and stress, and I think we definitely had more worry and stress than we would have done normally. It would have been high stress cause of exams, but not that high. Everyone was bored as well, so I think that helped with everyone turning up. We didn't exactly have busy schedules; we were all stuck at home just stressing. I think we probably got more benefit out of it, though, because of there being even more worry.

I: That makes sense to me. So, at the start, you said your mental health wasn't great. How did you find the sessions changed that – if they did change it, that is?

B: It was a bit weird because of COVID, everything was a bit unpredictable. So, the sessions really helped with preparing for anything. I mean, at that point, the news was constantly going between COVID death rates, America falling apart, and random horrible news like the Australian fires and murder hornets, so we were all just thinking 'what the fuck is going to happen now?'. It was ridiculous. So having the routine of 'for four weeks, on Wednesdays, I'm going to go to these sessions' was nice. It broke up the continuous cycle of shit.

I: It was a very hectic time, and everything was very uncertain.

B: It still is, but a bit less so. We've adjusted to the situation. Uni is still a bit uncertain. We don't know if we're going back in for classes, or if everything is just going to be done remotely. The idea of doing third year remotely is stressful. But it's definitely less stressful than it was a few months ago.

I: Why do you think that is?

B: I think it's a combo of the workshop helping me to worry less, and just getting used to the COVID situation in general. I mean, it's not exactly going anywhere anytime soon, so we've got to get used to it. I think at first, we thought it'd be over quickly like swine flu or whatever, but it's really, really sticking around.

I: It's certainly stubborn. We all have to adjust to a new normal for a while, I think.

B: Definitely.

I: What did you find useful from the sessions specifically for coping with the stress due to the pandemic?

B: Everything, really. In different ways. I liked that there were different things to apply to everyday life. The gratitude journal was nice because I got to just sit down and feel grateful for things, and during the start of COVID I think everyone really needed to sit down and think about the good stuff. There was just so much bad stuff. I think everyone would get benefit from just sitting and thinking about the things they're grateful for, it really does finish the day off with a happy note. And then the hope stuff was useful because like I said, everything was really unpredictable, so it helped to have plans wherever you could.

I: Do you still use the hope and gratitude exercises?

B: Yeah, I do. Less so the affirmations, but that's because I'm still not comfortable with being so positive about myself. That sounds really bad. I just get embarrassed. But I use the pathways and the gratitude all the time. I got my partner doing it too, actually.

I: That's great! Did you find any changes in how much time you spent worrying?

B: Less time worrying, definitely. Once we did the session where you told us about worry and when to notice it, I realised just how much time I was spending going over and over things in my head, but not doing anything to fix the issue. After that, any time I noticed that I was worrying, I'd stop myself and say, 'this isn't healthy or helping me', and then figure out something to change how I was acting.

I: Did you find it easier to change your response to stress as it went on?

B: Yeah, with practice it got easier. I don't worry a lot at the moment. I do sometimes, at night it gets harder to stop my head just spinning off on weird tangents. I feel like my brain switches into worry mode when I'm trying to sleep. But during the day, it's

easier, I can just stop myself worrying and change what I'm doing. I'll use the pathways a lot, to stop worrying being the focus, and that way I do productive things instead.

I: I'm really glad to hear it could decrease the time you spent worrying. Do you think the sessions could be useful if they were provided to students as a standard option during their time at university, to try and help with their worries?

B: Yeah, especially at the moment. My year at least had their first year and part of second year actually at university, in the classrooms and on campus, before COVID hit. I feel bad for the freshers coming in now, that are having to probably do their first year remotely. I think this sort of thing could really help people feel less alone as well. It would probably be best before exam season too.

I: That's great. I've just got a few more questions left. Were the sessions well-tailored for students, or do you have any suggestions on how to make them more student-friendly?

B: No, I think they were good. I think the only thing I'd suggest changing is having more of them, more sessions. The four were really good, and I think maybe six or eight would have been better. I think maybe to consolidate what we were learning.

I: That's a good suggestion. Would you have them focus on hope and gratitude also, or do you think other strengths could be considered?

B: I think I'd have the other sessions keep practicing the hope and gratitude. I would like to learn more about other strengths, but I wouldn't want it to become too much all at once, like too many exercises to do. So maybe one other strength – or just maybe some more practice of the hope and gratitude. I really enjoyed them.

I: That's great. Do you have any other comments or suggestions about the workshop, the sessions, and how you found it?

B: Not that I can think off the top of my head. I can email you if I think of something if that helps.

I: That would be great, feel free to email me anytime. However, I'm finished with my questions, so I'll let you go and enjoy your day. Just remember that you can withdraw this interview for any time up to a week, but after that it'll be transcribed and the audio file deleted, and it'll have become part of the data. So let me know if you want it removed within the week.

C.5.3 Interview with Participant C

Participant of first intervention group

Interview taken 4 months after intervention

Interviewer – I

Participant – C (name replaced with C in the appropriate places)

[Pleasantries and introductions omitted]

I: So, this interview is just to get a feel for how you found the sessions, and it's open for honest feedback. So please don't hold back, negative feedback is useful for me. And if you don't want to answer anything that's absolutely fine, just say so, it doesn't bother me.

C: Okay, will do.

I: Can you please confirm you've read and signed the consent form and read the GDPR and info sheet?

C: Yes, I have.

I: Thanks. So, thinking back to before the workshop – how would you describe your mental health then?

C: Not amazing, but not through the floor or anything.

I: What types of feelings were you experiencing during that time?

C: Some anxiety, some low mood. I wasn't getting much sleep, either.

I: That sounds difficult to deal with. Sleep affects so much. Did you find yourself worrying a lot at that time?

C: Not huge amounts, but more than usual.

I: What sorts of things did you worry about during that time?

C: Work mostly, but COVID was getting to be a problem as well. Everyone was freaking out over what was going to happen. Some people thought it would be over in a few weeks, some people thought it was going to mess up the rest of the year.

I: It was definitely hectic. While it's settled down a bit, it's still a bit up in the air.

C: Oh yeah. I mean, we're back in classes now but they're all online. They keep saying we'll be going back soon but I reckon we're going to end up doing the entire year remotely.

I: I imagine it'll be fuelled mostly by what the government decide to do, it's all very uncertain at the moment. Do you think you were worrying more than you would have been at that time, because of COVID?

C: I don't know. I think if it hadn't been COVID, I'd have just worried about something else. I think it's less the actual trigger and more about my mind just running off with whatever it gets its hands on.

I: It sounds like you were in a habit of worrying, rather than it being worry about specific problems.

C: Yeah, that sounds about right.

I: So, if you think back to that time, you've got all this stress and worry going on around you. What was it that made you sign up for the workshop?

C: I wanted to feel better.

I: What would feeling better look like, to you? Would it be worrying less, or your low mood getting better? What sort of picture did you have in your head?

C: I think it was that I wanted to feel better in my mood and worry less so that my sleep would be better. The sleep thing was driving me up the wall. Not sleeping is so much worse than people think it is.

I: As a fellow insomniac, I can relate. Had you sought out advice elsewhere, from a doctor or the uni?

C: I tried to, but the doctor just wasn't very sympathetic. He basically told me to Google mindfulness. Which, I'm not saying is a bad suggestion or anything, I'm sure it works. But I wanted someone to help me, not to just blindly delve into self-help.

I: I understand what you mean. Self-help is wonderful but sometimes you need or want a guide.

C: Yeah, exactly. So that's another thing I wanted out of the workshop, someone to guide me so I didn't have to figure everything out myself.

I: Did you get that from the workshop? Don't worry if the answer is no, I won't take offence, I really just want to know your honest opinion.

C: It's okay, the answer is yes. The workshop was good.

I: Cast your mind back to the first session. What were your first impressions?

C: I think I talked too much. I live with one roommate, and we're so used to each other, so it was sort of the first proper human interaction I'd had in a couple of weeks cause of COVID. It was fun, though. Classes had ended so I was a bit bored just revising constantly for exams and writing coursework. It was nice to just learn something for the fun of it rather than for classes.

I: How did you find the presentation aspect of the sessions?

C: Really good. I liked your colour schemes. That sounds weird, sorry.

I: Don't apologise, I'm happy to hear that. I agonised over them for longer than I'd like to admit.

C: Well, you picked nice ones. It was really clear, and I liked that it wasn't all negative stuff. It was focused on positive things, and I liked that. Usually that sort of stuff makes me cringe a bit, I guess I'm too British or something, but I think everything was so negative at that point that I just wanted to soak up some happiness.

I: I get what you mean. How did you find the hope and gratitude sessions?

C: They were cool. I'd heard of gratitude diaries before, I think everyone's heard of them. And everyone knows affirmations. But I hadn't really given them much thought before because I thought it was just usual social media nonsense. After you told us about the psychology behind it, it had a lot more credibility.

I: Did you have a preference between the sessions?

C: I liked the hope pathways one. I think because it was new to me, but also because it was really useful for the time. With exams and coursework, I mean.

I: How did you use it to help with exams and coursework?

C: Well, I kind of suck at motivating myself. I'm a big procrastinator. Like, I'll sit down to do my coursework and suddenly I've cleaned my whole flat and done a clear-out of my wardrobe, but I haven't written a single word of my coursework. So, the hope pathways were really good at giving me motivation to keep going with small, manageable tasks.

I: I'm happy to hear it gave you motivation and some guidance. Do you still use the hope pathways?

C: Yeah, I do. I write it down as well. I made a template to note down all the obstacles I might face and the contingency plans. It's really helpful. I'm way more organised because of it.

I: That's amazing, I'm very happy it's worked for you so well. Can you give me an example of one?

C: Sure, I can send you it, if you'd like.

I: That would be wonderful. Can I include it as part of the interview? I will make sure to anonymise it.

C: Yeah, that's fine. I'll send it to you after the interview.

I: Would you mind talking me through it?

C: Sure. So, it's one I'm doing at the moment, it's for a piece of coursework. Step one is to read the coursework question, because sometimes I misunderstand the point of the assessment if I'm flustered. Step two is to organise all the relevant notes from the lectures into one folder so I can more easily access them together.

I: That's good.

C: The third step is to search for relevant journal articles and books on the coursework topic and save them into one folder. These first few steps are all basically the same for my plans on coursework, so it's not specific yet to the coursework piece. Once I've done step four it becomes more specific.

I: So, you start off with the general plan and then tailor it as you get more information?

C: Yeah, exactly. So, at step four, which is to read the articles and book chapters, that's usually where I'd get really bored and end up procrastinating. And I'd tell myself 'Okay, you can break for an hour and then go back to it' but I'd wind up going past that hour. So really, I was my worst obstacle.

I: Did you identify contingency plans for that?

C: Yes, so rather than just taking that break the moment I got bored, I'd set myself the goal to do one article and make notes, and then I could take a break. But while on the break, I would set a timer, so I had to go back to it. Sometimes it's a bit hard to keep up with that because it's all dependent on my own ability to keep myself going.

I: Did you have any options to help with that?

C: Yeah, sometimes I'd ask my flatmate to hold me accountable for it. He'd come into the room when the timer was up and make me get back to it.

I: That's good, sometimes asking for outside support is the best way to achieve a goal. How did you find the affirmations part of the hope sessions?

C: I like that sort of thing.

I: Can you give me an example of one of your affirmations?

C: I don't have those written down. I use them more like when I get flustered or anxious to calm me down, rather than before a project or something.

I: Okay, so let's say that you are mid-project, and you get really anxious about a step and decide to use an affirmation to calm you down. What would you use?

C: Maybe 'you do not have to do everything all at once, you can do this small step'? I think that'd be what I'd tell myself.

I: That's good, and a good way to calm down. How did you find the gratitude session?

C: I liked it. I like the diary.

I: How did you find using the diary across the four weeks?

C: Good, it was a bit weird at first because it's a new part of the night-time routine, but I liked it. I thought about it while I did my night-time skincare, like what you said about habit bundles.

I: That's good, sometimes bundling habits together can make one habit easier to adapt to. Do you still use the gratitude diary?

C: Yeah, I don't really write it down, but I think of three things every night while I do my face.

I: That's great. What did you think about the group activities in the sessions?

C: I always find group activities a bit awkward, but everyone was really nice, so it was fine. And it helped with what I was saying earlier, that with just one roommate we were kind of going up the wall because we hadn't had much human interaction except with each other. So just having that interaction was really nice, like it would have been in normal classes.

I: Well, speaking of COVID – the sessions were originally planned to be face-to-face, rather than online. I had to redo it when COVID hit. How do you think that changed the experience?

C: Oh, I bet it changed it loads. Face-to-face would have been good if it had been earlier in the year, because we'd have been on campus for classes. But I think when we did the workshop, classes had basically finished anyway, so we would have had to make the trip in just for the sessions. I think you'd have had people dropping it halfway through because they couldn't be bothered. Online is easier to attend.

I: That makes sense to me. Would you have personally preferred face-to-face sessions?

C: It doesn't make much difference to me, I think. I just don't mind. Online is good, it's become way more of a thing since COVID.

I: COVID has put us through a ton of changes. The intervention, as you know, is designed to help reduce worry, but I didn't expect us to be going through such a worrying time when I designed it. How do you think COVID affected your experience of the sessions?

C: That's a good question. I reckon it's affected it in a hundred different tiny ways that we won't even realise. Like, it caused us all to be just naturally more anxious and stressed out, and it made the future really uncertain, plus on top of that you've got the restlessness and boredom of being stuck at home with nothing to do. And then a thousand shitty things are happening around the world, and everyone's developed this weird apathy where it's like 'okay, yet another horrendous thing is happening, I'm too tired to care'. It's been a really weird time.

I: Yeah, it's been really exhausting for everyone. Did the sessions help alleviate any of the anxiety and stress?

C: Sort of. I think it definitely helped make my anxiety better, but it's not like the stressors went away. And it just kept on coming and coming, like things piled up really fast, and they're still coming. But I think the sessions helped me sort of take a step back from the stress and think about how to deal with it better. So, I think it's more that it gave me a better way to address the problems.

I: And that in turn alleviates the anxiety?

C: Yeah, exactly.

I: Did you find any difference in the amount of time you spent worrying?

C: Oh, sure. I started out with probably a medium amount of worry, like I didn't spend all my time worrying but it was definitely more than usual. I went back to my normal amount after the sessions, but that was great for me because it was what I'd think of as a healthy amount of worry, during a stressful time. So that was nice because it felt like I was back to my normal self. I don't think you can ever really get rid of worry altogether, it's normal to worry a bit. But it was definitely good to get it down to the normal amount.

I: That's great to hear, I'm really glad that it's helped you. Do you think the sessions could be helpful for students if they were offered as a standard part of their year?

C: Yeah, definitely. I think it'd be good as well as a preventative thing, like giving them to the students at the start of the year so they can deal better with stress and worry when it comes up, rather than addressing it later on.

I: That's a great suggestion. Did you find the sessions were appropriate for students?

Were there any changes you'd suggest for the sessions themselves?

C: The sessions were fine, I enjoyed them. They weren't boring. It was a good mix of learning and practicing. I'd have said to do a few more, though, because four is fine but I think we'd have gotten more from the group aspect of it with more sessions.

I: Can you elaborate on that?

C: Yeah, I just think that groups take a couple of sessions to get comfortable around each other anyway, so it'd just be better if there were more sessions. Maybe if there was just a session where we talked about worry and stress, and what it was we were struggling with, we'd find the common ground there? That way we can all start the rest of the workshop with a clear foundation with each other.

I: That's actually a very interesting suggestion, I hadn't considered having a foundation session where everyone got to know each other. Thank you, that's really useful.

C: No worries.

I: Was the balance in the sessions between hope and gratitude appropriate?

C: Yeah, I think it was a good amount.

I: Would you have any other strengths be included in the future?

C: Maybe one more if you were doing more sessions, but I think it'd get too much after that. I guess you could do a session on the signature strengths for each person, but that might be too much too, because everyone's strengths are different.

I: That's true, it would be a more complex process. That would be better suited to a one-to-one type of workshop, I think. Would you have personally preferred a one-to-one series of sessions, or did you prefer the group set-up?

C: I've never really done a one-to-one session thing with anything like therapy or self-help, so I can't know for sure. But I think group is better for me, mostly because I like being able to see I'm not alone in what I'm doing, and it keeps me motivated if there's more than just me in it. No offence, I know you'd be helpful, but it's different when it's the people doing the workshop in the same role.

I: None taken, I understand what you mean. The person leading the workshop and the people doing the workshop as participants can be totally different.

C: Don't get me wrong, I felt like we could all approach you about anything. But sometimes it's nicer to go through it with someone else.

I: Completely understandable. Do you have any other suggestions or comments about the sessions, the content or the structure?

C: No, I think we've covered everything.

I: That's great, thank you so much for coming. Just to remind you from the information sheet – you can withdraw this interview for up to one week after it takes place, but after that the audio file will be deleted and your interview will have been transcribed and anonymised.

C.5.4 Interview with Participant D

Participant of first intervention group

Interview taken 4 months after intervention

Interviewer – I

Participant – D (name replaced with D in the appropriate places)

[Pleasantries and introductions omitted]

I: So, this interview is just to get a feel for how you found the sessions, and for honest feedback. So please don't hold back, negative feedback is useful for me too. And if you don't want to answer anything that's absolutely fine, just let me know.

D: Okay, I'll make sure to be super negative.

I: Excellent. Can you please confirm you've read and signed the consent form and read the GDPR and info sheet?

D: Yes, I have.

I: Thanks. So, thinking back to before the workshop – how would you describe your mental health then?

D: Oh well I can be super negative about that. You know that meme where the dog is like 'everything is fine'? That's my mental health before the workshop.

I: Oh no, that sounds like a lot. Was anything in particular causing it?

D: You name it, it was stressing me out. I'd just broken up with [name] because he was cheating on me, my nan was in hospital, COVID was messing everything up and I was stuck in my flat by myself, unable to even visit my nan. It was a really shit time.

I: I hope your nan is okay?

D: She is, yes. It was a rough time because COVID meant we weren't allowed to visit her in hospital, it was just a big mess. So yeah, my mental health was just straight up bad.

I: I'm really sorry to hear you went through such a rotten time. Is that why you decided to sign up for the workshop?

D: Yeah. This isn't going to sound very nice, but I wasn't expecting much from it. I wasn't really expecting anything to help me at that point, but I was just sort of reaching out for anything.

I: Don't worry, it's not your job to be nice about anything, just be honest. It sounds like you were at the end of your tether.

D: Yep, I was going to end up having a full-blown breakdown if I didn't do something.

I: Did you spend a lot of your time worrying?

D: It'd be easier to ask if I spent any time not worrying. I think I spent a solid week just thinking of all the possible outcomes of every single situation I was in. It was exhausting, I was knackered all the time.

I: That does sound exhausting. Did you find your worry levels were much higher than they would be during a normal time?

D: Yeah, I mean I'm a bit of a worrier anyway, but this was ridiculous. Usually, I'd worry about just things that stressed me out, but before the workshop I was worrying about things that wouldn't even bother me usually, I was just in this weird repetitive cycle.

I: Sometimes, it's easy to forget what we would usually do once we've found a new cycle.

D: Yep. It was rough.

I: It sounds it. What were you hoping to get out of the workshop, if anything?

D: Honestly, I didn't even dare hope for anything, I thought if I went in with zero expectations, I'd not be disappointed. So, I went in thinking 'this is just another class'.

I: That's understandable. What were your first impressions of the session?

D: Good question. My memory is absolutely pants, sorry. I remember I was really tired that day, so I went in feeling really low energy. I'm usually quite bubbly in social situations but I was absolutely knackered. Other than that, I don't really remember what my first impressions were.

I: That's okay, thanks for being honest. How did you feel after the first session, if you remember that?

D: Yeah, I remember that because I called my mum and talked to her about it. Nothing that would breach confidentiality or anything, just like told her what character strengths were. We did the signature strengths survey thing together, we had similar results.

I: That's very cool, I like seeing how I match up with people I know. I do it every few months to get a sense of how I'm changing over time.

D: It was pretty cool. We're quite similar people so it made sense.

I: It was similar for me and my partner, we match on a lot of things on that survey.

How did you find the content of the sessions in general?

D: Pretty interesting, like it was all brand-new stuff to me. I know a couple of people in the group knew what gratitude diaries were, but I had no idea. So yeah, it was all new stuff and I really enjoyed learning it. It felt like I was taking a class I actually wanted to take, not just one I had to take because I needed to pass my exams.

I: How did you find the gratitude diary, as you'd never heard of it?

D: At first it was really hard. Like, what I said about everything just piling up, it was *really* difficult to find anything to be grateful for. I had to start with really, really little things, like just having a coffee or having a nice meal. It was a bit depressing because I had to scrape the bottom of the barrel just to find something. But it got easier, and your examples did help.

I: That's good. Did you manage to do it every day, even though it was difficult?

D: Yeah, I'm really stubborn, so I kind of did it out of spite at first. Like I was flipping off life and telling it 'Screw you, I'm going to find things to be grateful for'.

I: Spite is a powerful motivator sometimes. Maybe I should be teaching that instead of hope.

D: That would be funny.

I: It's good you managed to do it every day because that's when it's most useful. Did you have a preference between the hope and gratitude sessions?

D: I don't think so. All of it merged into one, if you get me. So, it wasn't like 'this is the hope bit' and 'this is the gratitude bit', it was more like all of it was about making worry better.

I: That's very interesting. What did you think about the hope exercises? Did you find those difficult as well?

D: The affirmations, yes. I'm sort of the typical 'ew no' person when someone compliments me, and it's way worse when it's me doing it to me. I feel daft. But like I said, I'm really stubborn. So, I just got on with it.

I: It sounds like you're determined to achieve anything you sign up for.

D: Yep, that's me. I don't like failing. I just kind of funnel all my energy into getting things done. The affirmations were really awkward at first, I had to put them in a sort of backhanded compliment way to be able to do it. Like now I'd be able to say, 'you're capable of doing your work today', but at the start I'd be like 'you're capable of doing work when you actually try'. That sounds really bad, but it worked.

I: I'm not here to judge, don't worry. You sound like you knew why you were doing that and worked hard to get to a better way of using affirmations, which is really good and impressive.

D: Thanks, I appreciate that.

I: Was the pathways session easier?

D: Oh, yeah. That's much more 'me'. It was all about planning and preparing for things in advance and I love doing that. But it wasn't just about how to be organised and prepared, it had really good tips on how to make a plan that was easier to stick to. I

really liked that. It helped me put down how I was going to navigate exam season around all the other crap that was happening. Sorry, I shouldn't swear.

I: It's okay, I want your honest feelings; if that includes swearing, it includes swearing. Don't worry about it.

D: Okay.

I: Could you give me a possible example of your hope pathways?

D: If you give me a minute, I can get one up, they're on my laptop.

I: Sure, that'd be very helpful.

[break while participant accessed their hope pathways]

I: Can you walk me through it though, for the interview?

D: Yeah, of course. Okay so this is for a project I was doing that was multi-media, so we had a practical aspect of it where we worked with a – it's an art technique we were studying, it's a really long story. Basically, we had to do an art piece, but then we also had a paper to write on the technique and do a presentation on our process.

I: Sounds nice and complicated.

D: Oh yeah, everyone hated it. The piece itself was fine but writing on theory and art history is very boring, and I hate doing presentations. At least it wasn't a group project. But yeah, so the pathways helped me to balance all three aspects.

I: Okay, so what were the first steps?

D: So, I had specific steps talking about the time I would allow for the piece itself. It can be kind of hard to predict how long it would take, so I said I'd spend like an hour on it minimum a day for a week and see how I had done by the end of the week. That way, I'd be able to predict how much more time needed to be spent on it.

I: That's a good plan.

D: Thanks. I didn't actually need that bit in the end because I ended up getting absorbed into it and just getting it done within the week. So, the rest of the plan was focused on the paper and the presentation. The next steps were to make notes on my process, so that I didn't forget anything. Then I moved onto compiling that into the presentation, because that was more reliant on my memory of my experience making the piece, whereas the paper is pretty separate.

I: I understand. Did you note down potential obstacles and contingency plans?

D: Yeah, so I wrote down any obstacle for each step, which could honestly have been a lot of different things. Nan was in hospital, and she was due to leave at any point, and I might have had to go back home to help take care of her while my parents were at work. I get unwell easily as well, so I was trying to avoid a virus that was going around – as well as COVID, I mean. So, my contingency plans mostly rested on making sure I had flexibility in my schedule, so I could accommodate any surprise emergencies.

I: That's a good way to plan. Did you end up having to use any of them?

D: No, which was nice. And a surprise. But just having them there took away a lot of pressure.

I: So, if you think back to the sessions themselves, what did you think of the group activities?

D: They were good, I liked that I could hear what other people were thinking of. It helped with the gratitude diary, to get some inspiration on places I could look at in my own life for things I was thankful for.

I: That's good. Do you think the sessions being held in a group was best, or would you have preferred one-to-one sessions?

D: Oh god, no, I'm glad it was a group. No offence again. I was really alone and freaking out in life, so I looked forward to seeing the group every week for a few weeks. It was nice just to have some different company.

I: I'm glad you got to have some company out of it, it sounds like you were going through a frustrating and lonely time.

D: Yeah, it really was quite lonely.

I: Originally it was supposed to be held in person, rather than online, but when COVID happened, the research had to be changed in order to keep people safe. Do you think you would have preferred in-person sessions, or was online just as effective?

D: Personally, it doesn't matter to me either way. I mean, it's easier to do online in the sense that we don't have to get to campus to do it, but honestly, it's not a big deal either way for me because I don't live far away from the campus. It was just nice to be able to do it.

I: That's good. When the workshop was first planned, it was just before COVID really hit. How do you think COVID affected the sessions?

D: How much time do you have? COVID has affected everything. We were all extra stressed. We had extra pressure. It's not letting up either. It's like this is the new

normal and we're all freaking out about the future. So yeah, it's probably affected the sessions a lot and it definitely affected us.

I: What do you think the biggest effect was?

D: Definitely the stress. I don't know how to put it. It was just relentless stress, and you don't get a break from it because it's an ongoing thing. Everyone was in panic mode, plus there are tons of complete idiots walking around saying it's a hoax, which was really pissing me off. The panic has settled down but the stress has only gotten worse, I think.

I: You said your mental health was really bad before the sessions. Did that change over the sessions?

D: Yeah. It fluctuated a fair bit. I went up and down. But I definitely had more of a plan, and more to rely on when stress came along, so I think my worry went down for sure. That was a relief because it was taking over my life.

I: I'm glad to hear. How would you describe your mental health now?

D: It's a bit more stable, it doesn't rock up and down all the time. That in itself is a relief to be honest. My nan is home safe, and everyone's adjusted a bit more to COVID, and I've had time to grieve my break-up. So, I think I've got a more stable environment and now I can just focus on the normal things people stress about, like going into third year. Everything just sort of crashed down around me at once, so it was nice that everything is just staying put for now.

I: Do you think anything in the sessions will help you with the change to third year?

D: Totally, all of it. I think everyone's going to get really nervous about dissertations and I think the hope pathways are going to be way useful with breaking the dissertation down into small goals.

I: Do you think then that the workshop would be useful if it was offered to students as a standard part of their year?

D: Oh yeah, I think it'd be really helpful. Even if it's just to give them some extra support when they're going into the really stressful time. But I think it'd be good for second years too because second year just is a massive step up in difficulty and stress.

I: Second year being really stressful is one of the reasons I designed this to be useful for second year students. I remember it being very hard. It was absolutely my most stressful year.

D: Yeah, it is. Everyone tells you it'll be harder, and you think they're exaggerating, but they aren't, it's really hard.

I: You said you'll be using the hope pathways during your third year – do you still use them and the other exercises now?

D: Yeah. The affirmations are still hard, but like I said, I'm stubborn.

I: It gets easier the more you do it. I was also a bit embarrassed when I started doing them, but after a few months it's much easier to be positive about yourself.

D: I'm hoping I get there, because it is a bit depressing that it's so difficult for me to be nice to myself. The gratitude diary got way easier, though.

I: That's good. You mentioned it was scraping the bottom of the barrel to fill in the gratitude diary – did that get easier for you?

D: Yeah, definitely. I found many more things to be grateful for after everything settled down a bit. It's not hard to do now.

I: That's good. You said that your worry went down after the sessions. Can you describe why you think that is?

D: I think it's because I felt like I had more control over it. Before, it felt like worrying was all I could do to be prepared, to feel ready for anything. If I pictured all the possible things that could happen, I couldn't be surprised by anything. But the sessions showed me that I could choose to do something else. That worrying wasn't just something that happened, it was something I was actively choosing to do, and I could choose something else.

I: That's great. Just as a last question – do you think the sessions were well-tailored for students, or do you have any suggestions for changes to make it more appropriate?

D: No, I think it was fine for students. You related stuff to things we'd be worrying about, like exams and coursework, and that was useful. I think it would be fine to use with other groups, though, like it wasn't set up so only students could use it.

I: Brilliant. Do you have any other comments or suggestions?

D: Not that I can think of. I'll email you if I think of anything.

I: Thank you, that's really helpful. Well, I think that's everything on my end. Just to remind you, it's on the debriefing form, but just to reiterate – the interview can be withdrawn up to a week after it takes place, but after that your audio file will be deleted anyhow and all data will have been transcribed and anonymised.

D: Got it.

I: Thank you so much for coming.

C.5.5 Interview with Participant E

Participant of second intervention group

Interview taken 4 months after intervention

Interviewer – I

Participant – E (name replaced with E in the appropriate places)

[Pleasantries and introductions omitted]

I: So, this interview is just to get a feel for how you found the sessions, and for feedback. Negative feedback is useful for me too, so please don't worry about offending me. And if you don't want to answer anything that's absolutely fine, just let me know.

E: Okay.

I: Great. Can you please confirm you've read and signed the consent form and read the GDPR and info sheet?

E: Oh, yeah, I did that.

I: Thanks. So, I'll just dive right in if that's okay with you.

E: Go ahead.

I: So, thinking back to before the workshop – how would you describe your mental health at the time?

E: I was anxious. I'm a bit of a germophobe and COVID was really wiggling me out.

I: So, it was making you anxious and triggering some responses to health anxiety? Did you notice yourself worrying?

E: Health anxiety, yeah, that's it. I worried all the time. I kept picturing all the ways I could get ill, or everyone I knew could get ill. My friends and family are really casual about it, they don't seem to think it can even get to them. It's really fucking stressful because I've got to run around making them use sanitiser and masks, and it's like pulling teeth.

I: That does sound very stressful, I would be very anxious about my family and friends if they weren't careful.

E: It's ridiculous, really. All the information out there and they think they know more because they read a Wikipedia article six months ago.

I: It sounds as though you had to take the burden of responsibility with sensible decisions.

E: Yeah. I've tried to let go of it; I've definitely gotten better about it since the workshop. I'm trying to just remember that I can only control what I do, not them, and that it's on them if they get unwell.

I: It's good that you're focusing on what you can control and trying to worry less about the others. Is this anxiety you were feeling what encouraged you to sign up for the workshop?

E: This is going to make me sound desperate, but I sign up for anything I can get my hands on for mental health. I'll try literally anything to improve my mental health, I think it's so important.

I: It definitely is important to take time for yourself and learn new things for your mental health. Had you done anything involving positive psychology before?

E: Not in a group, or with a leader, it was just self-help stuff I found online with the gratitude diary. But honestly, it wasn't that great because I didn't know why it was supposed to help, and I didn't have the motivation to keep up with it. So, my experience of positive psychology hadn't been great.

I: Sure, that makes sense to me. Did that affect how you approached the sessions?

E: Probably. The thing is, because I sign up for everything, I'm also disappointed a lot. It's just that not everything works, and so I built a bit of a sceptical attitude to it all. But I keep going. Sorry, that sounds really negative.

I: It's alright, all of your feedback is valuable to me. So, if you went into the first session feeling a bit sceptical of it being useful, how did you then find the session?

E: Oh, really good. I felt a bit stupid actually for being so judgemental about it. I went in thinking 'I bet this is just some 'think positive' bullshit', and then I got there, and you were like 'hi, here's the psychology of why worrying is probably not great and here's some coping strategies to replace it' and I felt really bad for assuming I knew what was going to happen.

I: I'm just glad that you found the session to be a pleasant surprise. Did you enjoy the session?

E: Oh yeah. I felt so much better after it, like I was walking on air for a few hours. I felt energised for the first time in ages. I really looked forward to the next session.

I: Well, I appreciate that, thank you. Did you have a favourite session?

E: I did, actually. I really liked the affirmations one.

I: Do you mind elaborating on why you think that was your favourite?

E: Sure. I think it was my favourite because it was a surprise. Everyone knows what affirmations are, it's not like we'd never heard of them before. So, at first, I thought 'whatever, this is going to be boring' and a few people were super awkward with giving themselves any kind of compliment. But I gave it a chance because the first session had been really good. And then you sort of just surprised me with telling us how to make affirmations that were specific, and about things that we needed motivation for.

I: So, the specific guidelines on how to craft affirmations was the reason you enjoyed the session?

E: Yeah. When you hear 'affirmations', you think of people posting on Instagram with crap like 'I'm amazing, I'm fabulous' and honestly, it's just a major eye roll. But then you showed us how to make affirmations that were like 'I'm capable of doing two hours of work today' and 'I've proved to myself that I can easily do this revision', and that just made so much more sense. It felt stupid at first to say out loud this stuff, but I really liked it. It helped me focus on the task at hand.

I: That's so great to hear. Saying affirmations out loud can be really uncomfortable at first, but it does get much easier. How did you find the other hope session?

E: I liked it. It mixed things I knew with things I didn't. I knew about SMART goals and whatever, because the uni goes on about them all the time. But I liked combining it with contingency plans and obstacle spotting. I thought it was really interesting and I liked that when I did it, it worked. It proved itself as a good method.

I: Seeing the evidence of something working can be the best motivation of all, really.

E: Oh yeah, for sure.

I: So, how did you find the gratitude session in comparison to the hope sessions?

E: Well, like I said I'd come across gratitude diaries before, so the actual writing of the diary was pretty easy for me, like I got the process of it. But I think I just like knowing why things work, and what's going on when I do something. I like knowing the mechanisms behind things. I think it just makes me believe in it more. So, your information on why it helps, that was really good for me. It gave me way more motivation to keep going.

I: Fantastic. Did you manage to do it every day?

E: Yeah, pretty much every day. I think I skipped two days over the four weeks just because I forgot, but most of the time I did it.

I: That's good. Do you still do it now?

E: No, I really should have done but I let it slip. I still do the affirmations and the hope pathways planning thing, so I think it might just be that I didn't click with the gratitude diary as much. Or maybe because it's more like a gentle background thing that builds over time, rather than something I whip out for a specific issue.

I: Okay, so you think the gratitude diary was harder to maintain because it was a constant, rather than a situation-specific tool?

E: Yeah, exactly.

I: Okay, that makes sense to me, thank you. Can you give me some examples of your affirmations and one of your hope pathways?

E: Sure. So, my affirmations today were 'I am capable of doing an hour of work before my interview with Cam' and 'after my interview, I will be able to make myself a healthy lunch and go back to work'. I'm trying to lose weight at the moment and the affirmations are helpful as hell for that.

I: They're both great affirmations, very specific and motivating.

E: Thanks. With the hope pathways, I got to pick my dissertation title this week so I'm making plans for it, but I've used the hope pathways to keep it small and specific rather than focusing on the overall goal of 'writing a dissertation'. So, my hope pathway for the first chunk is researching the subject, compiling a list of papers and journals I can use, and finding books. The obstacles are all around getting bored and losing motivation, and also because the goal is at the end of the year it's so easy just to say 'whatever, I'll do it later' and go do something else. So, I've written down different ways I can stop myself from getting off-topic.

I: That sounds like a well-constructed and thorough pathway you've put together. You should be really proud of identifying those obstacles and finding ways around them.

E: Thanks, I am actually.

I: So, if you think back to your mental health before the workshop, and your mental health after, would you say there have been changes?

E: Definitely.

I: What sort of changes have there been?

E: I'm less anxious, definitely. I'm just less stressed in general because I spend less time going over and over all the shit around me. I don't spend hours just thinking of all the horrible ways my friends could get COVID and die. It does help that I've had time to get used to COVID just being around, but it still freaks me out. It's a relief not to spend all that time worrying and – what is that you call it when you just spend loads of time going over and over scenarios?

I: Ruminating?

E: Yeah, it's a relief not to be ruminating all the time.

I: Why do you think you've stopped ruminating a lot?

E: I'm not really sure. I think it's because I know what to replace it with. Before, I'd beat myself up for ruminating and say, 'just stop worrying!' but that doesn't actually help anything, because obviously there's nothing to replace it. The sessions gave me something to replace it with. And it felt like I had much more control over it that way.

I: Wonderful, that's so great to hear. Will talking about COVID in this interview be unpleasant for you, given your health anxiety?

E: No, it's okay.

I: Okay. It's just that when I originally developed the workshop, it was before COVID became an issue. I had to change it to be online, rather than face-to-face. How do you think that would change the experience of the workshop?

E: Honestly, I've done some workshops in person and some online, and I don't think there's much difference. I guess you can't see the whole body of the people you're doing the workshop with, so you miss out on some body language, and you've got to put up with any technical problems. But really, I think the difference is so small, I'm just nit-picking at that point.

I: I understand. Some people have mentioned that they'd have preferred a one-to-one style of workshop rather than a group workshop. What do you think your preference is?

E: I don't really have a preference in general. I get why both of them are important. But I think for this workshop specifically, the group will have worked better than one-to-one. I think you need the group exercises to help people learn it all and practice it.

I: So, you found the group exercises to be useful?

E: Yeah, I always find it helpful to have other people giving their own examples of things, so that I can make sure I'm on the right track. Everyone in the group was really nice, and really putting in effort as well, so that did genuinely help so much. I think it was a good atmosphere, like everyone was there with the same problem and everyone wanted the same answers.

I: That's good to hear, and I agree that everyone did put in a lot of effort into the sessions, which was helpful for me. You've said about how you were really struggling

with COVID and the effects it was having. How do you think it affected the experience of the workshop for the group as a whole?

E: I think everyone was just really stressed. I think usually, we'd have been stressed, because it was exam season and classes had finished and third year was coming up. But that we all expected, we all knew that part was coming. But then COVID hit and how exactly were we supposed to cope with that? No one had seen it coming. And I get wigged out during flu season, so a global pandemic was just the worst-case scenario for me.

I: And how did that change over the sessions?

E: I think it was a combination of being more grounded in the things we could control and having alternatives to just sitting around stressing about it. That sounds so stupid, because obviously we had other options before, but I think it's just that you forget about everything healthy you could do in the moment.

I: It doesn't sound stupid. Everyone needs guidance and to learn new coping methods sometimes. It's never stupid to seek those out.

E: Thanks.

I: No problem. Do you think the workshop could be useful if it was offered to students as part of their course?

E: Yes. I mean, honestly, I think students are kind of chunked into the deep end. We come to university, living independently for the first time ever, and they talk about how first-years are handheld through their year, but they're really not. We're just kind of thrown into classes and ignored. And then we start second year and it's really ridiculously difficult but there's no support offered for it. I don't know, I'm not saying

that they don't care about us, but it does feel like they think students should be fighting their way through uni, rather than actually enjoying learning and being challenged.

I: That sounds like it's a struggle for you to get through the academic year.

E: I think it's the same for everyone. We've got to go out of our way to support each other, and find other ways to cope, rather than the university actually giving a fuck about us. I think this year is going to be so weird, and we're probably going to spend at least half of it remotely learning, but I don't think they're prepared at all for how much that'll change students.

I: It is certainly a new situation to be in, for everyone, and I think no one was really prepared for this new normal. It's going to take a lot of time to adjust.

E: Yeah, definitely.

I: Just to steer us back to the workshop –

E: Shit, sorry, tangent.

I: It's fine, really. I like hearing all of your thoughts about this. All of it is really useful to me. I just wanted to know if you thought the sessions were appropriately designed for students.

E: Yeah, they were fine. I think there's a thing among some lecturers where they try to make it appropriate for students by adding memes and stuff, but it's always really old memes or slang that's really old, and it just gets a bit cringe. That sounds really mean, I know they're doing it to try and connect with us, but it's just a bit unnecessary.

I: I know what you mean. I keep getting targeted ads for life insurance and they add so many emojis into it, and it's completely unnecessary.

E: I know which ads you mean, that's so funny. But yeah, the presentations weren't like that. You just talked to us like adults, which really shouldn't be such a big deal but sometimes it really is. Most of the time we're either being spoken to like kids, or like irresponsible teenagers. Or we're being told by the world that we aren't real adults, and that we're not allowed to act like them. It's bizarre.

I: I understand. A lot of adverts directed at students can be patronising. I just have one question left – do you have any other comments or suggestions about the workshop at all?

E: Actually, yes. I think it could have been longer. Four sessions were good, but I think one more just to sort of practice a bit more with everyone, that would have made it just a bit better.

I: Thank you, that's useful to know.

E: That and honestly, I usually come away from any kind of workshop I enjoyed wishing there were a couple more sessions. I think I could do a hundred sessions of therapy and still feel like I hadn't finished it yet.

I: I understand that feeling, it can be hard to end something that you feel is helping you.

E: Yeah, definitely.

I: I've asked all the questions I need, so speaking of ending something – I'm all done. Thank you so much for your time.

E: No worries, it was fun.

I: And just remember, if you want to withdraw your interview you can for up to one week after the interview takes place. After that it'll be anonymised and transcribed, and the audio file deleted. Thank you for coming today!

C.5.6 Interview with Participant F

Participant of second intervention group

Interview taken 4 months after intervention

Interviewer – I

Participant – F (name replaced with F in the appropriate places)

[Pleasantries and introductions omitted]

I: So, this interview is just to get a feel for how you found the sessions. I want honest feedback, anything negative is useful too so please don't feel like you can't say anything negative.

F: No worries.

I: Can you please confirm you've read and signed the consent form and read the GDPR info sheet?

F: Yeah.

I: Wonderful. I'll just dive right in. So, if you think back to just before the sessions started. How would you describe your mental health back then?

F: Honestly, the last year has kind of just blurred together, so I can't say for sure how my mental health was specifically during that week or anything. But generally speaking, it wasn't great from like December onwards, so I guess it was bad.

I: Okay, can you elaborate on what was happening at the time?

F: I guess it was mostly stress. I don't know, first year was really easy for me at uni. I didn't really have to try hard. And then second year started, and it was suddenly really hard. I kept getting marks back that were like 2:2s and that's like a C. I've never had Cs before, and it stressed me out because I don't want to come out of uni with a 2:2.

I: It sounds like your work felt a bit overwhelming.

F: Yeah, it was. And it was typical really because everyone else was still doing really well, and it's not like they were trying any harder than me. I still did better than them in exams, though, I've got a good memory.

I: So, this was causing stress for you – did you notice yourself worrying?

F: Not really. It was like background stress. I don't really worry very much. I think it just makes everything worse.

I: Worry does tend to make you feel worse, yes. How did you find you were coping with the stress?

F: I don't think I really was, I just kind of ignored it. I didn't really have the time to figure it out myself, I was so busy with work. So yeah, I just ignored it really. Not the healthiest approach.

I: It's a pretty common approach, really, but it isn't sustainable. Is that what made you sign up for the workshop?

F: Sort of. A friend of mine was thinking of doing it and I thought it might help with the stress. I know psychology pretty well but I hadn't heard of positive psychology so I thought it might be useful. I guess I wanted to learn something new.

I: It's definitely an interesting area of psychology. I know you said that the time kind of blurred together, but if you cast your mind back to the first session, what were your first impressions of it?

F: I don't know. I can't really remember who I did the sessions with, I think one girl was called [name]. I thought you were one of the people doing the workshop, so I was surprised when you introduced yourself as the researcher. No offence, I just thought it'd be someone who's like a lecturer, like middle-aged.

I: A couple of people said that in the other group as well, I'm just pleased I pass for a 20-year-old. Did that affect your engagement in the sessions?

F: No, I just got used to it. And once you started talking it was more clear you weren't a student, so I think it was just first impressions.

I: Aside from the impressions you had of the people doing the workshop alongside you, what did you think of the session itself?

F: It was fine. It felt a bit cheesy at first, all the 'love yourself' stuff. I usually hate that kind of thing. But you explained it fine, and it got less cheesy.

I: I'm glad you settled into it and the overall cheese factor decreased. Now, you were in the second workshop group, which means that for four weeks you were on a waiting list. How did you find being on the waiting list between signing up and the sessions?

F: Didn't really bother me. I don't mind waiting for something when I know it's not going to last forever. I had other things to think about anyway.

I: Okay, that's good to know. If the waiting list had been indefinite, would that have changed your experience?

F: Yeah. I hate waiting with no end in sight. It's fine when you've got a date where it's like 'this is what you've been waiting for, and it's coming soon'. But when it's just waiting and waiting and you don't know when it's going to end, that's just annoying.

I: What were you expecting to get out of the workshop – if you had any expectations of it, I mean?

F: I was pretty stressed out about work. I guess I wanted to learn some ways to be less stressed. Or to figure out why I felt so stressed. I think I had so much to think about work I just didn't have any time for myself anymore. So, I think I expected to get some time to myself and to lift some of the stress.

I: Those are some good goals to have. Did you find those expectations were met during the sessions? Did you get any stress relief?

F: I definitely felt less stressed. I didn't get time to myself I think though, mostly because it was a group thing. So, we were all focused on each other as well as ourselves. It wasn't a bad thing; it was just that you didn't get time just to think about yourself for the forty minutes or whatever it was.

I: Would you have preferred a one-to-one format over a group format?

F: Yeah, definitely. I don't really like group things. I think it doesn't really help everyone individually, because you've got to let everyone speak and share their problems. I mean, everyone was really nice. But I just prefer one-to-one things so I can get everything out of it that I need. I knew I'd never speak to the others again, so it felt like a waste of time to listen to their stuff.

I: That's understandable. Sometimes people prefer one or the other. How did you feel after the first session?

F: Fine. A bit tired.

I: New things can be very tiring, especially when it's doing something new with total strangers. How did you find the gratitude exercise?

F: It was fine, I felt a bit weird just thinking of things I was grateful for. Like I'd usually just be grateful in the moment that it happened, not just sit around every day, and think about it for a specific length of time. It felt a bit weird.

I: Did you manage to keep it up for the four weeks?

F: Most of it, yeah.

I: That's good. Establishing a new habit can be tricky. Would you say you had a preference between the hope and gratitude sessions and exercises?

F: I preferred the planning one. I think it was the second hope session. I get why the other two were important to go alongside it, but I like that the planning session was about problems that come up, rather than a daily thing to do. It felt like more of an actual lesson as well, like I was learning something rather than just practicing an exercise.

I: That makes sense, I think a lot of people prefer feeling like they can use something to address problems as they arise. Like it's a tool on their toolbelt that they can choose for the right situation.

F: Yeah, exactly.

I: So, what kind of things did you use the pathways method for?

F: Tons of stuff. Exams, coursework, that sort of thing. I had a job interview, I used it for that. I think I used it for some personal stuff too, like keeping the house clean and stuff.

I: Would you be able to give me an example of how you used it?

F: Sure. Is the job interview one okay? It's the only one I really remember.

I: That's perfect, yes.

F: Okay, so like step one would be to research the company, and step two would be to read the job specs, they had this big document about the company values and stuff. So that way I could work it into my interview answers.

I: Did you identify any possible obstacles?

F: Not really, I didn't have any obstacles for this one. Just kind of did that and then went and did the interview. I didn't get the job, so I guess that's an obstacle.

I: I'm sorry to hear you didn't get the job. Was there a time during any of the other pathways you created that you identified any obstacles and how to deal with them?

F: I guess. It was mostly just things like getting bored of work or not spending enough time on it. I got my girlfriend to nag me to do things if I was bored or if I just didn't want to. Having someone else hold me responsible helped. I think it's easier to let yourself down than to let someone else down.

I: External support can be very useful. Do you still use the exercises that you learned during the workshop?

F: Yeah, it's a bit embarrassing but I still use the affirmations. It's like a pep-talk, like I just keep telling myself 'You can do this'. I don't do it out loud though, I think if my roommates heard me, they'd literally never let me forget it.

I: In your head can be just as effective, I'm sure.

F: Yeah, it worked for me. And it does help keep me motivated.

I: I'm glad to hear that the affirmations have helped you and provided you with the pep-talk that you needed. Do you still use the gratitude diary or the pathways?

F: The pathways I guess I use but not with the whole writing it down thing, it's just become a bit more of a habit I use to figure out a problem. Like I don't think 'I'm using the pathways method', I just think 'okay what's the main obstacles here and how do I prevent them becoming an issue'. The gratitude diary I don't really use anymore. I just found it a bit weird.

I: That's alright. Can you elaborate on why you think that is?

F: Sure, I think it's because I don't really get it. I think it's nice to be grateful for things, but I don't think it really does anything. I think some people feel all nice and happy after it, but I just didn't get that. I just thought 'okay now I've said what I'm grateful for, what was the point?'. I think it makes people feel good about themselves, but it didn't do anything for me.

I: Okay, I understand. I'm glad that the hope affirmations and pathways were useful for you even when the gratitude diary wasn't. So, if you think back to what you said about your mental health prior to the sessions, and then think about your mental health now, would you say there has been a change?

F: Yeah.

I: Can you describe what kind of change there has been?

F: I don't know. It's better, I think. I don't feel as stressed. Whenever I do, I just sort of plan my way out of it. I feel better having a plan, that's why I like the pathways. And the affirmations just keep me on top of it. It's what you said during the session about motivation, it keeps me motivated to keep up with the pathways.

I: That sounds great. You said you weren't much of a worrier beforehand – did that remain the same after the workshop?

F: Yeah, I still don't worry much. It just makes me feel worse and worse if I worry, so it's something I never really did. But other stuff changed. I don't feel the background stress as much anymore, so that's good.

I: That's good to hear. Now, when I originally developed the workshop, COVID wasn't a thing. When it hit, I had to change the sessions from in-person to online. How do you think that will have affected the workshop?

F: I don't know. I think everyone has massively overreacted. We didn't even know until last week that we were going to be doing remote classes online. I think it's stupid – we are going to get our dissertation projects soon and what, we're supposed to do those without seeing our supervisor?

I: It sounds like a stressful time with lots of uncertainty. How do you think that's affected the workshop?

F: Well, it made it online. I don't mind the online stuff but it's like everything is suddenly online because everyone's too scared to go outside. I'm not really bothering

with the whole isolating thing, like I'm happy to go out and just be careful while I'm out.

I: Would you have preferred an in-person workshop?

F: No, I don't really care either way. I just think everyone's freaking out about COVID and it's not that big a deal.

I: Okay, I understand what you mean. You mentioned earlier that you would have preferred a one-to-one format over a group format – did you find that the group exercises within the sessions weren't to your preferences?

F: It was fine, it helps to hear what other people are putting down for their diaries and affirmations so you can get inspiration about your own. So that was useful for the exercises specifically. I guess I just think I'd prefer getting the entire session to focus on myself rather than on a group. That way, I think I'd get more out of it.

I: I understand what you mean. Do you think the workshop could be useful if it was offered to students as part of their course?

F: I guess, yeah. I'd make it optional though, because some people wouldn't want to do it and then they'd just spoil it for everyone else by not putting any effort in.

I: That's a good suggestion. What kind of problems do you think the workshop would help students with?

F: Stress? We have a lot of it. Second-year is really a massive step-up, and I don't even know what third year is going to be like. We're still in the intro phase where it's all just talking about schedules and stuff. It's probably going to be hard and there's not going

to be any support again. So yeah, I guess just giving students some support would be nice. Or the option for it, anyway. Some people just sail through without trying.

I: Do you think the workshop is appropriate for students? Or could there be some changes made to make it more student-friendly?

F: I don't know. I don't really know what would make it student-friendly unless you turned it into a drinking game.

I: I'd probably get more sign-ups that way.

F: Take a shot every time you feel stressed – oh wait, everyone's dead.

I: Not sure it'd ever make it past the ethics board. Just to steer us back on subject – how did you find your mental health in the months after the workshop?

F: It fluctuated a bit, I guess. But mostly, I'd gotten what I needed, a way to stop being so stressed and I learned more about why I was stressed. So, it definitely was better. Plus, I think everyone got more used to being stuck inside and changing their lives to be more online, so it got better anyway.

I: So, it was a combination of being more aware of why you were so stressed and adjusting to the 'new normal' of COVID.

F: Yeah, sounds about right.

I: That makes sense. My last question is just if you had any other comments or suggestions for the workshop?

F: I'd cut the gratitude bit if I was running it. I think it doesn't really mix with the hope stuff. I think just focusing on the hope stuff would make it just better in general.

I: Okay, that's very interesting. Can you elaborate on why that would make it better?

F: I just think it's always better to focus on one thing and get it right. It's not that the gratitude stuff isn't helpful for some people, I know that some of the other people really liked it and you said you use it yourself. But I think it would have just been better if you picked one strength and focused all of the time on it, rather than mixing it up.

I: That makes sense to me. Thank you for that suggestion, that's great.

F: You're welcome.

I: Right, well that's all my questions asked, so I'm happy to let you go now. Thank you for coming.

F: No problem.

I: And of course, if you want to withdraw your data, please let me know within the next 7 days, as after that it'll be anonymised and transcribed, and you won't be able to withdraw it.

F: Okay, got it.

C.5.7 Interview with Participant G

Participant of second intervention group

Interview taken 4 months after intervention

Interviewer – I

Participant – G (name replaced with G in the appropriate places)

[Pleasantries and introductions omitted]

I: So, this interview is just to get a feel for how you found the workshop, and just let me know if you don't want to answer a question. And don't worry if anything you have to say is negative, it's all useful for me.

G: Okay.

I: Can you please confirm you've read and signed the consent form and read the GDPR info sheet?

G: Yeah, I did.

I: Great. So, without further ado, I'll jump right in. How would you describe your mental health prior to the workshop?

G: That was in June, right?

I: Yeah, the workshop was in July.

G: Okay, sorry, I'm just trying to remember. Time has passed really weirdly since COVID started.

I: I get it, don't worry. Just to the best of your knowledge, how did you feel before the workshop?

G: I was quite anxious. That's why I signed up in the first place, it was about worry and anxiety, so I thought it'd be helpful.

I: Do you remember what was causing the anxiety?

G: I think it was a mix of things, really. I was waiting for exam and coursework results, and I really hate waiting for results. And COVID was – well, it was hard because everyone had kind of settled into the lockdown, but it was still high stress all the time. I'm a part-time bartender and I wasn't getting paid, so I was just living off my student loan and that basically just covers my rent.

I: I hope that's changed for you since then.

G: Yeah, eventually we got the furlough pay but it took forever. I had to borrow money from my parents, which I hate doing.

I: And you said that this worry and anxiety was what caused you to sign up for the workshop?

G: Oh, yeah. You did a presentation on it in one of my lectures and I thought it sounded good. That was literally the week before we all got told to stay home as well.

I: Did you find yourself worrying a lot?

G: A lot, yes. Too much. I didn't really know it was a bad thing, though. Like, I knew worrying was stressful, but it felt more like a consequence of bad things, rather than a choice. I didn't think I was making a choice to do something harmful to me.

I: It can be really hard to tell when something we're used to doing isn't helping. Especially when it's something that's so commonplace.

G: Yeah, like everyone worries. It's hard to know where the line is from that being okay to that not being okay.

I: I understand. Do you think you were past that line?

G: Definitely, looking back. At the time, I didn't think so. But after the sessions, yeah, it was way too much. It was taking so much time out of my life.

I: Now, you were in the second workshop group, which means you were on a waiting list for a couple of months. How did you find that?

G: Honestly, a bit frustrating. Sorry.

I: It's okay, really, I want to hear your honest answers.

G: Okay well, yeah, a bit frustrating. But at first, I thought it was an indefinite wait list, like I was going to be waiting for who knows how long and that just sounded really annoying, because I couldn't plan for anything. When I saw it was a couple of months it didn't sound too bad, really, because I had exams to focus on until then and I didn't have a ton of free time.

I: So, you think doing the workshop at a time where you had less going on was better?

G: Yeah, I think it's good to prepare you for future stress, so I think maybe it would work well at the start of the year, before everything gets overwhelming.

I: Great suggestion. So, if you think back to the first session, what were your first impressions of it?

G: Everyone was really nice and friendly, and I really liked the character strengths stuff. I won't lie, I was getting really bored at home just sitting around waiting for things to happen. So, it was like a nice break. Everything felt just a bit more normal for a while.

I: It was definitely difficult for everyone to adjust to being stuck at home. What were you hoping to get out of the workshop, if you had any expectations, that is?

G: I think I had some silly hopes, really.

I: I'm sure they weren't silly.

G: I think I was hoping that I'd come in and you'd wave a magic wand, and I'd not be stressed anymore. I was really tired, and I think the idea of doing more work was exhausting. I just didn't want to have to put the effort in. Sometimes I get like that, where even doing something that I know I want to do seems so draining that it's easier just to sit there and stew in my own stress.

I: I don't think that's silly at all. Sometimes it genuinely does feel easier to sit in a hole than pull ourselves out of it with something healthier. It can be really difficult to find the motivation to do the harder, but better, thing.

G: Thanks. I think that's exactly it. I just wanted a magical fix, and I knew it wouldn't be like that, but I still held out hope.

I: I'm sorry I couldn't do a magical fix. Did you find you were disappointed?

G: No, not at all. I came out of the first session feeling really energised and motivated, it was great. I didn't feel tired at all. Everyone was really engaged in the subject and

shared some nice things with each other. I thought it would have been a lot of effort and putting in tons of work but then you showed us the gratitude diary and it was so simple and easy to do that I felt relieved.

I: How did you find the exercise when doing it at home?

G: Quite nice, honestly.

I: What did you find nice about it?

G: I think it was relaxing, in a weird way. I'd sit there and sort of sift through the day to find the times where I felt grateful – and sometimes, it was that I hadn't actually felt grateful at the time, but I realised that I should have done, because I was genuinely really thankful for that moment or person. So, it was like I got to feel grateful in retrospect for it. There was a bit of the questionnaire survey thing we did between sessions, that said something like 'as I get older, I see more and more how many people and things I'm grateful for' or something like that. I can't remember the exact wording. But that was something I felt more and more strongly over the sessions as I did the diary.

I: So, you found that doing the diary made you more aware of the good parts of your support network?

G: Yeah. It was just nice to actually take the time and be grateful. Like, a lot of the time that led to me thanking people much more sincerely, rather than just the usual 'thank you', it was 'thank you, I really appreciate your help here'. I think people really enjoyed having their support appreciated like that.

I: That's really nice, it's lovely when it ripples out like that. Did you manage to keep up with the diary for the four weeks?

G: I've kept up with it for four months now. I do it every night just before I go to bed. It makes me really relaxed for going to sleep. I skip it occasionally if I'm exhausted and just need to sleep, but pretty much every night.

I: That's brilliant, I'm so glad you've kept up with it and that it's helped you.

G: Definitely.

I: How did you find the hope sessions in comparison?

G: I really liked those, as well. Honestly, the whole thing put together worked really well, I think it was a good combo. It's funny because it's stuff you don't really think about. Like, beforehand I'd think 'yeah, I'm grateful for things' but once I started doing the diary, I realised that actually, I never felt grateful for something for longer than like a few seconds as it happened. Whereas now, I think I've got the time at the end of the day where I allow myself to feel grateful for the things that happened or didn't happen during the day. I think it's made me feel more grateful as things happen as well.

I: That is so great to hear, it sounds like you think it's raised your overall gratitude throughout the day.

G: Yeah. I think I'm more aware of taking the time to feel grateful regularly when things happen, rather than saving it for the end of the day. Although I still do it at the end of the day, it doesn't feel like I'm setting aside time to be grateful now, it feels like I'm setting aside time to remember the things I was already grateful for.

I: That's lovely. Did you find that the habitual aspect happened with the affirmations and planning, too?

G: Oh, yeah, definitely. I'd always try to give myself a pep talk before things, like the affirmations, but it would be stuff like 'you can do this!' or 'be awesome!', it would never be like what you taught us. Now, I've done the affirmations so much that it's just habit to be like 'today I am going to plough through this discussion section of my essay'.

I: It's good to hear that you were able to form them into automatic habits.

G: Definitely. It's a bit more complicated with the pathways because there are more steps to do, so that I still write down. I think it's best to write it down anyway because then you're not relying on your own memory. My memory is terrible, so I've got to set reminders and alarms and things to make sure I do everything I've said I'll do.

I: Setting reminders and alarms is a great way to accommodate for your memory not being great. Do you mind giving me an example of one of your pathways?

G: Oh, sure. I've got a couple that are ongoing at the moment, actually. Do you mind if I just read it off my phone?

I: No, go ahead.

G: Okay, so this is Pathways 12, which is just because it's the twelfth one I've done. It's about household chores. Step one is to divide the chores evenly among the housemates. Obstacles there include people disagreeing about chores, or people not liking what they get. Possible solutions are to draw straws for things people hate, or to try and give everyone at least one chore they don't mind doing. Step two is to draw up a chart so people will mark off when they've done something. Potential obstacles are people forgetting to mark things off on the calendar. Possible solutions are to set a daily reminder text so that we all remember to mark off what we've done on the

calendar. This could also be done on an app to make things easier, like Google Calendar. Step three is to run this for a trial fortnight so we can make sure that people are able to keep up with it without it impacting their work or energy. Possible obstacles are people finding they can't keep up with chores, or people just being lazy with them. Possible solutions are switching chores, setting more reminders, or setting specific times of day to do them. We could also do a pairs-system where people do the chores in pairs to make it easier. Step four is to review it after a month and see how it's gone. That's basically it for now, because I'll be able to make further steps after we've done the review of it.

I: That's great, and a really great methodical approach to it. I hope it works out for you, because chores are a pain when you live with roommates.

G: Oh yeah. I made them do this because I was sick of living in it.

I: It's useful for more than just work problems, definitely. Fingers crossed you don't need those possible solutions. But before I start ranting about chores and how people don't do them on time – did you have a favourite between the sessions?

G: Oh, that's hard, I really liked them all. I think my favourite was the gratitude session, though, I really just enjoyed learning about the character strengths and then doing the diary.

I: That's lovely, thank you. Now, when I first developed the workshop, it was supposed to be done in-person in a classroom. Would you have preferred in-person, or did you prefer online?

G: I prefer online, but that's because I prefer everything to be online. If there's an app for something, I'll use the app. Even my lightbulbs activate from an app. I just like

things online because I don't have to think about travelling into uni, finding my way around, sorting out food while I'm out, then travelling home. It's just easier for me to sit down at my desk, log on, do the thing, log out, and boom, it's taken less time out of my day.

I: It certainly was easier to do it online. The reason it changed is obviously because COVID hit, and everything had to be re-done. How do you think COVID affected the workshop?

G: Oh god, what hasn't it affected? Everyone was stressed about it. And it wasn't just COVID itself, it was the reactions to it. I was less stressed about the virus and more stressed about people saying it didn't exist or that it was a hoax created by the government. It's insane how people are saying the vaccine that they're developing won't be okay or that it'll have trackers in it or something. I'm more stressed about how selfish everyone is being in comparison to the rest of Europe. Look at New Zealand, they're doing so well and we're like 'oh sure, another hundred thousand people died, whatever'.

I: Looking at New Zealand can be very depressing, yeah. So, do you think that there's been an extra layer of stress on top of the existing stress?

G: Definitely. I mean, it's to be expected. I don't think anyone wouldn't be stressed about this. So yeah, I think the stress levels of everyone are really high. And what we learned in the sessions about worry – people will be worrying way more.

I: Why do you think that is?

G: Well, one of the things with worry was rumination. I think people will be ruminating on all the problems COVID causes. I catch myself doing it too, wondering what's going

to happen with third year, wondering what's going to happen with work, what's going to happen with the government, just going round and round on it. I'm able to stop myself because of what I learned in the sessions with controlling things you can control, but other people don't know that stuff, so they'd just keep going with it.

I: It's easy to get caught up in a circle of worry over possible outcomes. I'm glad that you're able to interrupt that response and do something healthier.

G: Yeah, it's saved me a lot of time. I think it was a perspective shift. Like, beforehand it's not that I thought worry was bad, and kept doing it, it's that I didn't know it wasn't a healthy thing to do or that it was even really within my control. I think once you showed us that some worry is fine but excessive worry isn't healthy, my whole attitude just shifted. Does that make sense?

I: That makes sense to me. It sounds like you found it much easier to stop worrying once you understood how it was contributing to your own anxiety.

G: Yes, that's exactly it.

I: Wonderful. I've just got a few more questions and then I can let you go.

G: No worries, shoot.

I: Did you like that the workshop was in a group format, or would you have preferred a one-to-one format?

G: I like group things; I tend to learn better when there are other people contributing to something. Like in the discussions, it's easier for me to understand the task if other people are giving their own examples. And it was nice because everyone was so bored

during the lockdown that it was just nice to have some social time with people going through the same thing.

I: That's good to hear.

G: I think everyone else felt similarly. It's just nice to talk to people that aren't the usual people in your life, and have it been specifically about something that you all share.

I: I understand what you mean. Do you think, then, that if this workshop was offered to all students as an optional part of their course, it would be useful?

G: Oh, yeah, definitely. It was very useful for me organising my work and that. I've gone into third year much more confident about my ability to handle things. I think if people had the option for that support, they'd feel a lot more confident and capable.

I: That's great. And did you find the workshop could be better tailored to suit students? Or did you find it was appropriate for students?

G: Personally, I found it fine for me, and I'm a student so I think it was good. Like, the examples you gave were all relevant to us, and you showed us how the pathways and affirmations could help specifically with student-related things, so I think it was good for students. Maybe not mature students, though, they might have different things to focus on, so you could run a group specifically for mature students? And maybe international students might struggle with a language barrier if they're still learning English.

I: Those are both good suggestions and something I would absolutely take on board. I think that's all the questions I've got, so just if you have any more comments or suggestions to give, I'd love to hear them.

G: No, I just hope this was helpful.

I: It was really helpful G, thanks. Just to reiterate from the information sheet – the interview can be withdrawn for up to a week after, and then it'll be anonymised and transcribed. No identifying details would be published.

C.5.8 Interview with Participant H

Participant of second intervention group

Interview taken 4 months after intervention

Interviewer – I

Participant – H (name replaced with H in the appropriate places)

[Pleasantries and introductions omitted]

I: So, this interview is just to see how you felt about the sessions. It's a place for honest feedback so please don't feel bad if you need to say something negative.

H: I promise to be a pain.

I: Thanks. Can you just confirm you have read the info sheet, the GDPR info sheet, and signed the consent form?

H: The stuff you sent over? Yeah, I did all that.

I: Great, thanks.

H: No worries.

I: So, just to dive right in, think back to just before the workshop. How would you describe your mental health back then?

H: I've had worse, but I've definitely had better. It was a period of low-key dread.

I: Do you know why you felt that way?

H: Oh, yeah. I hate summer, I hate COVID, and I hate being bored. I was getting all three at once. I mean, COVID was sort of unexpected in general, but by – was it June?

I: Around June, yes.

H: God, has it been that long already? Time has lost all meaning.

I: I know, someone said to me the other day that it was only nine weeks until Christmas and I was like 'please stop'.

H: Thanks, I hate it.

I: COVID has changed time for sure, I can't believe how fast this year has gone.

H: That's the thing, COVID has messed with everything. Time has gone all weird, uni is messed up, everything's just falling apart. And like I said, I hate summer. Everyone loves summer but I hate being too warm.

I: I actually hate summer too, so you've got a pal there.

H: Thank you! It's the worst. So yeah, I was stuck at home, waiting on results, with nothing to do except sweat a lot and get stressed over how many people were dying of COVID. Like, I personally haven't had any friends or family get COVID and get seriously ill, so that's a relief, and I know everyone has to sit around waiting for results, so it wasn't the worst it could have been. But it was pretty shit.

I: It was a really stressful time. It still is, really, but I think everyone's somewhat adjusted.

H: Everyone's adjusted and so it feels more normal now. Uni is definitely weird though. When COVID first hit we'd basically finished classes, I think I had two weeks of classes

to go, and they basically just sent us the lecture slides and told us to get in touch if we had any questions. So, we didn't have to get used to remote learning or anything. Now it's like a week into term and we're still working out all the kinks. Some people are not set up for internet classes. Teaching, I mean.

I: I don't teach or attend any classes, but I imagine it is really strange to suddenly adjust to a giant lecture being done online. I'd be stressed.

H: It's really weird. I bet it's weirder for the lecturer though, doing a lecture out of their home. Weird.

I: The workshop was actually developed prior to COVID hitting and it was originally going to be a face-to-face format. Do you think you would have preferred that?

H: I'd have preferred that. It would have been less easy to commit to, though, because of travelling and stuff. I think people might have dropped out. But I think I prefer being able to see people in real life, and not having to deal with people's Wi-Fi dropping out or lagging.

I: That makes sense to me. I think it's definitely easier in many ways to attend the online sessions, but I think online can only replace a certain amount.

H: Yeah. But I will say I do have chronic fatigue syndrome and so it is way easier to do online things if I'm having a flare up of symptoms. So, while I prefer 'IRL' I would probably always opt for online just in case I have a flare up – that way I don't have to drop out.

I: I also have chronic fatigue, so I completely understand that. Online is definitely easier in terms of disabled access, really.

H: Definitely. It's not something a lot of people think about, like they think 'oh I chose a classroom with a ramp' and they think it's completely accessible. They don't think about how far it is from the car park or the bus stop, or how uphill it is, or whether it's got chairs with support for joints, or whatever.

I: It's a really common thing I find that when somewhere said 'disabled access' they mean they have a disabled bathroom and a ramped entrance. There's very little consideration for any other disability or needs, just the bare minimum for a wheelchair user.

H: Yeah, exactly. Having things online just gets rid of all that stress. Cause you're doing it from a place you know is set up exactly how you need it.

I: Absolutely. Just on another note about the structure – obviously, this was a group workshop. Would you have preferred a one-to-one format?

H: That's actually hard to answer. I don't think I have a preference. I can see why both would be useful. I did enjoy the group though; everyone was a bit quiet at first, but I think everyone warmed up by week two.

I: There's always a settling-in period. You all did really well.

H: I think we all just needed to get used to talking to strangers again, it had been a while.

I: Absolutely. When you signed up for the workshop, what were you hoping to get out of the sessions – if you were hoping for anything?

H: I was hoping for a few things. I was hoping for meeting new people and getting to talk to them, which I definitely got, and I think it kept me sane during the month. I was

hoping for some help with reducing my worry and stress, which definitely happened.

And I was hoping for something to help with the boredom, which also happened.

I: It sounds like you knew exactly what you wanted.

H: I had a ridiculous amount of time to think about it, really, with being so bored.

I: So, thinking back to week one – what were your first impressions of the group?

H: I can actually tell you exactly what my first impression was because it was ‘okay I know that guy’.

I: Yes, I remember you did recognise someone in the group.

H: I still couldn’t tell you where from, we had literally nothing in common, but I recognised him. God knows where from. I bet it was a night out.

I: Other than recognising the other person in the group, what did you think of the session?

H: Well, it was nice to have an outlet for pent-up social neediness. I desperately just needed to talk to other human beings. I live with two, but they barely count if I’m totally honest, we never talk. And the group exercises were really fun. I liked hearing about what everyone was grateful for because it was such a mix of things. Everyone had their own special experiences and people they were grateful for, and that made me happy. It just reminded me how much good there is in the world.

I: That is very sweet. I like to hear other people’s entries too. How did you get on with the gratitude diary?

H: It was pretty easy for me to keep up with, to be honest. I have a before-bed routine where I check my calendar for tomorrow, double-check I’ve not double-booked

anything, then I make sure my guinea pigs are fed because the little goblins come out at night and scream if they don't have enough food. They're so loud.

I: I've got cats, I get that.

H: So, I just kind of slotted it into the routine, once I fed the hamsters, I did my diary. It worked well really; I still do it now.

I: Oh, good, you managed to keep up with it during the workshop and still do it now?

H: Yep, I still do all of the exercises now. I thought I'd slip, to be honest, because I don't have the best history with setting goals and sticking to them. I do less of the pathways because it depends on the situation. But the affirmations and gratitude diary I do daily.

I: That is wonderful. Did you have a favourite session?

H: Oh, good question. So, session one was a favourite because it was where we learned about the character strengths and got the gratitude diary. That was definitely my favourite exercise.

I: Why do you think that is?

H: I think it just made sense. Like, the affirmations and pathways made sense as well, sorry I'm useless at describing this stuff.

I: That's okay, just say what you feel.

H: Well, it just made sense. Like, we don't really spend enough time these days just letting ourselves feel things. We're always rushing about. We've got these really short attention spans because we consume media like binge-watching and TikTok and stuff, everything goes by quickly, so you don't have time to just sit and digest everything. So,

it made sense to just sit down and think about how we felt, think about what we were grateful for.

I: I understand what you mean. Sometimes it is just nice to sit and think about feelings and how we experienced the world that day.

H: Yeah, exactly.

I: Did it affect your stress at all?

H: It helped take away some of the stress, I think. At the end of the day, I'd struggle more with worry, like right before bed I would be sat there thinking about all the stuff I could have done, or all the things that might happen. After the gratitude diary, I went to bed thinking about all the things I was happy and thankful for instead. It was just way nicer. I noticed that I slept easier, too.

I: Ruminating can definitely affect sleep; I too am a night-time worrier, so the gratitude diary has helped me there also. How did you find the hope sessions in comparison?

H: Well, it was nice because everyone had settled around each other a bit more, so we were more chatty. The sessions were good, too. I like affirmations. I follow a ton of inspirational Instagram accounts because they do affirmations, I think they make me feel more positive. It keeps me motivated, like you said in the sessions.

I: That's great. Do you have an affirmation you're using today?

H: Yep, I've got three on the go today but my main one is 'you will change your bed' because I absolutely put that off until I can't put it off anymore.

I: Excellent. How did you find the pathways session?

H: Well, I love organisation and planning, so really it was like my happy place.

I: Could you give me an example of one of your pathways?

H: Sure! It'll be off the top of my head, though, because they're on my laptop which is downstairs.

I: That's not a problem, just to the best of your memory.

H: Well, at the moment I'm doing one that is about uni. So, my plan is basically to review the information I learned in any lecture a few days after the lecture, so that I can try to make sure it's going into my memory.

I: I think that's a great idea.

H: Thank you, a friend of mine swears by it for helping to remember things for exams. I think it's working, too, I can definitely remember more of my lectures. It helps as well because I can learn it my way a few days later, I'm not the best at listening and just taking in information. So, step one is to set up the timetable for doing this, so it's basically just shifting my actual timetable three days later so that I know when to set up the revision sessions.

I: Did you identify any obstacles there?

H: Not at that stage because it's pretty easy and like I said, I like organisation, so it was sort of fun for me. But then step two is to trial it for a week and see how it goes. I think the obstacles were mostly around me getting bored or not motivated, and the contingency plans were to keep up with my affirmations and to set rewards for me doing it.

I: Rewards always work for me.

H: Me, too. If there's a prize, I'll do it. Then step three was to examine how it was going for different subjects, so if there were subjects or lectures where everything made sense and I understood it or was very interested in it, I'd probably not have to do the review session to keep it in my memory. Whereas if it's something I hate, or something really boring, I might need to do two review sessions just to make sure I actually understood what was happening.

I: That makes perfect sense to me. Thank you for sharing it, that was very useful.

H: No worries.

I: So, you said that your mental health was in a state of low-key dread because of everything happening around you. How would you describe your mental health after the workshop?

H: It wasn't perfect, or anything. I still had stress and anxiety. But I think it was good because I could handle it. I mean, I could handle stuff before, but it always felt like I was sort of reaching the end of my tether. After the workshop, I had more tools in my toolbox. I think it definitely reduced my stress, because I wasn't worrying as much – I stopped worrying so much after you taught me that it was in my control to do so, I think I just needed to hear that it was controllable. And like I said, the gratitude diary helped to stop me worrying so much at night. So, I would say that I definitely had less stress, and the stress I still had I could deal with.

I: That's great. Do you think that the workshop could be useful if it was offered to students as an optional part of their course?

H: Absolutely. Honestly, if you made it optional, you'd only get the students who were really committed to it working, I think. If you made it mandatory, I think tons of

students wouldn't do the work and then would complain when it didn't fix their problems. I definitely think willingness to do the work is really important.

I: I agree, this workshop has two daily exercises to keep up with and that can be difficult when you lack the willingness to put that effort in.

H: Exactly.

I: You were, as you know, in the second lot of workshop groups, which meant you were on a waiting list for a month or two. Did that affect your experience of the workshop?

H: It didn't affect how the workshop was, in terms of the sessions themselves. But I think in a way it was good because I had much more free time in June than I did when the first groups went. I didn't have to slot it into my schedule in June because my schedule was just nothing. And it definitely helped fill the week out a bit and make me much less bored, so I think it timed well for me. I did feel probably a bit more stressed out in April, though, because it was when everything kicked off with COVID, so it might have been more helpful during that time. I don't know, it's a mix.

I: That's okay, that all makes sense to me. I've just got one last question and then I can let you go. Do you have any suggestions on how to make the sessions more student-friendly?

H: Honestly, I think it was fine for students. Sorry, that's not very helpful, but I don't think I've got any suggestions.

I: Absolutely no problem. Thank you so much for doing this interview, it really does help.

H: No problem, it was fun!

I: Just to remind you about the information sheet – you can withdraw your interview for up to one week after the interview, but after that it'll have been transcribed and anonymised. So just email me if you want to withdraw it.

C.6 Codes

Coding of Interviews

Stage 1

Identifying patterns and examples in the transcriptions

Pattern: participants felt stressed, worried, and/or anxious prior to the workshop

Examples:

A (page 2): It wasn't great. It wasn't the worst I've been at, but I was really stressed with everything.

A (page 2): I was really stressed about exams.

A (page 9): It was definitely more stress than the previous year, I mean it's different because second year suddenly counts and you have to work harder and the work gets so much harder, but then you have the pandemic come on and suddenly bam, everything's way more stressful.

B (page 1): Pretty shit, if I'm honest. I'm not usually the type to sign up for this kind of thing, but I was so stressed out I'd have tried anything. No offence.

C (page 1): Not amazing, but not through the floor or anything.

C (page 1): Some anxiety, some low mood. I wasn't getting much sleep, either.

D (page 1): Oh well I can be super negative about that. You know that meme where the dog is like 'everything is fine'? That's my mental health before the workshop.

D (page 2): You name it, it was stressing me out. I'd just broken up with [name] because he was cheating on me, my nan was in hospital, COVID was messing everything up and I was stuck in my flat by myself, unable to even visit my nan. It was a really shit time.

E (page 1): I was anxious. I'm a bit of a germophobe and COVID was really wiggling me out.

E (page 2): Health anxiety, yeah, that's it. I worried all the time. I kept picturing all the ways I could get ill, or everyone I knew could get ill. My friends and family are really casual about it, they don't seem to think it can even get to them. It's really fucking stressful because I've got to run around making them use sanitiser and masks, and it's like pulling teeth.

F (page 1): Honestly, the last year has kind of just blurred together, so I can't say for sure how my mental health was specifically during that week or anything. But generally speaking, it wasn't great from like December onwards, so I guess it was bad.

F (page 2): I guess it was mostly stress. I don't know, first year was really easy for me at uni. I didn't really have to try hard. And then second year started, and it was suddenly really hard. I kept getting marks back that were like 2:2s and that's like a C. I've never had Cs before, and it stressed me out because I don't want to come out of uni with a 2:2.

G (page 2): I was quite anxious. That's why I signed up in the first place, it was about worry and anxiety, so I thought it'd be helpful.

H (page 1): I've had worse, but I've definitely had better. It was a period of low-key dread.

H (page 2): Oh, yeah. I hate summer, I hate COVID, and I hate being bored. I was getting all three at once. I mean, COVID was sort of unexpected in general, but by – was it June?

Pattern: participants identified one of their stressors as the beginning of the COVID pandemic

Examples:

A (page 2): COVID had only just really started a month before, so everything was really confusing.

A (page 9): I have asthma and that makes COVID really dangerous for me, so I've been isolating completely, and I was pretty lonely. So, it was definitely more stress than it would have been normally, but it still would have been a stressful time anyway.

B (page 7): Well, the sessions were about worry and stress, and I think we definitely had more worry and stress than we would have done normally. It would have been high stress cause of exams, but not that high. Everyone was bored as well, so I think that helped with everyone turning up. We didn't exactly have busy schedules; we were all stuck at home just stressing. I think we probably got more benefit out of it, though, because of there being even more worry.

B (page 7-8): It was a bit weird because of COVID, everything was a bit unpredictable. So, the sessions really helped with preparing for anything. I mean, at that point, the news was constantly going between COVID death rates, America falling apart, and random horrible news like the Australian fires and murder hornets, so we were all just thinking 'what the fuck is going to happen now?'. It was ridiculous. So having the routine of 'for four weeks, on Wednesdays, I'm going to go to these sessions' was nice. It broke up the continuous cycle of shit.

C (page 2): Work mostly, but COVID was getting to be a problem as well. Everyone was freaking out over what was going to happen. Some people thought it would be over in a few weeks, some people thought it was going to mess up the rest of the year.

D (page 2): You name it, it was stressing me out. I'd just broken up with [name] because he was cheating on me, my nan was in hospital, COVID was messing everything up and I was stuck in my flat by myself, unable to even visit my nan. It was a really shit time.

E (page 2): Health anxiety, yeah, that's it. I worried all the time. I kept picturing all the ways I could get ill, or everyone I knew could get ill. My friends and family are really casual about it, they don't seem to think it can even get to them. It's really fucking stressful because I've got to run around making them use sanitiser and masks, and it's like pulling teeth.

E (page 2): It's ridiculous, really. All the information out there and they think they know more because they read a Wikipedia article six months ago.

G (page 2): I think it was a mix of things, really. I was waiting for exam and coursework results, and I really hate waiting for results. And COVID was – well, it was hard because everyone had kind of settled into the lockdown, but it was still high stress all the time. I'm a part-time bartender and I wasn't getting paid, so I was just living off my student loan and that basically just covers my rent.

H (page 2): Oh, yeah. I hate summer, I hate COVID, and I hate being bored. I was getting all three at once. I mean, COVID was sort of unexpected in general, but by – was it June?

H (page 2): That's the thing, COVID has messed with everything. Time has gone all weird, uni is messed up, everything's just falling apart. And like I said, I hate summer. Everyone loves summer but I hate being too warm.

H (page 2): Thank you! It's the worst. So yeah, I was stuck at home, waiting on results, with nothing to do except sweat a lot and get stressed over how many people were dying of COVID.

Like, I personally haven't had any friends or family get COVID and get seriously ill, so that's a relief, and I know everyone has to sit around waiting for results, so it wasn't the worst it could have been. But it was pretty shit.

H (page 2): Everyone's adjusted and so it feels more normal now. Uni is definitely weird though. When COVID first hit we'd basically finished classes, I think I had two weeks of classes to go, and they basically just sent us the lecture slides and told us to get in touch if we had any questions. So, we didn't have to get used to remote learning or anything. Now it's like a week into term and we're still working out all the kinks. Some people are not set up for internet classes. Teaching, I mean.

Pattern: participants found the uncertainty around whether their classes would be held remotely or on campus to be a source of stress

Examples:

A (page 2): We just didn't have a plan, so it was hard to know what to even do with uni work and exams. We still don't know if we're going to be going in for classes in September.

A (page 6): Yeah sure, it's just like during the beginning of COVID we were all taken out of our classes, and we didn't know when we'd be going back, and we didn't have tons left because it was like April or May or something, but we had exams coming up and it was so stressful just not knowing what was happening.

B (page 8): It still is, but a bit less so. We've adjusted to the situation. Uni is still a bit uncertain. We don't know if we're going back in for classes, or if everything is just going to be done remotely. The idea of doing third year remotely is stressful. But it's definitely less stressful than it was a few months ago.

F (page 7): I don't know. I think everyone has massively overreacted. We didn't even know until last week that we were going to be doing remote classes online. I think it's stupid – we are going to get our dissertation projects soon and what, we're supposed to do those without seeing our supervisor?

H (page 2): That's the thing, COVID has messed with everything. Time has gone all weird, uni is messed up, everything's just falling apart. And like I said, I hate summer. Everyone loves summer but I hate being too warm.

H (page 2): Everyone's adjusted and so it feels more normal now. Uni is definitely weird though. When COVID first hit we'd basically finished classes, I think I had two weeks of classes to go, and they basically just sent us the lecture slides and told us to get in touch if we had any questions. So, we didn't have to get used to remote learning or anything. Now it's like a week into term and we're still working out all the kinks. Some people are not set up for internet classes. Teaching, I mean.

Participants did not know how to cope with their stress and worry prior to the workshop

Examples:

A (page 2): I'm not really sure that I did. I kept it very bottled up, definitely. I was pushing it all down and hoping it wouldn't just spring up ten times worse. I knew it wasn't healthy to just ignore everything and hope it got better, but that was the only option I really had.

E (page 2): Not in a group, or with a leader, it was just self-help stuff I found online with the gratitude diary. But honestly, it wasn't that great because I didn't know why it was supposed to help, and I didn't have the motivation to keep up with it. So, my experience of positive psychology hadn't been great.

F (page 2): I don't think I really was, I just kind of ignored it. I didn't really have the time to figure it out myself, I was so busy with work. So yeah, I just ignored it really. Not the healthiest approach.

Participants did not have external mental health support from the NHS due to various reasons

Examples:

A (page 2): Honestly, I've thought about going to my doctor for anxiety a few times, but I know that it can be years of applying and waiting. I just don't really have the energy for it.

B (page 2): I still did that, went to the doctors and the uni, and I did get some help from the uni. But I'm still on a waiting list for IAPT, and I think the waiting time is a year.

C (page 3): I tried to, but the doctor just wasn't very sympathetic. He basically told me to Google mindfulness. Which, I'm not saying is a bad suggestion or anything, I'm sure it works. But I wanted someone to help me, not to just blindly delve into self-help.

Participants received some external support from the university

Examples:

B (page 2): I still did that, went to the doctors and the uni, and I did get some help from the uni. But I'm still on a waiting list for IAPT, and I think the waiting time is a year.

Participants felt unsupported by the university

Examples:

E (page 9): I think it's the same for everyone. We've got to go out of our way to support each other, and find other ways to cope, rather than the university actually giving a fuck about us. I think this year is going to be so weird, and we're probably going to spend at least half of it remotely learning, but I don't think they're prepared at all for how much that'll change students.

Participants signed up for the workshop as the advert sounded relatable

Examples:

A (page 2): The advert said it was for students who worry a lot and I thought that sounded relatable.

Participants spent time worrying prior to the workshop

Examples:

A (page 3): I spent tons of time worrying. I'd be lying there at night ready to go to sleep and then a thousand intrusive thoughts would just blast me in the face. I think I worried more about the problems I had than I should have done, it wasted a lot of time.

A (page 3): Yeah, and it's pointless at the end of the day. Picturing all the problems I had and then all the possible ways it could get worse, there was no point to it. I just made myself feel worse and worse.

C (page 2): Not huge amounts, but more than usual.

D (page 2): It'd be easier to ask if I spent any time not worrying. I think I spent a solid week just thinking of all the possible outcomes of every single situation I was in. It was exhausting, I was knackered all the time.

D (page 2): Yeah, I mean I'm a bit of a worrier anyway, but this was ridiculous. Usually, I'd worry about just things that stressed me out, but before the workshop I was worrying about things that wouldn't even bother me usually, I was just in this weird repetitive cycle.

G (page 2): A lot, yes. Too much. I didn't really know it was a bad thing, though. Like, I knew worrying was stressful, but it felt more like a consequence of bad things, rather than a choice. I didn't think I was making a choice to do something harmful to me.

G (page 3): Definitely, looking back. At the time, I didn't think so. But after the sessions, yeah, it was way too much. It was taking so much time out of my life.

Participants found that worrying affected their sleep

Examples:

A (page 3): I'd be lying there at night ready to go to sleep and then a thousand intrusive thoughts would just blast me in the face.

B (page 2): Oh yeah, a lot. I was losing sleep, literally. Couldn't sleep properly because I just kept thinking about everything I had to do.

C (page 2): I think it was that I wanted to feel better in my mood and worry less so that my sleep would be better. The sleep thing was driving me up the wall. Not sleeping is so much worse than people think it is.

Participants didn't know that worrying could affect them negatively prior to the workshop and so engaged it in frequently

Examples:

A (page 3): I didn't hope that because at the time I didn't really notice I was doing it a lot, if that makes sense. Like obviously I knew I spent a lot of time thinking about my problems, but it didn't really connect that that was worry and that it was harmful. I just thought I was being dramatic.

B (page 2): And when I did some of the work, I couldn't feel happy about it, I just kept thinking of everything else left to do. It felt like I had no control over it. I just couldn't stop worrying about everything. It was draining.

G (page 2): A lot, yes. Too much. I didn't really know it was a bad thing, though. Like, I knew worrying was stressful, but it felt more like a consequence of bad things, rather than a choice. I didn't think I was making a choice to do something harmful to me.

G (page 2): Yeah, like everyone worries. It's hard to know where the line is from that being okay to that not being okay.

G (page 3): Definitely, looking back. At the time, I didn't think so. But after the sessions, yeah, it was way too much. It was taking so much time out of my life.

G (page 9): Yeah, it's saved me a lot of time. I think it was a perspective shift. Like, beforehand it's not that I thought worry was bad, and kept doing it, it's that I didn't know it wasn't a healthy thing to do or that it was even really within my control. I think once you showed us that some worry is fine but excessive worry isn't healthy, my whole attitude just shifted. Does that make sense?

Participants hoped for help with their mental health from the workshop

Examples:

A (page 3): I think I was just hoping for help. I think I hadn't pictured anything specific. Just that I wanted help and that this was offering it.

B (page 2): Honestly, just anything would have been good. I was really at the end of my line. I just wanted anything to help, and it was way faster than going through the doctors or the uni.

B (page 2): Yeah, and it's not their fault, but it is really hard. I know you obviously said this isn't therapy or a replacement for seeking out help, but it was available really fast and just gave me a lifeline.

C (page 3): Yeah, exactly. So that's another thing I wanted out of the workshop, someone to guide me so I didn't have to figure everything out myself.

C (page 3): I think it was that I wanted to feel better in my mood and worry less so that my sleep would be better.

F (page 3-4): I was pretty stressed out about work. I guess I wanted to learn some ways to be less stressed. Or to figure out why I felt so stressed. I think I had so much to think about work I just didn't have any time for myself anymore. So, I think I expected to get some time to myself and to lift some of the stress.

G (page 2): I was quite anxious. That's why I signed up in the first place, it was about worry and anxiety, so I thought it'd be helpful.

G (page 4): I think I was hoping that I'd come in and you'd wave a magic wand, and I'd not be stressed anymore. I was really tired, and I think the idea of doing more work was exhausting. I just didn't want to have to put the effort in. Sometimes I get like that, where even doing something that I know I want to do seems so draining that it's easier just to sit there and stew in my own stress.

G (page 4): Thanks. I think that's exactly it. I just wanted a magical fix, and I knew it wouldn't be like that, but I still held out hope.

H (page 4): I was hoping for a few things. I was hoping for meeting new people and getting to talk to them, which I definitely got, and I think it kept me sane during the month. I was hoping for some help with reducing my worry and stress, which definitely happened. And I was hoping for something to help with the boredom, which also happened.

Participants signed up for the workshop with low expectations

Examples:

D (page 2): Yeah. This isn't going to sound very nice, but I wasn't expecting much from it. I wasn't really expecting anything to help me at that point, but I was just sort of reaching out for anything.

D (page 2): Yep, I was going to end up having a full-blown breakdown if I didn't do something.

D (page 3): Honestly, I didn't even dare hope for anything, I thought if I went in with zero expectations, I'd not be disappointed. So, I went in thinking 'this is just another class'.

E (page 2): This is going to make me sound desperate, but I sign up for anything I can get my hands on for mental health. I'll try literally anything to improve my mental health, I think it's so important.

E (page 3): Probably. The thing is, because I sign up for everything, I'm also disappointed a lot. It's just that not everything works, and so I built a bit of a sceptical attitude to it all. But I keep going. Sorry, that sounds really negative.

F (page 2): Sort of. A friend of mine was thinking of doing it and I thought it might help with the stress. I know psychology pretty well but I hadn't heard of positive psychology so I thought it might be useful. I guess I wanted to learn something new.

Participants seemed to think of their worry as something that just happened, rather than an active choice:

C (page 2): I think it's less the actual trigger and more about my mind just running off with whatever it gets its hands on.

D (page 2): Yeah, I mean I'm a bit of a worrier anyway, but this was ridiculous. Usually, I'd worry about just things that stressed me out, but before the workshop I was worrying about things that wouldn't even bother me usually, I was just in this weird repetitive cycle.

Participants felt a bit awkward during the first session due to communicating with strangers

Examples:

A (page 3): I was glad it was small groups because I get awkward in big groups. I just tend to shrink into a corner somewhere. I thought you were good at the whole settling in thing. All four of us were a bit uncomfortable and awkward with each other, but you were good at getting us to chat and open up.

B (page 3): I missed the first couple of minutes because my WiFi is pretty shit. So, when I came in, everyone was doing their introduction bit. That helped to break the ice a bit. I could tell people were nervous to be around other people, but I enjoyed it because I was so bored stuck at home.

Participants felt at first that positive psychology was going to be embarrassing or cheesy

Examples:

F (page 2): It was fine. It felt a bit cheesy at first, all the 'love yourself' stuff. I usually hate that kind of thing. But you explained it fine, and it got less cheesy.

Participants felt good after the first session

Examples:

E (page 3): Oh yeah. I felt so much better after it, like I was walking on air for a few hours. I felt energised for the first time in ages. I really looked forward to the next session.

G (page 3): Everyone was really nice and friendly, and I really liked the character strengths stuff. I won't lie, I was getting really bored at home just sitting around waiting for things to happen. So, it was like a nice break. Everything felt just a bit more normal for a while.

G (page 4): No, not at all. I came out of the first session feeling really energised and motivated, it was great. I didn't feel tired at all. Everyone was really engaged in the subject and shared some nice things with each other. I thought it would have been a lot of effort and putting in tons of work but then you showed us the gratitude diary and it was so simple and easy to do that I felt relieved.

Participants enjoyed the sessions as they were craving social contact

Examples:

H (page 5): Well, it was nice to have an outlet for pent-up social neediness. I desperately just needed to talk to other human beings. I live with two, but they barely count if I'm totally honest, we never talk. And the group exercises were really fun. I liked hearing about what everyone was grateful for because it was such a mix of things. Everyone had their own special experiences and people they were grateful for, and that made me happy. It just reminded me how much good there is in the world.

Participants enjoyed the presentations given throughout the sessions

Examples:

A (page 4): I liked the presentation at the start too, I thought it was useful for settling us into everything.

A (page 7): Not really, it was all really clear, the presentations were clear too. I liked that you gave examples of everything, it helped to really get what we had to do.

A (page 7): Although I did like that they weren't too long. Sorry, that sounds horrible. I just mean that it wasn't the whole session, we had discussions and activities and things, so it broke up the session.

C (page 3): Really good. I liked your colour schemes. That sounds weird, sorry.

C (page 4): Well, you picked nice ones. It was really clear, and I liked that it wasn't all negative stuff. It was focused on positive things, and I liked that. Usually that sort of stuff makes me cringe a bit, I guess I'm too British or something, but I think everything was so negative at that point that I just wanted to soak up some happiness.

Participants enjoyed the link to the wider character strengths survey online

Examples:

A (page 4): I went and did the character strengths quiz thing that you linked us to. It was fun.

D (page 3): Yeah, I remember that because I called my mum and talked to her about it. Nothing that would breach confidentiality or anything, just like told her what character strengths were. We did the signature strengths survey thing together, we had similar results.

G (page 3): Everyone was really nice and friendly, and I really liked the character strengths stuff. I won't lie, I was getting really bored at home just sitting around waiting for things to happen. So, it was like a nice break. Everything felt just a bit more normal for a while.

Participants enjoyed learning about their character strengths and positive psychology in general

Examples:

A (page 4): I don't know, I think it's about seeing a different perspective. It's fun to see that it's a normal thing to be how you are, like other people are the same as you, it makes you feel less alone. I think it shows you bits of yourself you might not have realised. Like mine was love of learning, I think, as my first one, but gratitude was really low on the list, which we'd obviously just learned about in the session as well. I think even spirituality was higher, and I'm atheist.

B (page 3-4): I liked the thought that we were focusing on positive things, rather than focusing on all the stress of uni. It was nice to get a break and just think about stuff I'm good at, rather than all the stuff I sucked at.

D (page 3): Pretty interesting, like it was all brand-new stuff to me. I know a couple of people in the group knew what gratitude diaries were, but I had no idea. So yeah, it was all new stuff and I really enjoyed learning it. It felt like I was taking a class I actually wanted to take, not just one I had to take because I needed to pass my exams.

E (page 3): Oh, really good. I felt a bit stupid actually for being so judgemental about it. I went in thinking 'I bet this is just some 'think positive' bullshit', and then I got there, and you were like 'hi, here's the psychology of why worrying is probably not great and here's some coping strategies to replace it' and I felt really bad for assuming I knew what was going to happen.

Some participants found the gratitude diary strange or difficult at first

Examples:

A (page 4): Yes actually, it felt weird at first to just sit and think and write down what I was grateful for, because it feels like something you would just do naturally, but I kind of realised that it wasn't something I ever really did. I'd feel thankful for something when it happened, but I wouldn't think about it again after that. That makes me sound horrible.

D (page 3): At first it was really hard. Like, what I said about everything just piling up, it was really difficult to find anything to be grateful for. I had to start with really, really little things, like just having a coffee or having a nice meal. It was a bit depressing because I had to scrape the bottom of the barrel just to find something. But it got easier, and your examples did help.

F (page 4): It was fine, I felt a bit weird just thinking of things I was grateful for. Like I'd usually just be grateful in the moment that it happened, not just sit around every day, and think about it for a specific length of time. It felt a bit weird.

Participants enjoyed doing the gratitude diary

Examples:

A (page 4-5): Yes, definitely. Every night I did the gratitude diary, and it was really nice just having those two minutes to think about what had happened that day that I was thankful for. I thought it'd be really hard to keep up with, but it was actually not that difficult, I just did it after brushing my teeth, so it was more of a habit like how you said you do it with your bedtime routine.

A (page 6): But the gratitude sessions gave me some time each day to feel happy and thankful and that was more valuable than I thought it would be long-term.

B (page 4): I liked it. I mean, it was easy to do, which was surprising because I thought I'd struggle to find things I really felt grateful for. But you gave us the examples of being grateful for your friends, but also feeling grateful for just having iced tea, so that got the ideas flowing.

B (page 8): Everything, really. In different ways. I liked that there were different things to apply to everyday life. The gratitude journal was nice because I got to just sit down and feel grateful for things, and during the start of COVID I think everyone really needed to sit down and think about the good stuff. There was just so much bad stuff. I think everyone would get benefit from just sitting and thinking about the things they're grateful for, it really does finish the day off with a happy note.

E (page 4): Well, like I said I'd come across gratitude diaries before, so the actual writing of the diary was pretty easy for me, like I got the process of it. But I think I just like knowing why things work, and what's going on when I do something. I like knowing the mechanisms behind things. I think it just makes me believe in it more. So, your information on why it helps, that was really good for me. It gave me way more motivation to keep going.

G (page 4): I think it was relaxing, in a weird way. I'd sit there and sort of sift through the day to find the times where I felt grateful – and sometimes, it was that I hadn't actually felt grateful at the time, but I realised that I should have done, because I was genuinely really thankful for that moment or person. So, it was like I got to feel grateful in retrospect for it. There was a bit of the questionnaire survey thing we did between sessions, that said something like 'as I get older, I see more and more how many people and things I'm grateful for' or something like that. I can't remember the exact wording. But that was something I felt more and more strongly over the sessions as I did the diary.

G (page 5): Yeah. It was just nice to actually take the time and be grateful. Like, a lot of the time that led to me thanking people much more sincerely, rather than just the usual 'thank you', it was 'thank you, I really appreciate your help here'. I think people really enjoyed having their support appreciated like that.

G (page 5): I really liked those, as well. Honestly, the whole thing put together worked really well, I think it was a good combo. It's funny because it's stuff you don't really think about. Like, beforehand I'd think 'yeah, I'm grateful for things' but once I started doing the diary, I realised that actually, I never felt grateful for something for longer than like a few seconds as it happened. Whereas now, I think I've got the time at the end of the day where I allow myself to feel grateful for the things that happened or didn't happen during the day. I think it's made me feel more grateful as things happen as well.

G (page 6): Yeah. I think I'm more aware of taking the time to feel grateful regularly when things happen, rather than saving it for the end of the day. Although I still do it at the end of

the day, it doesn't feel like I'm setting aside time to be grateful now, it feels like I'm setting aside time to remember the things I was already grateful for.

H (page 6): It helped take away some of the stress, I think. At the end of the day, I'd struggle more with worry, like right before bed I would be sat there thinking about all the stuff I could have done, or all the things that might happen. After the gratitude diary, I went to bed thinking about all the things I was happy and thankful for instead. It was just way nicer. I noticed that I slept easier, too.

H (page 6): Well, it just made sense. Like, we don't really spend enough time these days just letting ourselves feel things. We're always rushing about. We've got these really short attention spans because we consume media like binge-watching and TikTok and stuff, everything goes by quickly, so you don't have time to just sit and digest everything. So, it made sense to just sit down and think about how we felt, think about what we were grateful for.

Participants managed to keep up with the daily activities for most of the four weeks

Examples:

B (page 4): No, but most days. I forgot sometimes, but I set reminders to try keep it up.

E (page 4): Yeah, pretty much every day. I think I skipped two days over the four weeks just because I forgot, but most of the time I did it.

F (page 4): Most of it, yeah.

G (page 5): I've kept up with it for four months now. I do it every night just before I go to bed. It makes me really relaxed for going to sleep. I skip it occasionally if I'm exhausted and just need to sleep, but pretty much every night.

H (page 5): It was pretty easy for me to keep up with, to be honest. I have a before-bed routine where I check my calendar for tomorrow, double-check I've not double-booked anything, then I make sure my guinea pigs are fed because the little goblins come out at night and scream if they don't have enough food. They're so loud.

Participants used habit bundling to establish a new habit

Examples:

A (page 5): I thought it'd be really hard to keep up with, but it was actually not that difficult, I just did it after brushing my teeth, so it was more of a habit like how you said you do it with your bedtime routine.

C (page 6): Good, it was a bit weird at first because it's a new part of the night-time routine, but I liked it. I thought about it while I did my night-time skincare, like what you said about habit bundles.

H (page 5): So, I just kind of slotted it into the routine, once I fed the pigs, I did my diary. It worked well really; I still do it now.

Participants favoured one session over the others

Examples:

C (page 4): I liked the hope pathways one. I think because it was new to me, but also because it was really useful for the time. With exams and coursework, I mean.

E (page 3): I did, actually. I really liked the affirmations one.

E (page 3): Sure. I think it was my favourite because it was a surprise. Everyone knows what affirmations are, it's not like we'd never heard of them before. So, at first, I thought 'whatever, this is going to be boring' and a few people were super awkward with giving themselves any kind of compliment. But I gave it a chance because the first session had been really good. And then you sort of just surprised me with telling us how to make affirmations that were specific, and about things that we needed motivation for.

F (page 5): I preferred the planning one. I think it was the second hope session. I get why the other two were important to go alongside it, but I like that the planning session was about problems that come up, rather than a daily thing to do. It felt like more of an actual lesson as well, like I was learning something rather than just practicing an exercise.

G (page 7): Oh, that's hard, I really liked them all. I think my favourite was the gratitude session, though, I really just enjoyed learning about the character strengths and then doing the diary.

H (page 5): Oh, good question. So, session one was a favourite because it was where we learned about the character strengths and got the gratitude diary. That was definitely my favourite exercise.

H (page 6): Well, it just made sense. Like, we don't really spend enough time these days just letting ourselves feel things. We're always rushing about. We've got these really short attention spans because we consume media like binge-watching and TikTok and stuff, everything goes by quickly, so you don't have time to just sit and digest everything. So, it made sense to just sit down and think about how we felt, think about what we were grateful for.

Participants switched to using an app instead of writing down a gratitude diary

Examples:

A (page 5): I actually switched to an app as well, cause there's tons of them for gratitude diaries. They send reminders, which helps me. I mean, I know they're pretty easy to ignore as well, but I guess if you have the motivation.

B (page 4): I did it on my phone, just in my notes app. It wasn't that I felt it should be done that way or anything, I just do everything on my phone. Makes it easier to keep up with it, too.

Participants suggested using an app might be more appropriate

Examples:

A (page 5): Yeah, but honestly, I spend so much time on my phone that everything in my life sort of has an online version. I think the reminders are really good for people who tend to forget things easily. And it's just easier to use than paper, you don't need to remember where you put it.

A (page 11): Just the online thing I think, making the gratitude diary online and maybe having some form of app for the pathways.

A (page 11): Not really! I think just put stuff online a bit more, and people will probably keep up with it better than they would on paper.

B (page 4): Sure, I think apps make everything easier, but that's cause the workshop was for students. If it was different age groups, I'd say don't do it online. Plus, it depends on what phone you have – some phones don't have access to the same apps. And some people can't afford phones.

Participants found the hope sessions helpful for building motivation

Examples:

A (page 6): So, when the hope sessions came along and the first one was about motivation and how to build it, that was really helpful cause once I'm motivated, I'm really good, I can just charge ahead. But if I don't feel motivated it's so hard, I can't feel settled or get comfy in the work. So doing the affirmations really helped, especially the tips about making them specific.

C (page 4): Well, I kind of suck at motivating myself. I'm a big procrastinator. Like, I'll sit down to do my coursework and suddenly I've cleaned my whole flat and done a clear-out of my wardrobe, but I haven't written a single word of my coursework. So, the hope pathways were really good at giving me motivation to keep going with small, manageable tasks.

H (page 6): Well, it was nice because everyone had settled around each other a bit more, so we were more chatty. The sessions were good, too. I like affirmations. I follow a ton of inspirational Instagram accounts because they do affirmations, I think they make me feel more positive. It keeps me motivated, like you said in the sessions.

Participants used affirmations to calm feelings of anxiety or worry

Example:

C (page 5): I don't have those written down. I use them more like when I get flustered or anxious to calm me down, rather than before a project or something.

C (page 5): Maybe 'you do not have to do everything all at once, you can do this small step'? I think that'd be what I'd tell myself.

Participants preferred matching their affirmations to the pathways

Examples:

A (page 6): Yeah, because it helped the motivation be specifically about the pathways. But I definitely use the affirmations outside of my pathways because I don't use the pathways for everything.

A (page 7): Pretty much everything to do with work honestly, it was really useful. What you said in the session, that people make vague broad goals and then get frustrated when it doesn't work out, that was definitely me, I would get so annoyed at myself for not being able to do what I wanted to do. And I'm still not perfect at it but I'm definitely better.

A (page 7): Yes, the 'you can complete the first two steps of your plan today' affirmation is because the first two steps of my pathways plan is to make sure I fully understand the information around the coursework piece, and to email the tutor if there's a part that I don't really get.

B (page 6): Sure. I said things like 'you did the step yesterday, so you can do the step today'. You said that adding evidence to our affirmations could help, so I did that. I'd say, 'you did this, so you can do that'.

G (page 6): Oh, yeah, definitely. I'd always try to give myself a pep talk before things, like the affirmations, but it would be stuff like 'you can do this!' or 'be awesome!', it would never be like what you taught us. Now, I've done the affirmations so much that it's just habit to be like 'today I am going to plough through this discussion section of my essay'.

Participants found the pathways method useful for university work and organisation

Examples:

A (page 7): Yes, the 'you can complete the first two steps of your plan today' affirmation is because the first two steps of my pathways plan is to make sure I fully understand the information around the coursework piece, and to email the tutor if there's a part that I don't really get. Once I've done those two steps, I've done the first chunk of the plan. It helps just to know I've got all the information and I can just go ahead knowing I'm on the right path.

B (page 4-5): I'm not very organised, so the planning part of the hope sessions was useful for me. It gave me a routine to get into with dealing with my uni work. It was all stuff that was common sense, but until you pointed it out, I just wouldn't have done it. Like when you showed us how to do contingency plans and small goals, that makes sense, but I'd never have thought about doing that without the workshop.

B (page 5): My first one was about exam revision, so it's by itself but it also works into a bigger plan for all my other exams. They all link together so I could balance the work timetable out. The first step is that I would do an hour of revision on that subject every other day for one week, and then each hour has a specific category of revision. Then after one week I build it up to one hour every day and keep that going for two weeks. Then I've got steps about doing practice essays, and group revision too.

B (page 8): And then the hope stuff was useful because like I said, everything was really unpredictable, so it helped to have plans wherever you could.

C (page 5): Sure. So, it's one I'm doing at the moment, it's for a piece of coursework. Step one is to read the coursework question, because sometimes I misunderstand the point of the assessment if I'm flustered. Step two is to organise all the relevant notes from the lectures into one folder so I can more easily access them together.

C (page 5): Yeah, exactly. So, at step four, which is to read the articles and book chapters, that's usually where I'd get really bored and end up procrastinating. And I'd tell myself 'Okay, you can break for an hour and then go back to it' but I'd wind up going past that hour. So really, I was my worst obstacle.

D (page 5): Oh, yeah. That's much more 'me'. It was all about planning and preparing for things in advance and I love doing that. But it wasn't just about how to be organised and prepared, it had really good tips on how to make a plan that was easier to stick to. I really liked that. It helped me put down how I was going to navigate exam season around all the other crap that was happening. Sorry, I shouldn't swear.

D (page 6): Yeah, of course. Okay so this is for a project I was doing that was multi-media, so we had a practical aspect of it where we worked with a – it's an art technique we were studying, it's a really long story. Basically, we had to do an art piece, but then we also had a paper to write on the technique and do a presentation on our process.

E (page 5): Thanks. With the hope pathways, I got to pick my dissertation title this week so I'm making plans for it, but I've used the hope pathways to keep it small and specific rather than focusing on the overall goal of 'writing a dissertation'. So, my hope pathway for the first chunk is researching the subject, compiling a list of papers and journals I can use, and finding books. The obstacles are all around getting bored and losing motivation, and also because the goal is at the end of the year it's so easy just to say 'whatever, I'll do it later' and go do something else. So, I've written down different ways I can stop myself from getting off-topic.

F (page 5): Tons of stuff. Exams, coursework, that sort of thing. I had a job interview, I used it for that. I think I used it for some personal stuff too, like keeping the house clean and stuff.

H (page 7): Well, at the moment I'm doing one that is about uni. So, my plan is basically to review the information I learned in any lecture a few days after the lecture, so that I can try to make sure it's going into my memory.

H (page 7): Thank you, a friend of mine swears by it for helping to remember things for exams. I think it's working, too, I can definitely remember more of my lectures. It helps as well because I can learn it my way a few days later, I'm not the best at listening and just taking in information. So, step one is to set up the timetable for doing this, so it's basically just shifting my actual timetable three days later so that I know when to set up the revision sessions.

Participants identified obstacles and managed to work around them through the pathways

Examples:

B (page 5): Yeah, the group revision ended up not being very useful, everyone got bored and we ended up going for food instead. It's harder to stay disciplined when everyone is giving up.

B (page 5): No, but I then put one in, in case it happened again. I just hadn't expected everyone just suddenly deciding not to do the work. I probably should have expected it.

B (page 5): I got back on the plan the next day, so it didn't feel like I was failing. Which is how I'd feel before the workshop, I'd feel like I failed and then I'd feel guilty. The plan just helped me get back on track and not just beat myself up about it instead.

D (page 6): D: Yeah, so I wrote down any obstacle for each step, which could honestly have been a lot of different things. Nan was in hospital, and she was due to leave at any point, and I might have had to go back home to help take care of her while my parents were at work. I get unwell easily as well, so I was trying to avoid a virus that was going around – as well as COVID, I mean. So, my contingency plans mostly rested on making sure I had flexibility in my schedule, so I could accommodate any surprise emergencies.

D (page 9): Totally, all of it. I think everyone's going to get really nervous about dissertations and I think the hope pathways are going to be way useful with breaking the dissertation down into small goals.

E (page 4): I liked it. It mixed things I knew with things I didn't. I knew about SMART goals and whatever, because the uni goes on about them all the time. But I liked combining it with contingency plans and obstacle spotting. I thought it was really interesting and I liked that when I did it, it worked. It proved itself as a good method.

E (page 5): Thanks. With the hope pathways, I got to pick my dissertation title this week so I'm making plans for it, but I've used the hope pathways to keep it small and specific rather than focusing on the overall goal of 'writing a dissertation'. So, my hope pathway for the first chunk is researching the subject, compiling a list of papers and journals I can use, and finding books. The obstacles are all around getting bored and losing motivation, and also because the goal is at the end of the year it's so easy just to say 'whatever, I'll do it later' and go do something else. So, I've written down different ways I can stop myself from getting off-topic.

F (page 6): I guess. It was mostly just things like getting bored of work or not spending enough time on it. I got my girlfriend to nag me to do things if I was bored or if I just didn't want to. Having someone else hold me responsible helped. I think it's easier to let yourself down than to let someone else down.

G (page 6-7): Okay, so this is Pathways 12, which is just because it's the twelfth one I've done. It's about household chores. Step one is to divide the chores evenly among the housemates. Obstacles there include people disagreeing about chores, or people not liking what they get. Possible solutions are to draw straws for things people hate, or to try and give everyone at least one chore they don't mind doing. Step two is to draw up a chart so people will mark off when they've done something. Potential obstacles are people forgetting to mark things off on the calendar. Possible solutions are to set a daily reminder text so that we all remember to mark off what we've done on the calendar. This could also be done on an app to make things easier, like Google Calendar. Step three is to run this for a trial fortnight so we can make sure

that people are able to keep up with it without it impacting their work or energy. Possible obstacles are people finding they can't keep up with chores, or people just being lazy with them. Possible solutions are switching chores, setting more reminders, or setting specific times of day to do them. We could also do a pairs-system where people do the chores in pairs to make it easier. Step four is to review it after a month and see how it's gone. That's basically it for now, because I'll be able to make further steps after we've done the review of it.

H (page 7): Not at that stage because it's pretty easy and like I said, I like organisation, so it was sort of fun for me. But then step two is to trial it for a week and see how it goes. I think the obstacles were mostly around me getting bored or not motivated, and the contingency plans were to keep up with my affirmations and to set rewards for me doing it.

Participants found the group activities useful within the sessions

Examples:

A (page 8): At first, they were a bit awkward because we were all nervous and shy, but I think we got into it more as it went on. You joined in with it which helped because it gave us an example. I think they were good, though, to get us into the swing of things.

C (page 6): I always find group activities a bit awkward, but everyone was really nice, so it was fine. And it helped with what I was saying earlier, that with just one roommate we were kind of going up the wall because we hadn't had much human interaction except with each other. So just having that interaction was really nice, like it would have been in normal classes.

D (page 7): They were good, I liked that I could hear what other people were thinking of. It helped with the gratitude diary, to get some inspiration on places I could look at in my own life for things I was thankful for.

E (page 7): Yeah, I always find it helpful to have other people giving their own examples of things, so that I can make sure I'm on the right track. Everyone in the group was really nice, and really putting in effort as well, so that did genuinely help so much. I think it was a good atmosphere, like everyone was there with the same problem and everyone wanted the same answers.

F (page 8): It was fine, it helps to hear what other people are putting down for their diaries and affirmations so you can get inspiration about your own. So that was useful for the exercises specifically. I guess I just think I'd prefer getting the entire session to focus on myself rather than on a group. That way, I think I'd get more out of it.

Some participants preferred a group format over a one-to-one format

Examples:

A (page 8): I'm not sure, because there would be definite upsides to it; you'd get more one-to-one time with the person running the session, but really, I think it made more sense in a group. It makes you feel like you're not alone in it and that helped more than I thought it would.

C (page 9): I've never really done a one-to-one session thing with anything like therapy or self-help, so I can't know for sure. But I think group is better for me, mostly because I like being able to see I'm not alone in what I'm doing, and it keeps me motivated if there's more than just me in it. No offence, I know you'd be helpful, but it's different when it's the people doing the workshop in the same role.

C (page 10): Don't get me wrong, I felt like we could all approach you about anything. But sometimes it's nicer to go through it with someone else.

D (page 7): Oh god, no, I'm glad it was a group. No offence again. I was really alone and freaking out in life, so I looked forward to seeing the group every week for a few weeks. It was nice just to have some different company.

E (page 7): I don't really have a preference in general. I get why both of them are important. But I think for this workshop specifically, the group will have worked better than one-to-one. I think you need the group exercises to help people learn it all and practice it.

G (page 9): I like group things; I tend to learn better when there are other people contributing to something. Like in the discussions, it's easier for me to understand the task if other people are giving their own examples. And it was nice because everyone was so bored during the lockdown that it was just nice to have some social time with people going through the same thing.

G (page 9): I think everyone else felt similarly. It's just nice to talk to people that aren't the usual people in your life, and have it been specifically about something that you all share.

H (page 3): That's actually hard to answer. I don't think I have a preference. I can see why both would be useful. I did enjoy the group though; everyone was a bit quiet at first, but I think everyone warmed up by week two.

Some participants would have preferred one-to-one sessions

Examples:

B (page 6): I think so, yes. I can see why the group is useful, but I prefer things being private. I still would have been embarrassed to share it with you, but I probably would have shared more with just you than I did with the group. Not that they weren't nice, they were lovely, I'm just a bit awkward around strangers.

F (page 4): Yeah, definitely. I don't really like group things. I think it doesn't really help everyone individually, because you've got to let everyone speak and share their problems. I mean, everyone was really nice. But I just prefer one-to-one things so I can get everything out of it that I need. I knew I'd never speak to the others again, so it felt like a waste of time to listen to their stuff.

F (page 4): I definitely felt less stressed. I didn't get time to myself I think though, mostly because it was a group thing. So, we were all focused on each other as well as ourselves. It wasn't a bad thing; it was just that you didn't get time just to think about yourself for the forty minutes or whatever it was.

Participants felt embarrassed at times in the sessions and doing the exercises

Examples:

A (page 8): Yeah. It was a bit weird at first because you're sharing about your worries and stress with people. And it did feel a bit embarrassing at times, to share affirmations or even what we were grateful for – I didn't want people to think I was cringey or grateful for something silly.

B (page 6): I wasn't as good at that bit. I'm not very good at paying myself compliments. I get embarrassed at it.

B (page 6): Some of them were fine. Sharing the gratitude stuff was fine. I wasn't as good at sharing the affirmations, like I said it makes me embarrassed. But I just shared some of the less personal ones. I just didn't want to show all my feelings to strangers.

B (page 9): Yeah, I do. Less so the affirmations, but that's because I'm still not comfortable with being so positive about myself. That sounds really bad. I just get embarrassed. But I use the pathways and the gratitude all the time. I got my partner doing it too, actually.

D (page 4): The affirmations, yes. I'm sort of the typical 'ew no' person when someone compliments me, and it's way worse when it's me doing it to me. I feel daft. But like I said, I'm really stubborn. So, I just got on with it.

D (page 4): Yep, that's me. I don't like failing. I just kind of funnel all my energy into getting things done. The affirmations were really awkward at first, I had to put them in a sort of backhanded compliment way to be able to do it. Like now I'd be able to say, 'you're capable of doing your work today', but at the start I'd be like 'you're capable of doing work when you actually try'. That sounds really bad, but it worked.

F (page 6): Yeah, it's a bit embarrassing but I still use the affirmations. It's like a pep-talk, like I just keep telling myself 'You can do this'. I don't do it out loud though, I think if my roommates heard me, they'd literally never let me forget it.

Some participants would have preferred in-person sessions over online

Examples:

A (page 8): Well, I've never done a group thing like that in person so I can only really say hypothetically. I think it would be easier to get to know each other in the group, because on screen it's a bit hard to see body language and there are some delays, but it also was much easier being online because of the pandemic, and it also meant no one had to travel in.

H (page 3): I'd have preferred that. It would have been less easy to commit to, though, because of travelling and stuff. I think people might have dropped out. But I think I prefer being able to see people in real life, and not having to deal with people's Wi-Fi dropping out or lagging.

H (page 3): Yeah. But I will say I do have chronic fatigue syndrome and so it is way easier to do online things if I'm having a flare up of symptoms. So, while I prefer 'IRL' I would probably always opt for online just in case I have a flare up – that way I don't have to drop out.

Some participants preferred online sessions to in-person

Examples:

B (page 7): I probably wouldn't have signed up if it was in person, to be honest.

B (page 7): No, even without COVID. With it being online I could be at home, in my own space, so it felt easier than going to a classroom with a bunch of strangers. I felt way more likely to turn up to all the sessions, and to open up with everything. It also made it easier for my schedule because I didn't have to factor in travel times, so I could just turn up.

G (page 7-8): I prefer online, but that's because I prefer everything to be online. If there's an app for something, I'll use the app. Even my lightbulbs activate from an app. I just like things online because I don't have to think about travelling into uni, finding my way around, sorting out food while I'm out, then travelling home. It's just easier for me to sit down at my desk, log on, do the thing, log out, and boom, it's taken less time out of my day.

Some participants didn't have a preference on in-person or online

Examples:

C (page 7): It doesn't make much difference to me, I think. I just don't mind. Online is good, it's become way more of a thing since COVID.

D (page 7): Personally, it doesn't matter to me either way. I mean, it's easier to do online in the sense that we don't have to get to campus to do it, but honestly, it's not a big deal either way for me because I don't live far away from the campus. It was just nice to be able to do it.

E (page 7): Honestly, I've done some workshops in person and some online, and I don't think there's much difference. I guess you can't see the whole body of the people you're doing the workshop with, so you miss out on some body language, and you've got to put up with any technical problems. But really, I think the difference is so small, I'm just nit-picking at that point.

F (page 8): No, I don't really care either way. I just think everyone's freaking out about COVID and it's not that big a deal.

Participants found the workshop useful to break up the boredom they experienced during lockdown

Examples:

A (page 9): I mean it was happening during the time where everyone was doing online pub quizzes and stuff, so I think it was good timing. It broke up the week a bit too, I was stressed all the time, but I was also really restless and bored. I'm not used to being stuck in the house, and when it first happened, I didn't think it'd be that difficult, but it really was.

B (page 3): Super restless, yeah. I was in the baking bread stage I think, or the cycling stage. Either way, it was nice to get a break from just sitting around stressing about uni.

C (page 3): Classes had ended so I was a bit bored just revising constantly for exams and writing coursework. It was nice to just learn something for the fun of it rather than for classes.

G (page 3): Everyone was really nice and friendly, and I really liked the character strengths stuff. I won't lie, I was getting really bored at home just sitting around waiting for things to happen. So, it was like a nice break. Everything felt just a bit more normal for a while.

H (page 4): I was hoping for a few things. I was hoping for meeting new people and getting to talk to them, which I definitely got, and I think it kept me sane during the month. I was hoping for some help with reducing my worry and stress, which definitely happened. And I was hoping for something to help with the boredom, which also happened.

Participants had heard of some of the activities prior to the workshop

Examples:

B (page 3): It was interesting. I'd never heard of character strengths before. I've heard of gratitude diaries; they were pretty big on Instagram for a bit.

C (page 4): They were cool. I'd heard of gratitude diaries before, I think everyone's heard of them. And everyone knows affirmations. But I hadn't really given them much thought before because I thought it was just usual social media nonsense. After you told us about the psychology behind it, it had a lot more credibility.

E (page 3): Sure. I think it was my favourite because it was a surprise. Everyone knows what affirmations are, it's not like we'd never heard of them before. So, at first, I thought 'whatever, this is going to be boring' and a few people were super awkward with giving themselves any kind of compliment. But I gave it a chance because the first session had been really good. And then you sort of just surprised me with telling us how to make affirmations that were specific, and about things that we needed motivation for.

E (page 4): Well, like I said I'd come across gratitude diaries before, so the actual writing of the diary was pretty easy for me, like I got the process of it. But I think I just like knowing why things work, and what's going on when I do something. I like knowing the mechanisms behind things. I think it just makes me believe in it more. So, your information on why it helps, that was really good for me. It gave me way more motivation to keep going.

E (page 4): Yeah. When you hear 'affirmations', you think of people posting on Instagram with crap like 'I'm amazing, I'm fabulous' and honestly, it's just a major eye roll. But then you showed us how to make affirmations that were like 'I'm capable of doing two hours of work today' and 'I've proved to myself that I can easily do this revision', and that just made so much more sense. It felt stupid at first to say out loud this stuff, but I really liked it. It helped me focus on the task at hand.

Participants found that the workshop gave them more ways to cope with stress

Examples:

A (page 9): The stress didn't really change cause the things causing the stress were always happening, it just kept coming in. But I definitely noticed a change in how I dealt with it. I could handle it better because I had the motivation and the plans, and like I said, taking a few minutes at the end of the day for the gratitude diary, that was really nice and relaxing. So, it was like the stress didn't change but the response from me did. I didn't worry as much about it, it was easier to switch off from it because I knew I had the plan, and I knew I'd stick to it.

C (page 8): Sort of. I think it definitely helped make my anxiety better, but it's not like the stressors went away. And it just kept on coming and coming, like things piled up really fast, and they're still coming. But I think the sessions helped me sort of take a step back from the stress and think about how to deal with it better. So, I think it's more that it gave me a better way to address the problems.

D (page 8): Yeah. It fluctuated a fair bit. I went up and down. But I definitely had more of a plan, and more to rely on when stress came along, so I think my worry went down for sure. That was a relief because it was taking over my life.

E (page 6): I'm not really sure. I think it's because I know what to replace it with. Before, I'd beat myself up for ruminating and say, 'just stop worrying!' but that doesn't actually help anything, because obviously there's nothing to replace it. The sessions gave me something to replace it with. And it felt like I had much more control over it that way.

E (page 8): I think it was a combination of being more grounded in the things we could control and having alternatives to just sitting around stressing about it. That sounds so stupid, because obviously we had other options before, but I think it's just that you forget about everything healthy you could do in the moment.

F (page 7): I don't know. It's better, I think. I don't feel as stressed. Whenever I do, I just sort of plan my way out of it. I feel better having a plan, that's why I like the pathways. And the affirmations just keep me on top of it. It's what you said during the session about motivation, it keeps me motivated to keep up with the pathways.

Participants worried less and had improvements in their mental health

Examples:

A (page 10): Yeah. I definitely noticed when I was worrying more, I was more aware of when it was happening. It made it easier to interrupt myself and stop worrying and focus more on the affirmations and the pathways. I think over time, that became a habit as well, because at the moment I don't really worry about things anymore, and when I do I manage to stop it quickly and change what I'm doing.

B (page 9): Less time worrying, definitely. Once we did the session where you told us about worry and when to notice it, I realised just how much time I was spending going over and over things in my head, but not doing anything to fix the issue. After that, any time I noticed that I was worrying, I'd stop myself and say, 'this isn't healthy or helping me', and then figure out something to change how I was acting.

B (page 9): Yeah, with practice it got easier. I don't worry a lot at the moment. I do sometimes, at night it gets harder to stop my head just spinning off on weird tangents. I feel like my brain switches into worry mode when I'm trying to sleep. But during the day, it's easier, I can just stop myself worrying and change what I'm doing. I'll use the pathways a lot, to stop worrying being the focus, and that way I do productive things instead.

C (page 8): Oh, sure. I started out with probably a medium amount of worry, like I didn't spend all my time worrying but it was definitely more than usual. I went back to my normal amount after the sessions, but that was great for me because it was what I'd think of as a healthy amount of worry, during a stressful time. So that was nice because it felt like I was back to my normal self. I don't think you can ever really get rid of worry altogether, it's normal to worry a bit. But it was definitely good to get it down to the normal amount.

D (page 8): Yeah. It fluctuated a fair bit. I went up and down. But I definitely had more of a plan, and more to rely on when stress came along, so I think my worry went down for sure. That was a relief because it was taking over my life.

D (page 8): It's a bit more stable, it doesn't rock up and down all the time. That in itself is a relief to be honest. My nan is home safe, and everyone's adjusted a bit more to COVID, and I've had time to grieve my break-up. So, I think I've got a more stable environment and now I can just focus on the normal things people stress about, like going into third year. Everything just sort of crashed down around me at once, so it was nice that everything is just staying put for now.

D (page 10): I think it's because I felt like I had more control over it. Before, it felt like worrying was all I could do to be prepared, to feel ready for anything. If I pictured all the possible things that could happen, I couldn't be surprised by anything. But the sessions showed me that I could choose to do something else. That worrying wasn't just something that happened, it was something I was actively choosing to do, and I could choose something else.

E (page 2): Yeah. I've tried to let go of it; I've definitely gotten better about it since the workshop. I'm trying to just remember that I can only control what I do, not them, and that it's on them if they get unwell.

E (page 6): I'm less anxious, definitely. I'm just less stressed in general because I spend less time going over and over all the shit around me. I don't spend hours just thinking of all the

horrible ways my friends could get COVID and die. It does help that I've had time to get used to COVID just being around, but it still freaks me out. It's a relief not to spend all that time worrying and – what is that you call it when you just spend loads of time going over and over scenarios?

E (page 6): Yeah, it's a relief not to be ruminating all the time.

E (page 6): I'm not really sure. I think it's because I know what to replace it with. Before, I'd beat myself up for ruminating and say, 'just stop worrying!' but that doesn't actually help anything, because obviously there's nothing to replace it. The sessions gave me something to replace it with. And it felt like I had much more control over it that way.

F (page 7): I don't know. It's better, I think. I don't feel as stressed. Whenever I do, I just sort of plan my way out of it. I feel better having a plan, that's why I like the pathways. And the affirmations just keep me on top of it. It's what you said during the session about motivation, it keeps me motivated to keep up with the pathways.

F (page 7): Yeah, I still don't worry much. It just makes me feel worse and worse if I worry, so it's something I never really did. But other stuff changed. I don't feel the background stress as much anymore, so that's good.

F (page 9): It fluctuated a bit, I guess. But mostly, I'd gotten what I needed, a way to stop being so stressed and I learned more about why I was stressed. So, it definitely was better. Plus, I think everyone got more used to being stuck inside and changing their lives to be more online, so it got better anyway.

G (page 8): Well, one of the things with worry was rumination. I think people will be ruminating on all the problems COVID causes. I catch myself doing it too, wondering what's going to happen with third year, wondering what's going to happen with work, what's going to happen with the government, just going round and round on it. I'm able to stop myself because of what I learned in the sessions with controlling things you can control, but other people don't know that stuff, so they'd just keep going with it.

G (page 9): Yeah, it's saved me a lot of time. I think it was a perspective shift. Like, beforehand it's not that I thought worry was bad, and kept doing it, it's that I didn't know it wasn't a healthy thing to do or that it was even really within my control. I think once you showed us that some worry is fine but excessive worry isn't healthy, my whole attitude just shifted. Does that make sense?

H (page 6): It helped take away some of the stress, I think. At the end of the day, I'd struggle more with worry, like right before bed I would be sat there thinking about all the stuff I could have done, or all the things that might happen. After the gratitude diary, I went to bed thinking about all the things I was happy and thankful for instead. It was just way nicer. I noticed that I slept easier, too.

H (page 8): It wasn't perfect, or anything. I still had stress and anxiety. But I think it was good because I could handle it. I mean, I could handle stuff before, but it always felt like I was sort of reaching the end of my tether. After the workshop, I had more tools in my toolbox. I think it definitely reduced my stress, because I wasn't worrying as much – I stopped worrying so much after you taught me that it was in my control to do so, I think I just needed to hear that it was controllable. And like I said, the gratitude diary helped to stop me worrying so much at night. So, I would say that I definitely had less stress, and the stress I still had I could deal with.

Participants thought the workshop could be helpful if offered to students in general

Examples:

A (page 10): Yeah definitely, I don't know if people would all accept the option because I know some people just wouldn't keep up with it. Some people really don't have the discipline to keep up with daily exercises, but I think having the option would be really helpful for people that do.

B (page 9): Yeah, especially at the moment. My year at least had their first year and part of second year actually at university, in the classrooms and on campus, before COVID hit. I feel bad for the freshers coming in now, that are having to probably do their first year remotely. I think this sort of thing could really help people feel less alone as well. It would probably be best before exam season too.

C (page 8): Yeah, definitely. I think it'd be good as well as a preventative thing, like giving them to the students at the start of the year so they can deal better with stress and worry when it comes up, rather than addressing it later on.

D (page 9): Oh yeah, I think it'd be really helpful. Even if it's just to give them some extra support when they're going into the really stressful time. But I think it'd be good for second years too because second year just is a massive step up in difficulty and stress.

E (page 8): Yes. I mean, honestly, I think students are kind of chucked into the deep end. We come to university, living independently for the first time ever, and they talk about how first-years are handheld through their year, but they're really not. We're just kind of thrown into classes and ignored. And then we start second year and it's really ridiculously difficult but there's no support offered for it. I don't know, I'm not saying that they don't care about us, but it does feel like they think students should be fighting their way through uni, rather than actually enjoying learning and being challenged.

F (page 8): I guess, yeah. I'd make it optional though, because some people wouldn't want to do it and then they'd just spoil it for everyone else by not putting any effort in.

F (page 8): Stress? We have a lot of it. Second-year is really a massive step-up, and I don't even know what third year is going to be like. We're still in the intro phase where it's all just talking about schedules and stuff. It's probably going to be hard and there's not going to be any support again. So yeah, I guess just giving students some support would be nice. Or the option for it, anyway. Some people just sail through without trying.

G (page 10): Oh, yeah, definitely. It was very useful for me organising my work and that. I've gone into third year much more confident about my ability to handle things. I think if people had the option for that support, they'd feel a lot more confident and capable.

H (page 8): Absolutely. Honestly, if you made it optional, you'd only get the students who were really committed to it working, I think. If you made it mandatory, I think tons of students wouldn't do the work and then would complain when it didn't fix their problems. I definitely think willingness to do the work is really important.

Participants believe the COVID pandemic meant that the workshop was experienced differently than it would have been before

Examples:

C (page 7): Oh, I bet it changed it loads. Face-to-face would have been good if it had been earlier in the year, because we'd have been on campus for classes. But I think when we did the workshop, classes had basically finished anyway, so we would have had to make the trip in just for the sessions. I think you'd have had people dropping it halfway through because they couldn't be bothered. Online is easier to attend.

C (page 7): That's a good question. I reckon it's affected it in a hundred different tiny ways that we won't even realise. Like, it caused us all to be just naturally more anxious and stressed out, and it made the future really uncertain, plus on top of that you've got the restlessness and boredom of being stuck at home with nothing to do. And then a thousand shitty things are happening around the world, and everyone's developed this weird apathy where it's like 'okay, yet another horrendous thing is happening, I'm too tired to care'. It's been a really weird time.

D (page 8): How much time do you have? COVID has affected everything. We were all extra stressed. We had extra pressure. It's not letting up either. It's like this is the new normal and we're all freaking out about the future. So yeah, it's probably affected the sessions a lot and it definitely affected us.

D (page 8): Definitely the stress. I don't know how to put it. It was just relentless stress, and you don't get a break from it because it's an ongoing thing. Everyone was in panic mode, plus there are tons of complete idiots walking around saying it's a hoax, which was really pissing me off. The panic has settled down but the stress has only gotten worse, I think.

E (page 7): I think everyone was just really stressed. I think usually, we'd have been stressed, because it was exam season and classes had finished and third year was coming up. But that we all expected, we all knew that part was coming. But then COVID hit and how exactly were we supposed to cope with that? No one had seen it coming. And I get wiggled out during flu season, so a global pandemic was just the worst-case scenario for me.

F (page 8): Well, it made it online. I don't mind the online stuff but it's like everything is suddenly online because everyone's too scared to go outside. I'm not really bothering with the whole isolating thing, like I'm happy to go out and just be careful while I'm out.

G (page 8): Oh god, what hasn't it affected? Everyone was stressed about it. And it wasn't just COVID itself, it was the reactions to it. I was less stressed about the virus and more stressed about people saying it didn't exist or that it was a hoax created by the government. It's insane how people are saying the vaccine that they're developing won't be okay or that it'll have trackers in it or something. I'm more stressed about how selfish everyone is being in comparison to the rest of Europe. Look at New Zealand, they're doing so well and we're like 'oh sure, another hundred thousand people died, whatever'.

G (page 8): Definitely. I mean, it's to be expected. I don't think anyone wouldn't be stressed about this. So yeah, I think the stress levels of everyone are really high. And what we learned in the sessions about worry – people will be worrying way more.

G (page 8): Well, one of the things with worry was rumination. I think people will be ruminating on all the problems COVID causes. I catch myself doing it too, wondering what's going to happen with third year, wondering what's going to happen with work, what's going to happen with the government, just going round and round on it. I'm able to stop myself because of what I learned in the sessions with controlling things you can control, but other people don't know that stuff, so they'd just keep going with it.

Some participants use the session activities still, four months after the sessions ended

Examples:

A (page 10): Yeah, I switched to an app for the gratitude exercise, but I definitely still do that. It sends me reminders on my phone so it's easier to keep up. And the hope exercises are more situational, I'll use it when I want to achieve a goal, rather than every day. But I still keep up with both of them, I think it's been more of switch in mindset than thinking of them as exercises now.

A (page 10): Yeah exactly. It happens more naturally now, especially as the one for my coursework and exams follows the same structure each time, so it's easy to just repeat it but tailor it a bit for each piece of work. A lot of my coursework and exams are similar, it's a lot of essays.

B (page 9): Yeah, I do. Less so the affirmations, but that's because I'm still not comfortable with being so positive about myself. That sounds really bad. I just get embarrassed. But I use the pathways and the gratitude all the time. I got my partner doing it too, actually.

C (page 4): Yeah, I do. I write it down as well. I made a template to note down all the obstacles I might face and the contingency plans. It's really helpful. I'm way more organised because of it.

C (page 6): I don't really write it down, but I think of three things every night while I do my face.

D (page 9): Totally, all of it. I think everyone's going to get really nervous about dissertations and I think the hope pathways are going to be way useful with breaking the dissertation down into small goals.

D (page 9): Yeah. The affirmations are still hard, but like I said, I'm stubborn.

D (page 9): I'm hoping I get there, because it is a bit depressing that it's so difficult for me to be nice to myself. The gratitude diary got way easier, though.

E (page 5): No, I really should have done but I let it slip. I still do the affirmations and the hope pathways planning thing, so I think it might just be that I didn't click with the gratitude diary as much. Or maybe because it's more like a gentle background thing that builds over time, rather than something I whip out for a specific issue.

E (page 5): Sure. So, my affirmations today were 'I am capable of doing an hour of work before my interview with Cam' and 'after my interview, I will be able to make myself a healthy lunch and go back to work'. I'm trying to lose weight at the moment and the affirmations are helpful as hell for that.

F (page 6): Yeah, it's a bit embarrassing but I still use the affirmations. It's like a pep-talk, like I just keep telling myself 'You can do this'. I don't do it out loud though, I think if my roommates heard me, they'd literally never let me forget it.

F (page 6): The pathways I guess I use but not with the whole writing it down thing, it's just become a bit more of a habit I use to figure out a problem. Like I don't think 'I'm using the pathways method', I just think 'okay what's the main obstacles here and how do I prevent them becoming an issue'. The gratitude diary I don't really use anymore. I just found it a bit weird.

G (page 5): I've kept up with it for four months now. I do it every night just before I go to bed. It makes me really relaxed for going to sleep. I skip it occasionally if I'm exhausted and just need to sleep, but pretty much every night.

H (page 5): Yep, I still do all of the exercises now. I thought I'd slip, to be honest, because I don't have the best history with setting goals and sticking to them. I do less of the pathways because it depends on the situation. But the affirmations and gratitude diary I do daily.

Some participants did not like some of the activities

Examples:

F (page 6): Sure, I think it's because I don't really get it. I think it's nice to be grateful for things, but I don't think it really does anything. I think some people feel all nice and happy after it, but I just didn't get that. I just thought 'okay now I've said what I'm grateful for, what was the point?'. I think it makes people feel good about themselves, but it didn't do anything for me.

Participants found the workshop appropriate for students

Examples:

A (page 11): I really hate when lecturers use emojis in their stuff, it makes me feel like I'm being talked down to, and you didn't do that. I liked the presentations because they were clear and gave enough information, but it wasn't like massive chunks of text.

B (page 10): No, I think they were good.

D (page 10): No, I think it was fine for students. You related stuff to things we'd be worrying about, like exams and coursework, and that was useful. I think it would be fine to use with other groups, though, like it wasn't set up so only students could use it.

E (page 9): Yeah, they were fine. I think there's a thing among some lecturers where they try to make it appropriate for students by adding memes and stuff, but it's always really old memes or slang that's really old, and it just gets a bit cringe. That sounds really mean, I know they're doing it to try and connect with us, but it's just a bit unnecessary.

E (page 9): I know which ads you mean, that's so funny. But yeah, the presentations weren't like that. You just talked to us like adults, which really shouldn't be such a big deal but sometimes it really is. Most of the time we're either being spoken to like kids, or like irresponsible teenagers. Or we're being told by the world that we aren't real adults, and that we're not allowed to act like them. It's bizarre.

G (page 10): Personally, I found it fine for me, and I'm a student so I think it was good. Like, the examples you gave were all relevant to us, and you showed us how the pathways and affirmations could help specifically with student-related things, so I think it was good for students. Maybe not mature students, though, they might have different things to focus on, so you could run a group specifically for mature students? And maybe international students might struggle with a language barrier if they're still learning English.

H (page 9): Honestly, I think it was fine for students. Sorry, that's not very helpful, but I don't think I've got any suggestions.

Participants said they would have preferred to have more sessions

Examples:

A (page 11): Maybe add a couple of sessions. I think people would be more likely to keep up with it if it was a bit longer. If there were more sessions, maybe we could talk about how we've been using the exercises in our lives more in the sessions.

B (page 10): No, I think they were good. I think the only thing I'd suggest changing is having more of them, more sessions. The four were really good, and I think maybe six or eight would have been better. I think maybe to consolidate what we were learning.

B (page 10): I think I'd have the other sessions keep practicing the hope and gratitude. I would like to learn more about other strengths, but I wouldn't want it to become too much all at once, like too many exercises to do. So maybe one other strength – or just maybe some more practice of the hope and gratitude. I really enjoyed them.

C (page 8): I'd have said to do a few more, though, because four is fine but I think we'd have gotten more from the group aspect of it with more sessions.

C (page 9): Yeah, I just think that groups take a couple of sessions to get comfortable around each other anyway, so it'd just be better if there were more sessions. Maybe if there was just a session where we talked about worry and stress, and what it was we were struggling with, we'd find the common ground there? That way we can all start the rest of the workshop with a clear foundation with each other.

E (page 9): Actually, yes. I think it could have been longer. Four sessions were good, but I think one more just to sort of practice a bit more with everyone, that would have made it just a bit better.

E (page 9): That and honestly, I usually come away from any kind of workshop I enjoyed wishing there were a couple more sessions. I think I could do a hundred sessions of therapy and still feel like I hadn't finished it yet.

Participants thought more strengths included might have confused the content of the workshop

Examples:

C (page 9): Maybe one more if you were doing more sessions, but I think it'd get too much after that. I guess you could do a session on the signature strengths for each person, but that might be too much too, because everyone's strengths are different.

Some participants thought it might be better to focus on one strength

Examples:

F (page 9): I'd cut the gratitude bit if I was running it. I think it doesn't really mix with the hope stuff. I think just focusing on the hope stuff would make it just better in general.

F (page 9): I just think it's always better to focus on one thing and get it right. It's not that the gratitude stuff isn't helpful for some people, I know that some of the other people really liked it and you said you use it yourself. But I think it would have just been better if you picked one strength and focused all of the time on it, rather than mixing it up.

Participants in the wait-list group didn't mind the short waiting list but felt an indefinite waiting list would have affected them negatively

Examples:

F (page 3): Didn't really bother me. I don't mind waiting for something when I know it's not going to last forever. I had other things to think about anyway.

F (page 3): Yeah. I hate waiting with no end in sight. It's fine when you've got a date where it's like 'this is what you've been waiting for, and it's coming soon'. But when it's just waiting and waiting and you don't know when it's going to end, that's just annoying.

F (page 3): Didn't really bother me. I don't mind waiting for something when I know it's not going to last forever. I had other things to think about anyway.

G (page 3): Okay well, yeah, a bit frustrating. But at first, I thought it was an indefinite wait list, like I was going to be waiting for who knows how long and that just sounded really annoying, because I couldn't plan for anything. When I saw it was a couple of months it didn't sound too bad, really, because I had exams to focus on until then and I didn't have a ton of free time.

Participants thought the intervention would be best given during a time of low stress to prepare for future stress

Examples:

G (page 3): Yeah, I think it's good to prepare you for future stress, so I think maybe it would work well at the start of the year, before everything gets overwhelming.

H (page 9): It didn't affect how the workshop was, in terms of the sessions themselves. But I think in a way it was good because I had much more free time in June than I did when the first groups went. I didn't have to slot it into my schedule in June because my schedule was just nothing. And it definitely helped fill the week out a bit and make me much less bored, so I think it timed well for me. I did feel probably a bit more stressed out in April, though, because it was when everything kicked off with COVID, so it might have been more helpful during that time. I don't know, it's a mix.

Appendix D: Ethics Forms

D.1 Ethics form for Study 1

Positive emotions and transitional anxiety in students; a longitudinal study

Ethics Review ID: ER6928418

Workflow Status: Approved with Advisory Comments

Type of Ethics Review Template: All other research with human participants

Primary Researcher / Principal Investigator

Cameron Pattinson

(Faculty of Social Sciences and Humanities)

Converis Project Application:

Q1. Is this project ii) Doctoral research

Director of Studies

Ann Macaskill

(Faculty of Social Sciences and Humanities)

Q4. Proposed Start Date of Data Collection: 01/08/2018

Q5. Proposed End Date of Data Collection : 31/10/2018

Q6. Will the research involve any of the following

i) Participants under 5 years old: No

ii) Pregnant women: No

iii) 5000 or more participants: No

iv) Research being conducted in an overseas

country: No

Q7. If overseas, specify the location:

Q8. Is the research externally funded?: No

Q9. Will the research be conducted with partners and subcontractors?: No

Q10. Does the research involve one or more of the following?

i. Patients recruited because of their past or present use of the NHS or Social Care:

No

ii. Relatives/carers of patients recruited because of their past or present use of the

NHS or Social Care: No

iii. Access to data, organs, or other bodily material of past or present NHS patients: No

iv. Foetal material and IVF involving NHS patients: No

v. The recently dead in NHS premises: No

vi. Participants who are unable to provide informed consent due to their incapacity

even if the project is not health related: No

vii. Prisoners or others within the criminal justice system recruited for health-related research: No

viii. Prisoners or others within the criminal justice system recruited for non-health-related research: No

ix. Police, court officials or others within the criminal justice system: No

Is this a research project as opposed to service evaluation or audit?: No

Q11. Category of academic discipline: Social Sciences

Q12. Methodology: Mixed Method

P2 - Project Outline

Q1. General overview of study: The aim of this study is to examine the prevalence of transitional anxiety, worry, resilience, and the character strengths associated with anxiety (hope, curiosity, optimism, and gratitude), in an undergraduate population. Participants will be recruited prior to their start date of university to ascertain the level of anxiety they feel about beginning university. The results collected will be used to create an intervention later in the research. The survey will include demographic questions, and measures to examine the factors listed above, including two qualitative questions. A follow-up survey will be sent out in January, once exam season has finished, to examine the difference in these factors after students have settled at university. The data will be analysed mostly through statistical tests, along with qualitative analyses on the two qualitative questions. This study will provide new data

on positive psychology character strengths and anxiety, as previous research focuses on the associations with depression. This will be used to develop the intervention to help alleviate anxiety in students.

Q2. Background to the study and scientific rationale (if you have already written a research proposal, e.g. for a funder, you can upload that instead of completing this section).:

Anxiety and worry in students

Student mental health is a growing global concern (Storrie, Ahern & Tuckett, 2010).

The traditional stressors of transitioning from living with parents to living independently, academic study, managing finances and coursework (Ansari, Oskrochi & Haghgoo, 2014) have now grown to incorporate recent strain placed on education by the increased financial burden of tuition fees. With more students having to work alongside their studies, and facing the minimum of £27,000 debt, cases of anxiety have become more prevalent. In the UK, the rate of mental health problems in students is 17.3%, with only 5.1% of cases receiving treatment (Macaskill, 2012). With so many of these cases going untreated, it is important for research to focus on identifying factors that may cause or alleviate anxiety.

The proposed research will examine both anxiety and worry in students. Anxiety is the general term covering anxiety disorders, most commonly referring to Generalised Anxiety Disorder (GAD). Anxiety is categorised as having the presence of anxiety or worry about a variety of topics for at least 6 months, and is excessive, along with at least 3 physiological factors that accompany the anxiety (American Psychiatric Association, 2013). While worry is a main symptom of GAD, it only includes excessive,

pathological worry, in which the individual has very little control over their worry, and it is not an adaptive response to stressors (Borkovec et al., 1991).

In comparison, other types of worry are seen in most people without an anxiety disorder, and worry is often an adaptive response, as people use it to problem-solve and come up with strategies for the events they worry about (Ruscio, Ayelet Meron & Borkovec, 2004). This worry is caused by more specific events, such as a presentation at work, causes mild emotional distress, is a temporary state, and is controllable as it is caused by realistic concerns (Barlow, 2002). Anxiety, in contrast, is less specific, often happening without a stressor, causes intense emotional distress, is long-term, and is often uncontrollable.

Whilst worry is often described as either excessive and therefore a symptom of GAD, or moderate and therefore not a symptom of GAD. However, previous research has demonstrated that people can experience high levels of worry without displaying the criteria necessary for a diagnosis of GAD (Ruscio, 2002). This would indicate that individuals are capable of high levels of worry without it being accompanied by anxiety symptoms. Worry is often directed towards future events, specifically the potential negative outcomes within the events. Starting university has several large life changes; living independently, managing finances, starting new formats of lessons in lectures and seminars, making new friends, adapting to a new place, and many others (Ansari, Oskrochi & Haghgoo, 2014). Picturing the outcomes of these life events is to be expected; however, many students may be worrying, ruminating, picturing negative outcomes. Therefore, the proposed research will examine worry as a separate variable to anxiety, although the two variables are expected to be associated with each other.

The proposed study will focus specifically on anxiety and worry caused by the transition that students must undertake during their time at university. It is suggested that different stages of transition throughout education cause anxiety symptoms (Parade, Leerkes & Blankson, 2009; Grills-Taquechel, Norton & Ollendick, 2010; Lucey & Reay, 2000). However, the literature lacks studies that focus on more than one transition, and ways in which the transitions can be made easier for the students. The proposed study will look at the first period of transition; the students first coming to university, with a follow-up survey to examine the difference once the students are settled at university.

Positive Psychology

The broaden-and-build theory (Fredrickson, 2004) suggests that negative emotions are associated with negative well-being; when someone encounters a stressor, their physiological responses such as sweating, nervousness, and a fight/flight/freeze response narrow the individual's attention to the stressors causing them anxiety or worry. This narrowed focus means the individual may be unable to experience positive emotions, or actively engage in positive experiences (Garland, Fredrickson, Kring, Johnson, Meyer, & Penn, 2010). Frederickson & Joiner (2002) demonstrated how the experience of positive emotions can broaden the range of thoughts and actions available to an individual, so that the individual becomes more able to consider a wider range of features that may be relevant to helping them cope in a particular situation. Positive psychology is an area of psychology that focuses on promoting positive feelings and experiences, resulting in a positive effect on wellbeing (Seligman & Csikszentmihalyi, 2000). People have personal assets, known as 'character

strengths', as conceptualised by Seligman and Peterson (2004). Character strengths, such as 'hope', 'kindness', and 'gratitude', can be thought of as personal assets that individuals can be taught to use more effectively, which in turn can improve their subjective wellbeing (Macaskill & Denovan, 2013).

In previous research, participants have been taught to use their character strengths more effectively through positive psychology interventions (PPIs), which have been found to alleviate the symptoms of mental health problems, including depression and anxiety. However, as depression is often the main focus of the research, there is often not much centred around alleviating anxiety.

The study will examine anxiety in relation to several character strengths that have been associated with anxiety in previous literature. This research demonstrated the importance of gratitude (Nelson, 2009), hope (Kwon, Birrueta, Faust, & Brown, 2015) in the alleviation of mental health problems, however curiosity and optimism have also been included in the study to examine their association with anxiety, as arguably both the ability to explore new thoughts and ideas, and the ability to think positively, would be associated with lower anxiety levels. The study will also look at resilience, as it is a key resource used against anxiety. Whereas previous research has examined the individuals at high levels of worry and anxiety, the proposed research will also examine the individuals that are optimal levels of functioning, with little or no anxiety, to see if character strengths and resilience are associated with these flourishing individuals.

Impact

This study (including the follow-up survey) will help to develop an intervention for student anxiety later in the research. Individuals are frequently unaware of their

character strengths (Seligman et al., 2005) so assessing character strengths, feeding these back to students through the intervention that will be developed, with some discussion about how they can be used to create positive emotions and an awareness of additional resources that can be used to help combat stress and reduce anxiety (Macaskill & Denovan, 2013, 2014).

This research will provide greater insights into student anxiety at university and how these relate to character strengths. With the significant increase in student mental health, the proposed study and the future associated research is vital to understand how the possession or development of certain character strengths may reduce anxiety. This would lead to fewer absences from classes, fewer cases of requiring extensions or resitting exams, and fewer students having to leave university due to struggles with mental health.

Q3. Is your topic of a sensitive/contentious nature or could your funder be considered controversial?: No

Q4. Are you likely to be generating potentially security-sensitive data that might need particularly secure storage?: No

Q5. Has the scientific/scholarly basis of this research been approved, for example by Research Degrees Sub-committee or an external funding body?: Yes

Q6. Main research questions: To establish the prevalence of anxiety in undergraduate students, and examine the relationship between anxiety, resilience, and character strengths.

Q7. Summary of methods including proposed data analyses: A Qualtrics survey will be distributed to students prior to their start date at Sheffield Hallam University, to establish their anxieties about beginning university. The survey will consist of:

- An information sheet- A consent form
- Demographic questions: age, gender, ethnicity, current living situation, expected living situation at university, and employment status
- Participants will be asked to disclose any mental health conditions they may have diagnoses for, and if they are receiving treatment. There will be options available not to disclose this information if they do not wish to
- HADs – 14 items, to measure anxiety
- The Penn State Worry Questionnaire – 16 items, to measure worry
- GQ-6 – 6 items, to measure gratitude
- Adult Hope Scale – 12 items, to measure hope
- Curiosity and Exploration Scale – 10 items, to measure curiosity
- LOT-R – 10 items, to measure optimism
- Brief Resilience Scale – 6 items, to measure resilience
- TIPI – 10 items, to measure the Big 5 Personality Factors
- A list of situations that may cause anxiety or worry (such as ‘making new friends’) in participants – participants rate how worried they are about each situation
- Two qualitative questions – to record more in-depth accounts of participants’ feelings about starting university and their worries

Data will be analysed through statistical analyses in SPSS, and qualitative analyses.

P3 - Research with Human Participants

Q1. Does the research involve human participants?: Yes

Q2. Will any of the participants be vulnerable?: No

Q3. Is this a clinical trial?: No

If yes, will the placebo group receive a treatment plan after the study? If N/A tick no.: No

Q4. Are drugs, placebos or other substances (e.g. food substances, vitamins) to be administered to the study participants or will the study involve invasive, intrusive or potentially harmful procedures of any kind?: No

Q5. Will tissue samples (including blood) be obtained from participants?: No

Q6. Is pain or more than mild discomfort likely to result from the study?: No

Q7. Will the study involve prolonged testing (activities likely to increase the risk of repetitive strain injury)?: No

Q8. Is there any reasonable and foreseeable risk of physical or emotional harm to any of the participants?: No

Q9. Will anyone be taking part without giving their informed consent?: No

Q10. Is it covert research?: No

Q11. Will the research output allow identification of any individual who has not given their express consent to be identified?: No

Q12. Where data is collected from human participants, outline the nature of the data, details of anonymisation, storage and disposal procedures if these are required (300 - 750): The information sheet and consent form will be provided first to ensure

informed consent is collected from the participants. They will be informed of the need to create a participant ID at the end of the survey in order to match their data set with the future data set from the follow-up survey.

The survey will ask for demographic questions, including age, gender, ethnicity, employment status, current living situation and expected living situation at university. This has the potential to be identifiable depending on the combination of responses. The survey will also ask for participants to disclose mental health problems and treatments they may be receiving. However, there will be options for participants not to disclose this information. No identifiable information will be published.

Data exported from the survey will be stored on a password protected computer, only accessible by the researcher. The data will only be shared with members of the project team. The data will be retained for use during the research project which is expected to be completed by October 2020. However, data in an anonymised form may be retained indefinitely in the University Research Data Archive for other research projects following publication of the current research. The data may be shared by other researchers, but only anonymised data will be shared.

P4 - Research in Organisations

Q1. Will the research involve working with an external organisation or using data/material from an external organisation?: No

P5 - Research with Products and Artefacts

Q1. Will the research involve working with copyrighted documents, films, broadcasts, photographs, artworks, designs, products, programmes, databases, networks, processes, existing datasets or secure data?: No

P6 - Human Participants - Extended

Q1. Describe the arrangements for recruiting, selecting/sampling and briefing potential participants.: Participants will be recruited through Sheffield Hallam University, before their start date of university. This will approximately be in July/August, as students are given their log-in details for the university website and their email addresses, before they begin university. They will be sent an advertisement through their email address which will provide brief information about the survey and the link to the survey. Participants must be about to begin their course as an undergraduate, not a postgraduate. An a priori power calculation conducted in G*Power suggested that for one-way ANOVA testing, a sample size of 305 was appropriate. As this is a longitudinal study, larger numbers will be sought to allow for drop outs at the follow up stage.

Q2. Indicate the activities participants will be involved in.: Participants will take part in an online survey on Qualtrics that includes demographic questions, measures of anxiety, worry, character strengths, the Big 5 Personality Factors and resilience. The survey will take 15-20 minutes to complete. They will then take part in a follow-up survey in January that will take 15 minutes to complete.

Q3. What is the potential for participants to benefit from participation in the research?: Participants will be contributing to a study that will provide new information on student mental health, the prevalence of anxiety, and the results of the study will form the basis of an intervention intended to reduce anxiety and worry. Participants will be able to volunteer for the intervention later on in their academic journey.

Q4. Describe any possible negative consequences of participation in the research along with the ways in which these consequences will be limited: Participants will be answering questions on their mental health, anxiety, and other personal thoughts and feelings. This may make them uncomfortable, but there are no anticipated risks to the participants through these questions. It will be made clear that if a participant feels they want to withdraw, they should do so and simply log off the site. The researcher's email will be provided if the participants have any questions they want to ask, and details of support services at the university will be provided, as well as contact details for mental health services.

Q5. Describe the arrangements for obtaining participants' consent.: The first part of the survey is an information sheet describing the survey and what the participant should expect. The second part of the survey is a consent form with tick boxes for the participant to demonstrate that they consent to participate in the study. The tick boxes will be mandatory for the participant to access the rest of the study. If they do not consent (tick all the boxes) they will not be able to access the study.

Q6. Describe how participants will be made aware of their right to withdraw from the research.: The information sheet will describe participants' right to withdraw at any point during the survey by closing the website without any negative consequences

or needing to explain. Participants will not be able to withdraw their data once the survey is completed as the data will be anonymised. This will be repeated in the followup survey; participants can withdraw at any point during the survey, but once it is completed, they cannot withdraw their data.

Q7. If your project requires that you work with vulnerable participants describe how you will implement safeguarding procedures during data collection: No vulnerable participants are expected to take part in this study; all participants should be 18 or older. If there are participants under the age of 18, as some may turn 18 between the survey date and their university start date, they will not be able to participate in the study, and this will be made clear to them in the information sheet and consent form.

Q8. If Disclosure and Barring Service (DBS) checks are required, please supply details: N/A.

Q9. Describe the arrangements for debriefing the participants.: The information sheet will provide the information needed for participants to have a general understanding of the study. Debriefing will not contain many additional details, as participants will be taking part in a follow-up survey in the following January. A more detailed debriefing form will be available at the end of the follow-up survey. Both debriefing forms will include the research team's contact details and information about support services in case of any distress caused by the survey.

Q10. Describe the arrangements for ensuring participant confidentiality. This should include details of: No personal identifying information will be given. A participant ID code will be provided, but this will only be identifiable to the participant that provided it and will not be included in any published research. The ID code will only be used to match the data sets of the survey and follow-up survey and will be deleted once they

are matched. Demographic questions may inadvertently be identifiable; however, this information will only be accessed by the research team and will only be included in the published research as collated data.

Q11. Are there any conflicts of interest in you undertaking this research?: The data will be collected from the institution I work and study at, however the data is anonymous, so there are no conflicts of interest in this work.

Q12. What are the expected outcomes, impacts and benefits of the research?: The survey will provide new information on the prevalence of anxiety and worry in undergraduate students, and the relationships between anxiety and other factors such as character strengths, resilience, and the Big 5 personality factors. There will be a new perspective provided through the analysis of the data, as it will focus on the flourishing individuals as well as the highly anxious individuals. The data will inform an intervention that will be developed later in the research, that will then be delivered and evaluated. This intervention will aim to reduce anxiety by cultivating character strengths that increase resilience to negative situations. The intervention will benefit students suffering from anxiety and may also decrease students requiring extensions/ resits for assessments, and ultimately decrease the level of students leaving university due to mental health struggles.

Q13. Please give details of any plans for dissemination of the results of the research.: The data will be retained until at least the end of the thesis, which is estimated to be October 2020. The data may be retained indefinitely for other research projects and may be shared with other researchers for their own projects. The results of the analysis may be published in journal articles and will be published as one of the studies in a completed PhD.

Q1. Will the proposed data collection take place only on campus?

: Yes

Q2. Are there any potential risks to your health and wellbeing associated with either (a) the venue where the research will take place and/or (b) the research topic itself?:

None that I am aware of

Q3. Will there be any potential health and safety risks for participants (e.g. lab studies)? If so a Health and Safety Risk Assessment should be uploaded to P8.: No

Q4. Where else will the data collection take place? (Tick as many venues as

apply)Researcher's Residence: false

Participant's Residence: false

Education Establishment: false

Other e.g. business/voluntary organisation, public venue: false

Outside UK: false

Q8. How will you ensure your own personal safety whilst at the research venue, (including on campus where there may be hazards relating to your study)?: N/A - the

research is done through an online survey so the participants can access it themselves.

The only interaction I may have with a participant is through email if they have a question.

P8 - Attachments

Are you uploading any recruitment materials (e.g. posters, letters, etc.)?: Yes

Are you uploading a participant information sheet?: Yes

Are you uploading a participant consent form?: Yes

Are you uploading details of measures to be used (e.g. questionnaires, etc.)?: Yes

Are you uploading an outline interview schedule/focus group schedule?: Non

Applicable

Are you uploading debriefing materials?: Yes

Are you uploading a Risk Assessment Form?: Non Applicable

**Are you uploading a Serious Adverse Events Assessment (required for Clinical Trials
and**

Interventions)?: Non Applicable

Are you uploading a Data Management Plan?: Yes

P9 - Adherence to SHU Policy and Procedures

Primary Researcher / PI Sign-off:

**I can confirm that I have read the Sheffield Hallam University Research Ethics Policy
and Procedures:** true

I can confirm that I agree to abide by its principles and that I have no personal or commercial conflicts of interest relating to this project.: true

Date of PI Sign-off: 19/06/2018

Director of Studies Sign-off:

I confirm that this research will conform to the principles outlined in the Sheffield Hallam University Research Ethics policy: true

I can confirm that this application is accurate to the best of my knowledge: true

Upload:

Date of submission and supervisor sign-off: 21/06/2018

Director of Studies Sign-off

Ann Macaskill

P10 - Review

Comments collated by Lead Reviewer (Or FREC if escalated): This is a really interesting piece of research, which has been well-designed and clearly articulated. Echoing the issues identified by colleagues there are a few advisory points to consider. It would be advisable to store the research data in a folder on the Q: drive which could be accessed by the research team.

Similarly, given an ID is being used to link the two surveys, it would seem that it will be possible to identify participants responses at least until the two data set are merged. I would advise that there is an option for students to withdraw from the study between the two surveys.

It would be useful to clarify how the student data is being accessed (data set from SI?) and the point of contact, i.e. will the students have accepted their offer of a place at SHU.

Final Decision to be completed by Lead Reviewer (or FREC if escalated): Approved with advisory comments

Date of Final Decision: 09/07/2018

P12 - Post Approval Amendments

Amendment 1

Title of Amendment 1: Changes to the distribution of the follow-up survey

Details of Amendment 1: To ensure a large enough sample size for the follow-up survey, there will be additional recruitment measures added. These will be the same as the first survey - advertising via SONA and Facebook groups for first-year students. Specific changes to parts of this proposal are as follows:

P3.Q12:

The information sheet and consent form will be provided first to ensure informed consent is collected from the participants. They will be informed of the need to create

a participant ID at the end of the survey in order to match their data set with the future data set from the follow-up survey – this applies only to participants taking part in both surveys.

P6.Q1:

As this is a longitudinal study, larger numbers will be sought to allow for drop outs at the follow up stage. The follow-up survey participants will be recruited through SONA and student social media groups aimed at firstyear students. This will give a combination of participants from the first survey, and participants not in the first survey, to ensure numbers will be high enough for data analysis.

P6.Q10:

No personal identifying information will be given. A participant ID code will be provided, but this will only be identifiable to the participant that provided it and will not be included in any published research – this applies only to participants taking part in both surveys.

Date of Amendment 1: 19/02/2019

In my judgement amendment 1 should be:

Amendment Approved **Date of Amendment Outcome**

1: 28/02/2019

Amendment 2

In my judgement amendment 2 should be: Select Amendment Outcome

Amendment 3

In my judgement amendment 3 should be: Select Amendment Outcome

D.2 Ethics form for Studies 2 and 3

Developing and evaluating a hope and gratitude intervention

Ethics Review ID: ER20211155

Workflow Status: Approved with Advisory Comments

Type of Ethics Review Template: All other research with human participants

Primary Researcher / Principal Investigator

Cameron Pattinson

(Faculty of Social Sciences and Humanities)

Converis Project Application:

Q1. Is this project ii) Doctoral research

Director of Studies

Ann Macaskill

(Faculty of Social Sciences and Humanities)

Supervisory Team

David Reynolds

(Centre for Behavioural Science and Applied Psychology)

Q4. Proposed Start Date of Data Collection: 10/01/2020

Q5. Proposed End Date of Data Collection : 10/07/2020

Q6. Will the research involve any of the following

- i) Participants under 5 years old: No**
- ii) Pregnant women: No**
- iii) 5000 or more participants: No**
- iv) Research being conducted in an overseas
country: No**

Q7. If overseas, specify the location:

Q8. Is the research externally funded?: No

Q9. Will the research be conducted with partners and subcontractors?: No

Q10. Does the research involve one or more of the following?

- i. Patients recruited because of their past or present use of the NHS or Social Care:
No**
- ii. Relatives/carers of patients recruited because of their past or present use of the
NHS or Social Care: No**
- iii. Access to data, organs, or other bodily material of past or present NHS patients: No**
- iv. Foetal material and IVF involving NHS patients: No**
- v. The recently dead in NHS premises: No**

vi. **Participants who are unable to provide informed consent due to their incapacity even if the project is not health related:** No

vii. **Prisoners or others within the criminal justice system recruited for health-related research:** No

viii. **Prisoners or others within the criminal justice system recruited for non-health-related research:** No

ix. **Police, court officials or others within the criminal justice system:** No

Q11. Category of academic discipline: Social

Sciences

Q12. Methodology: Mixed Method

P2 - Project Outline

Q1. General overview of study: The aim of this study is to develop, implement, and evaluate a hope and gratitude-based positive psychology psycho-education intervention (PPI) for second-year students in order to alleviate anxiety and/or worry. Participants will be recruited in second-year and will complete a four week intervention with a control group on a waiting list. Two sessions will focus on hope, and two sessions will focus on gratitude, with homework tasks between sessions. Measures of worry, anxiety, rumination, hope, gratitude, and life satisfaction will be taken using validated psychometric scales before and after sessions and at two follow-up points. This data will be analysed through statistical tests in SPSS. The second part of the study is a qualitative study using structured interviews with the participants to evaluate the intervention. This data will be analysed through thematic analysis. The study will provide new data on hope and gratitude-based PPIs and the effect on

student mental health. It will also provide valuable information on the effectiveness of PPIs from a student perspective due to the detailed analysis of the interviews.

Q2. Background to the study and scientific rationale (if you have already written a research proposal, e.g. for a funder, you can upload that instead of completing this section).:

Student mental health

The prevalence of student mental health problems is a growing concern (Regher, Glancey, & Pitts, 2013; Storrie, Ahern, & Tucket, 2010). In the UK, the rate of mental health problems in students is 17.3%, with only 5.1% resulting in treatment (Macaskill, 2013). Increases in worry, stress, and anxiety can lead to issues in the students' academic lives (Thurber & Walton, 2012) for example students needing extensions on assessment deadlines, or even taking leaves of absence. A study examining the student population at a university found that over half of the students suffered from at least one mental health problem from anxiety, depression, and eating disorders, but fewer than half of those sought treatment during a two year period after, despite the mental health problems persisting (Zivin, Eisenberg, Gollust, & Golberstein, 2009). One possible explanation for this is the stigma of mental health problems; this is a strong barrier to students accessing the support they need.

The proposed research will focus specifically on student anxiety and worry. Anxiety and worry are general terms for conditions that have various levels of severity, both ranging from a mild, manageable severity to a pathological severity. At a lower level, anxiety and worry are common feelings of discomfort and uneasiness that arise as a result of unpleasant situations (e.g. worrying about an upcoming job interview or an

argument that happened between friends). At an excessive level, anxiety and worry can become disorders that require support with extreme rumination perceived as uncontrollable (Borkovec et al., 1991). However, there is a middle-ground between lower-level and pathological anxiety/worry, in which individuals demonstrate an excessive amount of worry or anxiety without it reaching the level of severity for a diagnosis of an anxiety disorder (Ruscio, 2002). Worry often involves ruminating on towards future events, specifically the potential negative outcomes within the events. An excessive amount of worry and anxiety may therefore be triggered by periods of time that involve overwhelming events. The proposed research will focus on students undertaking the transition period into their second year of undergraduate study.

Transition periods

Students undertake several transitional periods during their years at university, the most prominent being the transitions between academic years. In the transition from first to second year, there is a substantial leap in academic pressure. In first year, grades are often not counted towards the overall degree and there is a sense of 'hand-holding' the students through the year. In second year, the grades count towards the overall degree, students are expected to be more independent, and the course content is significantly more difficult. In a study examining mental health in 1197 undergraduate students across three years of study, second year students reported significantly worse mental health issues, including anxiety, than first or third year students (Macaskill, 2012). A mixed methods study analysing interviews of 23 second-year students identified four main areas of anxiety in second year students (Macaskill, 2018); first year worries affecting second year (such as only needing a pass grade in

first year), course issues in second year, career and future employability, and financial difficulties. Life changes often cause anxiety (Cheng, Lau, & Chan, 2014), and therefore a series of them, in a short space of time, would lead to student anxiety and worry increasing throughout the transition period (Thurber & Walton, 2012). While it is important for students to seek support for their mental health, increases in student mental health problems can also put overwhelming pressure on the university health support teams, from the university doctors to the student support services.

The proposed research

The proposed study is to develop, implement, and evaluate a potential resource for student wellbeing; a positive psychology intervention. Positive psychology is an area of psychology that focuses on encouraging positive well-being by promoting positive emotions and experiences to encourage resilience against negative emotions and experiences (Seligman & Csikszentmihalyi, 2000). The interventions developed by positive psychologists can therefore be used alongside existing interventions (such as cognitive-behavioural therapy) to help encourage an increase in life satisfaction alongside the decrease in mental illness symptoms.

The proposed intervention has been informed by existing research on character strengths (a series of character traits such as 'humour', 'hope', etc), and a prior exploratory study by the researcher examining student anxiety and worry alongside four character strengths (hope, gratitude, curiosity and optimism). The study examined changes in these variables across the first year of undergraduate study, to determine

how certain character strengths changed up to the point of starting second year, and how anxiety and worry altered throughout this transition period.

Analysis of the data from this study showed that both aspects of hope significantly decreased throughout the transition period of first year study ($F(1,323)=15.20$, $p<.001$; $F(1,323)=7.04$, $p=.008$, respectively), indicating that by the beginning of their second year, hope was at a low level for the next transition period of second year study. The analyses also indicated that gratitude significantly decreased throughout the year ($F(1,323)=19.38$, $p<.001$), suggesting that by the beginning of second year, gratitude was also at a low level for the next transition period of second year study.

Hope has also been found to decrease anxiety and worry in other research; a study examined the effects of a hope-based PPI on 21 adults with a diagnosis of multiple sclerosis (MS), recruited from a branch of the MS society in the UK. The results found that the intervention increased hope, and anxiety and stress were decreased (Anderson, Turner, & Clyne, 2017). The same effect of hope on anxiety and depression was found in another study on 196 parents from 139 different families (Lloyd & Hasting, 2009), utilising hope in a PPI to improve resilience to mental health symptoms and stress. Gratitude has also been found to lower anxiety and worry. Gratitude diaries have been found to have a positive effect on depression, anxiety, and stress, as well as the ability to maintain a good sleeping pattern, as shown in a study on 109 Australian adults (Southwell & Gould, 2017), with the effects for anxiety persisting over a follow-up period, suggesting that gratitude can improve anxiety

over a lengthy period of time. These two character strengths were therefore made the focus of the intervention development.

Q3. Is your topic of a sensitive/contentious nature or could your funder be considered controversial?: No

Q4. Are you likely to be generating potentially security-sensitive data that might need particularly secure storage?: No

Q5. Has the scientific/scholarly basis of this research been approved, for example by Research Degrees Sub-committee or an external funding body?: Yes

Q6. Main research questions: To examine the effect of a hope-gratitude PPI on second-year student anxiety, worry and life satisfaction, and to thoroughly evaluate the intervention from the perspective of the students.

Q7. Summary of methods including proposed data analyses:

For the intervention:

Measures/materials

Participants will complete the following measures before and after sessions, and at follow-up time points: - Demographic questions: age, gender, ethnicity, current living situation, expected living situation at university, and employment status

- Participants will be asked to disclose any mental health conditions they may have diagnoses for, and if they are receiving treatment. There will be options available not to disclose this information if they do not wish to

- HADs – 14 items, to measure anxiety
- The Penn State Worry Questionnaire – 16 items, to measure worry
- GQ-6 – 6 items, to measure gratitude
- Adult Hope Scale – 12 items, to measure hope
- Satisfaction with Life Scale – 5 items, to measure life satisfaction
- RRS-10 – 10 items, to measure rumination

Data will be analysed through statistical analyses in SPSS.

Procedure

Second-year undergraduate students will be recruited through online advertising (including social media) and through brief in-class advertisements. Participants will read an information sheet and sign a consent form detailing their involvement in the study, their anonymity, and their right to withdraw at any time. They will be given contact information in case of any questions.

Participants will complete demographic information and baseline measures of anxiety, worry, hope, gratitude, life satisfaction and rumination. Participants will be split into an experimental group (the intervention) and a control group (a waiting list). The experimental group will attend and engage in four once-weekly sessions, detailed above. Participants in this group will complete measures one-two days before the sessions, and one-two days after the sessions. Participants in the control group will complete the post-session measures to compare the data. Both groups will complete follow-up measures at 1 and 3 months.

After this, the control group will take part in a repeated version of the intervention to ensure everyone is given the chance to participate. Participants in this group will

complete measures one-two days before the sessions, and one-two days after the sessions. Both groups will then complete further follow-up measures; for the second group, it will show more evidence for short-term follow-up, for the first group it will show effects for long-term follow up.

For the evaluative study:

Measures/analysis

The participants will undertake structured interviews that will be recorded for transcription purposes. The recording device will be securely stored, and the recordings deleted after transcription for anonymity. The interviews will be transcribed using the intelligent verbatim method and analysed using thematic analysis (Clarke & Braun, 2018).

The interviews will have questions focused on two main aspects; the effectiveness of the intervention, and the acceptability of the intervention delivery. The effectiveness of the intervention will include questions about the effect of the course content on daily life, how participants felt they coped with issues during/after the intervention, how they feel it has equipped them for the future, etc. The acceptability questions will focus more on how they felt about the course structure, which sessions they found most useful, how they found the psychoeducation, etc. This will provide a thorough interview evaluating the intervention.

Procedure

Participants will be recruited from the previous study. They will be given an information sheet and a consent form to sign detailing their involvement in the study, their anonymity, and their right to withdraw during the interview and up to one week after the interview has taken place. One-on-one interviews will be set up with the participants. The interviews will take around one hour. The participants' interviews will be recorded for transcription purposes. Notes may also be taken during the interviews in case an answer requires clarification later. The participant will read a debrief form before they leave and given contact information in case of any questions.

P3 - Research with Human Participants

Q1. Does the research involve human participants?: Yes

Q2. Will any of the participants be vulnerable?: No

Q3. Is this a clinical trial?: No

If yes, will the placebo group receive a treatment plan after the study? If N/A tick no.: No

Q4. Are drugs, placebos or other substances (e.g. food substances, vitamins) to be administered to the study participants or will the study involve invasive, intrusive or potentially harmful procedures of any kind?: No

Q5. Will tissue samples (including blood) be obtained from participants?: No

Q6. Is pain or more than mild discomfort likely to result from the study?: No

Q7. Will the study involve prolonged testing (activities likely to increase the risk of repetitive strain injury)?: No

Q8. Is there any reasonable and foreseeable risk of physical or emotional harm to any of the participants?: No

Q9. Will anyone be taking part without giving their informed consent?: No

Q10. Is it covert research?: No

Q11. Will the research output allow identification of any individual who has not given their express consent to be identified?: No

Q12. Where data is collected from human participants, outline the nature of the data, details of anonymisation, storage and disposal procedures if these are required

(300 - 750): In both parts of the study, an information sheet and consent form will be provided first to ensure informed consent is collected from the participants. They will be informed of their involvement in the study, the length of the study, the homework tasks in between sessions, how their anonymity will be maintained, how their data will be stored, and their right to withdraw at any time.

The survey will ask for demographic questions, including age, gender, ethnicity, employment status, relationship status, and current living situation. This has the potential to be identifiable depending on the combination of responses. The survey will also ask for participants to disclose mental health problems and treatments they may be receiving. However, there will be options for participants not to disclose this information. No identifiable information will be published.

Data exported from the survey will be stored on a password protected computer, only accessible by the researcher. The data will only be shared with members of the project

team. The data will be retained for use during the research project which is expected to be completed by October 2020. However, data in an anonymised form may be retained indefinitely in the University Research Data Archive for other research projects following publication of the current research. The data may be shared by other researchers, but only anonymised data will be shared.

P4 - Research in Organisations

Q1. Will the research involve working with an external organisation or using data/material from an external organisation?: No

P5 - Research with Products and Artefacts

Q1. Will the research involve working with copyrighted documents, films, broadcasts, photographs, artworks, designs, products, programmes, databases, networks, processes, existing datasets or secure data?: No

P6 - Human Participants - Extended

Q1. Describe the arrangements for recruiting, selecting/sampling and briefing potential participants.:

For the intervention:

Participants will be recruited through opportunistic sampling within Sheffield Hallam University. Participants must be second-year students. There will be two groups of

participants – one group will be the experimental group, the other will be the control group at first, and then a second experimental group. At least eight participants will be recruited for the first group, and eight for the second group.

For the evaluation:

Participants will be recruited from the sample of the previous study. As the evaluative study will be done on the both group of participants (the initial experimental group, and the control group after receiving the intervention), the recruitment will take place after their respective sessions are completed. The evaluative study will therefore run alongside the intervention study with two periods of data collection. The first will be after the first group's intervention sessions, the second will be after the second group's intervention sessions.

At least four participants from each group will be selected (50%).

Q2. Indicate the activities participants will be involved in.:

The intervention schedule:

The intervention will have a dual focus of hope and gratitude, with both psychoeducation and practical exercises. Each session will be followed with a homework task to reinforce the lessons learned within the sessions. Each session will take place once a week, and will take 45 minutes to 1 hour. There will be four sessions in total for each group. They will be held at the university in a classroom.

Gratitude

The gratitude intervention session will focus on improving gratitude towards the self and other people.

The session will include psychoeducation on gratitude and focus on a technique called a gratitude diary.

Participants will be instructed to keep a daily diary documenting 3-5 things a day that they are grateful for. This can range from small things (e.g. I am thankful that my bus was on time) to larger things (e.g. I am grateful for my mother supporting me through my career). The gratitude diary has been found to be effective in improving various aspects of wellbeing (Geraghty et al., 2010; Kerr & O'Donovan, 2014; Killen & Macaskill, 2014, Southwell & Gould, 2017).

Hope Exercises

The first hope session will focus on encouraging hope agency, which involves the motivation and belief that goals can be achieved. This will be done through daily affirmations. Affirmations that are applicable to most students will be given to the participants, but they will also be shown how to write their own affirmations for specific goals. Examples of generic affirmations are:

“I am capable of achieving my goals.”

“I am able to do my work, one step at a time.”

“I have come so far with my studies, and I can go even further.” Examples of more specific affirmations are:

“The two hours of work I do today at the library will be productive and useful.”

“I am going to succeed in my plan to do 15 minute revision bursts with 5 minute breaks.”

“The work I will put in today will help me learn how to write better conclusions.”

The session will also show the participants how to practice affirmations, for example speaking it aloud clearly to themselves, and writing them down to look at as frequently as they need to. This will encourage the participants to feel more motivated.

The second session will focus on improving hope pathways, which is the ability to take the necessary steps to reach goals. Often, people may make non-specific, unrealistic goals (e.g., I will get a first in all of my assessments), which can cause frustration and apathy when the goals are not then achieved. The session will focus on helping people to set specific goals that are realistic through goal mapping, a practical exercise in which participants will map out the steps needed for them to achieve their goal, noting down potential obstacles and how to work around them. Participants will also set contingency plans for any potential setbacks so they will not be discouraged by any potential failure. This technique has been found to increase hope in students (Davidson, Feldman, & Margalit, 2012; Feldman & Dreher, 2012).

Final session

The final session will focus on consolidating the information the participants have learned in the sessions, through recapping the educational material and practicing

the exercises again. The participants will also be encouraged to keep up the gratitude journal long-term and use the hope strategies to plan for goal achievement in the long-term too.

Q3. What is the potential for participants to benefit from participation in the research?: Participants will receive a structured intervention that will provide them with new resources to be able to deal with anxiety and worry. The techniques learned within the intervention will continue to benefit them as they are applicable to personal and academic problems, and can be used as a template in the future. The control group will also receive the intervention later, to ensure fairness.

Q4. Describe any possible negative consequences of participation in the research along with the ways in which these consequences will be limited: Participants will be answering questions and participating in an intervention centred around their mental health, anxiety, and other personal thoughts and feelings. This may make them uncomfortable, but there are no anticipated risks to the participants through these questions. It will be made clear that if a participant feels they want to withdraw, they can do so without penalty. The researcher's email will be provided if the participants have any questions they want to ask, and details of support services at the university will be provided, as well as contact details for mental health services.

Q5. Describe the arrangements for obtaining participants' consent.: Both parts of the study begin with an information sheet describing the survey and what the participant should expect. This will be followed in both parts by a consent form with tick boxes for the participant to demonstrate that they consent to participate in the study. The tick boxes will be mandatory for the participant to access the rest of the

study. If they do not consent (tick all the boxes) they will not be able to access the study.

Q6. Describe how participants will be made aware of their right to withdraw from the research.: The information sheet will describe participants' right to withdraw at any point during the intervention and during the interviews. Participants in the first part of the study will be able to withdraw from the sessions, but once their data is submitted between sessions it is anonymised and will therefore not be able to be located to be deleted. Participants in the second part of the study will be able to withdraw themselves and their data from the study during the interview and up to one week after data collection before it is anonymised.

Q7. If your project requires that you work with vulnerable participants describe how you will implement safeguarding procedures during data collection: No vulnerable participants are expected to take part in this study; all participants will be 18 or older as they are second-year undergraduate students.

Q8. If Disclosure and Barring Service (DBS) checks are required, please supply details: N/A

Q9. Describe the arrangements for debriefing the participants.: The information sheet will provide the information needed for participants to have a general understanding of the study. This will include an information sheet on GDPR. A debriefing form will be made available to the participants after data collection during both parts of the study; however, it will not contain many additional details as most of the information will have already been provided to them. Both debriefing forms will include the research team's contact details and information about support

services in case of any distress caused by the study, but this is a very unlikely scenario.

Q10. Describe the arrangements for ensuring participant confidentiality. This should

include details of: No identifying information will be given in the surveys taken between sessions in the first part of the study. Participants will know and recognise each other due to the intervention being in groups but will not be identifiable to anyone else. In the second part, identifying information may be given during the interviews, such as names or course title, but this will be anonymised during transcribing the interviews, and the recordings will be deleted later. Demographic questions across both parts may inadvertently be identifiable; however, this information will only be accessed by the research team and will only be included in the published research as collated data.

Q11. Are there any conflicts of interest in you undertaking this research?: There are

no conflicts of interest. The research will take place at the university I study at, however I do not currently teach any undergraduate students and therefore I am unlikely to know any of the participants prior to the intervention.

Q12. What are the expected outcomes, impacts and benefits of the research?: The

first part of this study will provide new information on the effects of a positive psychology intervention in an academic setting. It will also demonstrate the effectiveness of a dual-focused PPI on hope and gratitude. The results may provide new evidence for PPIs being effective in dealing with anxiety and worry in students. There will be a new perspective on worry/anxiety provided through the analysis of this data as it will examine worried and anxious students through positive psychology. It

will also provide evidence for using PPIs as a support resource within universities. The intervention will benefit students struggling with higher levels of worry and/ or anxiety.

The second part of this study will provide a thorough level of evaluation from the participants. This will provide more than just the statistics from the intervention measures to examine the effectiveness of the intervention. It will help to identify specific areas that are the most helpful, and also examine how the structure and delivery of the intervention affected the impact of the intervention. This will provide detailed information on how participants feel about the effectiveness and delivery of the PPI, which is often lacking in research around them.

Q13. Please give details of any plans for dissemination of the results of the research.:

The data will be retained until at least the end of the thesis, which is estimated to be October 2020. The anonymised data may be retained indefinitely for other research projects and may be shared with other researchers for their own projects. The results of the analysis may be published in journal articles and will be published as one of the studies in a completed PhD.

P7 - Health and Safety Risk Assessment

Q1. Will the proposed data collection take place only on campus?

: Yes

Q2. Are there any potential risks to your health and wellbeing associated with either (a) the venue where the research will take place and/or (b) the research topic itself?:

None that I am aware of

Q3. Will there be any potential health and safety risks for participants (e.g. lab studies)? If so a Health and Safety Risk Assessment should be uploaded to P8.: No

Q4. Where else will the data collection take place? (Tick as many venues as

apply)Researcher's Residence: false

Participant's Residence: false

Education Establishment: false

Other e.g. business/voluntary organisation, public venue: false

Outside UK: false

Q8. How will you ensure your own personal safety whilst at the research venue, (including on campus where there may be hazards relating to your study)?: I will be on campus using a classroom and therefore will adhere to any safety standards necessary (e.g. following fire safety protocol in the event of a fire).

P8 - Attachments

Are you uploading any recruitment materials (e.g. posters, letters, etc.)?: Yes

Are you uploading a participant information sheet?: Yes

Are you uploading a participant consent form?: Yes

Are you uploading details of measures to be used (e.g. questionnaires, etc.)?: Yes

Are you uploading an outline interview schedule/focus group schedule?: Yes

Are you uploading debriefing materials?: Yes

Are you uploading a Risk Assessment Form?: Non Applicable

Are you uploading a Serious Adverse Events Assessment (required for Clinical Trials and

Interventions)?: Non Applicable

Are you uploading a Data Management Plan?: Yes

P9 - Adherence to SHU Policy and Procedures

Primary Researcher / PI Sign-off:

I can confirm that I have read the Sheffield Hallam University Research Ethics Policy and Procedures: true

I can confirm that I agree to abide by its principles and that I have no personal or commercial conflicts of interest relating to this project.: true

Date of PI Sign-off: 02/12/2019

Director of Studies Sign-off:

I confirm that this research will conform to the principles outlined in the Sheffield Hallam University Research Ethics policy: true

I can confirm that this application is accurate to the best of my knowledge: true

Upload:

Date of submission and supervisor sign-off: 03/12/2019

Ann Macaskill

P10 - Review

Comments collated by Lead Reviewer (Or FREC if escalated): The application is approved with advisory comments below:

1. To provide a little more detail on what can be expected from attending the sessions.

This might help to allay any concerns for participants, and minimise any anxiety that may be caused by going into a unfamiliar situation. The information sheet and selected publicity about the workshop should be amended to say a little more about the workshop content.
2. P2, Q1 - need to add the word 'university' after 'second year'.
3. Do you say which survey platform you will be using?
4. P6, Q7 & P6, Q3 - It could be argued that participants may be considered 'vulnerable' if they are experiencing mental health difficulties. Possibility that topics for discussion could bring up sensitive issues that need to be responded to, and sign posted so as not to cause undue harm. Without some form of preassessment, it is difficult to anticipate how individuals may react to some of the intended questions,

or how some may experience feeling 'uncomfortable'. Important for the researcher to consider and reflect on how they would handle someone who became distressed.

5. Ensure that the participants are clear that the research is being undertaken independent of SHU Student Support Services. Consider instances in practice where the researcher may feel sign posting to the student, without compromising the integrity of the research.
6. Make it clear in the information participant sheet that participation is entirely independent of the students' programme of study.
7. Information sheet - could say that you may use the data for conferences and publications (cf. P6, Q13)

Final Decision to be completed by Lead Reviewer (or FREC if escalated): Approved with advisory comments

Date of Final Decision: 17/02/2020

P12 - Post Approval Amendments

Amendment 1

Title of Amendment 1: Change to online intervention

Details of Amendment 1: Due to the increased threat of COVID-19, and the researcher's disabilities and compromised immune system, the intervention will be delivered through a web conference rather than in a campus room. The intervention

content will remain unchanged, and the delivery will be the same as before. The only thing that will change is the medium. Recruitment advertisements will be altered to include the fact it is an online delivery system.

Date of Amendment 1: 13/03/2020

In my judgement amendment 1 should be: Amendment Approved

Date of Amendment Outcome 1: 17/04/2020

Amendment 2

In my judgement amendment 2 should be: Select Amendment Outcome

Amendment 3

In my judgement amendment 3 should be: Select Amendment Outcome