

STUDY WELL, STAY WELL: AN EXPLORATION OF THE RELATIONSHIP BETWEEN ACADEMIC SKILLS DEVELOPMENT AND STUDENT WELLBEING

LITERATURE REVIEW

Written by: Liam
Claricoats

Study Well, Stay Well: An exploration of the relationship between academic skills development and student wellbeing.

Written by Liam Claricoats, Graduate Intern, Student Experience, Teaching & Learning Directorate, Sheffield Hallam University
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Introduction

This exploratory review of the literature examining academic skills development and student wellbeing was commissioned by the Study Well, Stay Well Working Group at Sheffield Hallam University. This Group is co-led by the Skills Centre and Student Support Services colleagues to support cross-institutional collaboration to increase levels of student mental wellbeing via academic skills development.

This literature review intended to provide evidence for developing a rationale for intervention design and delivery whilst highlighting approaches to evaluation and the identification of outcomes and measures. This overview paper presented a summary of key findings, an articulation of the search strategy and a list of annotated references.

On review of this evidence and that gathered from the Study Well Stay Well Listening Rooms research, a Theory of Change for a programme to support student wellbeing via academic skills development will be co-designed with students and other key stakeholders.

Summary findings

1. What is the relationship between academic skills development and student wellbeing in higher education?

Findings from the literature indicated a positive relationship between the development of academic skills and improved student mental wellbeing in Higher Education institutions. Specifically, developing academic writing and time management were prominent skills that assisted in improving mental wellbeing. An increase in confidence was also associated with better mental wellbeing in the student population, although, this may be a by-product of developing academic skills.

2. What skills-based interventions have attempted to impact on student wellbeing? What have been the results (positive or negative)?

Peer mentoring programmes were a widely used academic skill-based intervention that attempted to impact on university students' mental wellbeing. Beside from providing academic support, peer mentors helped mentee's access emotional support and provided them with a sense of community and belonging. Also, levels of negative affect, summarised by feelings of emotional distress, decreased in students that engaged in peer mentoring programmes.

Furthermore, one study implemented academic writing workshops to aid Doctoral students with thesis writing. Post student engagement in the workshops, levels of reported procrastination, stress and anxiety decreased which participants attributed to being surrounded by supportive peers.

Finally, two interventions focused on embedding wellbeing into the curriculum and found mixed results. One study found non-significant improvements in mental wellbeing between the intervention group and the control group. The second study discussed also found no significant main effect of group (experimental and control) on wellbeing levels. However, there was a significant interaction between time and group, with the control group showing a significant decline in wellbeing between assessment at Time 1 and Time 2 (Non-significant for experimental group). Thus, this suggests that the wellbeing programme acted as a preventative measure for decreasing students' wellbeing over time.

3. Are there any nuances in this evidence for particular student groups (e.g., indigenous students, students with disabilities, international students, LGBTQ+ students, mature students)

Very limited research has examined the impact of academic skill-based interventions on mental wellbeing for particular student groups. Nevertheless, two peer mentoring interventions did have a positive impact on wellbeing for disabled students (e.g., autism spectrum disorder) regarding reducing negative emotions of stress, anxiety and worry, along with increasing perceived social support and access. Another study with a heavy mature student sample found that a wellbeing and study skill support system had a beneficial impact on participants. The findings revealed that students who engaged in the support system experienced a decrease in anxiety and depressive symptoms along with increased wellbeing scores after 8 weeks, compared to baseline results.

There is an evident gap in the literature for research into academic skill-based interventions that attempt to impact on mental wellbeing for specific student groups (e.g., BAME, international and LGBTQ+ students).

4. What methods of data gathering have been employed to evaluate the impact of these type of interventions?

There were several methods of data gathering that were employed across the interventions discussed above. The Academic Writing Workshops intervention utilised a mixed methods design and collected quantitative data (survey measure) pre-intervention and post-intervention, as well as qualitative data (focus group) post-intervention.

Two longitudinal studies examined the impact of peer mentoring programmes on student wellbeing. The first study employed a matched longitudinal comparison between two universities, adopting a survey-based methodology with data being collected at two time points (5 days and 10 weeks into university). The second study was a longitudinal investigation over four years that utilised several standardised quantitative outcome measures. Consistently, data was also gathered at two time points.

Another study focusing on a peer mentoring intervention to impact on wellbeing collected data using a pre-test and post-test comparison (mentored and non-mentored students) in a Quasi experimental design. The final research discussed in relation to peer mentoring used a convergent mixed methods research design, consisting of survey measures and interviews.

Regarding research that embedded wellbeing into the curriculum, the first study utilised a non-randomised controlled 2x2 mixed methods design. Data was collected at two time points, the first being at pre-module (a module with wellbeing embedded or not) and post-module. The final research paper consisted of three studies. Study 1 used a Longitudinal panel design, with quantitative measures being completed by students at baseline, each week during the intervention (for 6 weeks) and again one month after the intervention concluded. The second study in the research employed a pre-test and post-test design, whilst study three used Quasi experimental design.

Recommendations

The findings from this literature review provides clear evidence for the development of an intervention that aims to improve students' wellbeing through the development of academic skills. As outlined in the introduction, the findings can also assist in informing the intervention design and delivery. Thus, the Study Well, Stay Well initiative could adopt a weekly in person peer mentoring programme that specifically focuses on the skills of academic writing and time management as these were prominently positively correlated with wellbeing outcomes within the literature.

Moreover, the findings can also guide appropriate data gathering methods to evaluate the impact of the Study Well, Stay Well intervention on the levels of student wellbeing. This could take the form of a longitudinal or pre-test-post-test research design. Also, gathering quantitative and/or qualitative feedback from students may be useful to refine the intervention design and delivery in the future.

Review search and data extraction

Search strategy

1. What is the relationship between academic skills development and student wellbeing in higher education?
 - "Academic skills" OR "study skills" OR "learning skills" development AND wellbeing OR wellness relationship OR correlation in "higher education".
 - Independent "learning skills" AND "student wellbeing" AND university.
2. What skills-based interventions have attempted to impact on student wellbeing? What have been the results (positive or negative)?
 - Skill* based interventions impact on "student wellbeing" in "higher education".
3. Are there any nuances in this evidence for particular student groups (e.g., indigenous students, students with disabilities, international students, LGBTQ+ students, mature students)
 - Relationship OR correlation between "academic skills" development AND wellbeing "international students" in "higher education".

- Relationship OR correlation between "academic skills" development AND wellbeing "mature students" in "higher education".
- Relationship OR correlation between "academic skills" development AND wellbeing for "disabled students" in "higher education".

Search criteria (inclusion/exclusion)

Criteria	Include	Exclude	Rationale
Date	2013 onwards.	2012 or before.	Ensuring the literature is within a 10-year period ensures that the findings can be discussed in the context of current evidence and do not contain 'outdated' ideas.
Language	Literature written in English.	Literature not written in English.	
Access	Accessible literature.	Literature that is only accessible after payment.	This review does not have the resources for access payments. Access will be determined when the source is opened and literature that requires payment will be excluded from the review.
Source types	Academic literature.	Non-academic literature e.g., Newspaper articles.	Focused on sources that provide evidence on the relationship between academic skills development and wellbeing, skill-based interventions that attempt to impact wellbeing, and any nuances in this evidence for particular student groups. These are often not the focus on non-academic literature.
Country	Western countries with HE institutions.	Rest of the world.	The study is focused on the student population in Higher Education.

Definition of academic skills	Skills Centre: Time management, statistics, presenting, group work, problem solving, academic writing, reflecting, effective notetaking, referencing, research, digital tools, revising, evaluating.	Any skills that are not included on the Skills Centre website.	The intervention will be formulated by the Skills Centre and Wellbeing services at Sheffield Hallam University.
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Annotated References

What is the relationship between academic skills development and student wellbeing in higher education?

Source, author, date, and publication	Aim of paper	Motivation	Methods	Results / Findings	Impressions
<p>Baik et al. (2016). https://doi.org/10.1080/07294360.2019.1576596</p>	<p>Limited research on students' perspective on the measure's that universities could take to reduce stressors and promote protective factors in HE.</p>	<p>Mental wellbeing is an increasing concern, with the student population being a high-risk population for psychological distress.</p>	<p>Recruited 5061 undergraduate students from different degree disciplines (used participants from original research).</p> <p>Original study used Quantitative surveys to measure psychological distress and wellbeing.</p> <p>In this study, 2776 participants from the original research completed open ended questions on how universities can improve wellbeing.</p>	<p>More than a quarter of participants (27.3%) reported that student support, specifically services for academic skills and advising would improve student wellbeing at university.</p> <p>However, these services needed to be more widely available and to a higher quality then currently offered to support wellbeing.</p>	<p>Shows that students believe that developing academic skills is important for their wellbeing.</p>

Source, author, date, and publication	Aim of paper	Motivation	Methods	Results / Findings	Impressions
<p>Putwain et al. (2013)</p> <p>https://doi.org/10.1111/j.2044-8279.2012.02084.x</p>	<p>To examine the relationships between academic self-efficacy about one's study related skills/behaviours, learning related emotions (LRE's) and academic performance.</p>	<p>Academic self-efficacy has been found to be a predictor of academic achievement and emotions. Although academic emotions are also a predictor of academic achievement, there is limited evidence for reciprocal relations with academic achievement.</p>	<p>Sample consisted of 206 undergraduate psychology students (66 males, 144 females) mean age = 21.7 years old.</p> <p>Academic self-efficacy for study related skills/behaviours and learning related emotions were measured using standardised Likert scales.</p> <p>Academic performance measured using mean scores from assessments in semesters (1&2).</p>	<p>Self-efficacy when operationalised as study skills/behaviours is a predictor of LRE's.</p> <p>Higher confidence in study skills/behaviours facilitated a challenge appraisal resulting in greater pleasant and fewer unpleasant LRE's.</p> <p>The findings indicated that these links occurred directly and indirectly through a better semester one academic performance.</p>	<p>Students' belief in their study related skills plays an important role in maintaining positive emotions and enhancing academic performance.</p>

Source, author, date, and publication	Aim of paper	Motivation	Methods	Results / Findings	Impressions
Upsher et al. (2022) https://doi.org/10.1007/s10734-022-00969-8	<p>To understand how curriculum, pedagogy, and assessment design impact undergraduate students' wellbeing.</p>	<p>More robust understanding is needed of existing curriculum-embedded approaches and students' perspectives of these.</p>	<p>57 undergraduate students were recruited from modules that incorporated a student wellbeing element. 5 undergraduate degree programmes collaborated (e.g., Psychology & Nursing)</p> <p>Topic guides were created, and these were assessed for face validity through pilot interviews.</p> <p>Online semi-structured one-to-one interviews (30 minutes) and focus groups of 2-4 undergraduate students (1 hour) were conducted.</p>	<p>Students across all cohorts found that academic skills (e.g., essay writing and referencing) development had an indirect positive impact on their wellbeing. Academic skills also included content that was useful for students' future careers.</p> <p>Students valued easy to access resources, firm guidance, and support to prepare them for assessments. Students also suggested that embedding wellbeing into assessments could include clearer guidance, guaranteed access to support and adequate time between assessments.</p>	<p>This research highlights the importance of academic skills development on student wellbeing in HE and how assessments could be altered to support student wellbeing.</p>

Source, author, date, and publication	Aim of paper	Motivation	Methods	Results / Findings	Impressions
<p>Rowlett (2020). https://core.ac.uk/download/pdf/341355689.pdf</p>	<p>To explore the role that independent learning skills, have on student wellbeing during the transition to university.</p>	<p>Limited research on how to support students' wellbeing during the transitional period into HE.</p>	<p>The study utilised semi structured interviews to gather qualitative data.</p> <p>12 second year university students were recruited using a convenience sampling method.</p> <p>Each participant was asked to complete a 500-word written reflection about their transition to university before their 1-2 hour semi structured interview.</p> <p>Data was analysed using template analysis (form of thematic analysis).</p>	<p>Associations between developing cognitive skills and positive emotions: Time management skills enhanced students' wellbeing as it assisted in reducing stress, especially around assessments. Time management also helped students feel more motivated. Academic writing and time management were also mentioned as skills that led to confidence in upcoming work experience during students' university course.</p> <p>Associations between cognitive skills and meaning: Students valued the development of problem-solving and analytical skills due to their role in providing confidence, enjoyment and meaning.</p> <p>Cognitive skills and relationships: Developing academic skills such as problem solving, memory development and presenting at the same rate as peers helped to develop and construct relationships.</p>	<p>I have focused on the main findings in relation to academic skills and wellbeing. There is also some more results around non-academic skills and students' emotions and engagement.</p> <p>Findings give examples of specific academic skills development and their relationships with wellbeing.</p>

Source, author, date, and publication	Aim of paper	Motivation	Methods	Results / Findings	Impressions
<p>Lister et al. (2023) - https://doi.org/10.1080/02680513.2021.1899907</p>	<p>To understand the barriers and enablers to mental wellbeing and study success in HE distance learning students.</p>	<p>Distance learning students disclose mental health issues at a higher rate than campus students.</p> <p>Enablers and barriers to wellbeing in HE has previously focused on students in campus environments.</p>	<p>The study used a convenience sample to recruit 21 participants including 16 students (13 White British, 2 Black British and 1 White European) and 5 tutors.</p> <p>21 semi structured interviews were carried out (30-90 minutes). Students were asked to share study/related life experiences, and tutors were asked to share experiences of supporting students with mental health issues.</p> <p>Thematic analysis was used to identify the emerging themes of barriers and enablers</p>	<p>Skills related barriers and enablers:</p> <p>Study skills – Students noted that note taking, time management and revising were barriers for them until they learned these skills. Increasing confidence in these skills helped students with their mental health.</p> <p>Social skills (with others on their course) – barriers were primarily communication, not asking for help and a fear of participation. These issues were mainly caused by mental health issues e.g., anxiety.</p>	<p>Although the sample only contains distance students, the findings are still insightful into the relationships between study skills and wellbeing in HE students.</p>

Annotated References

What skills-based interventions have attempted to impact on student wellbeing? What have been the results (positive or negative)?

Source, author, date, and publication	Aim of paper	Motivation	Methods	Results / Findings	Impressions
Collings et al. (2014) https://doi.org/10.1007/s10734-014-9752-y	<p>Aims to bridge the gap between theory, practice, and evaluation of peer mentoring in higher education.</p>	<p>There is limited good quality theoretical research driven by and evaluative research into peer mentoring in UK higher education.</p>	<p>This evaluation appears to be conducted by internal practitioners at the University of Northampton and Stirling.</p> <p>A matched longitudinal comparison between two universities, adopting a survey-based method.</p> <p>Data was collected at 5 days (T1) and 10 weeks (T2) into university.</p> <p>Variables measured at both times were self-esteem and negative affect, whilst perceived stress was measured at T2. All used self-report measures.</p> <p>The sample consisted of 109 first year undergraduate psychology students from two universities, one with a peer mentoring scheme ($p = 53$) and one without a peer mentoring ($p = 56$).</p> <p>As part of the mentoring scheme, mentors provided psychosocial support and academic advice.</p> <p>By T2, 53% of participants did not have contact with their mentor.</p>	<p>Moderating effects of mentoring:</p> <p>Analysis indicated that significant moderating effects occurred for self-esteem.</p> <p>Non peer mentored students experienced a decrease in self-esteem, whilst peer mentored students indicated no change.</p> <p>Peer mentored individuals showed a significant decrease in negative affect, whereas non peer mentored students showed no changes in their affect levels between T1 and T2.</p> <p>Independent samples t test found no significant difference between the two universities on perceived stress levels.</p>	<p>Useful insight into the role of peer mentoring interventions and the impact of student wellbeing (self-esteem and negative affect).</p>

Source, author, date, and publication	Aim of paper	Motivation	Methods	Results / Findings	Impressions
Buckley et al. (2021). https://liverpool.ac.uk/3129408/1/Buckleyetal%282021JLDHE.pdf	<p>To explore the benefits of academic writing workshops to address stress and anxiety caused by thesis writing.</p>	<p>Limited number of interventions addressing student wellbeing have focused on doctoral students. This is despite doctoral students having higher rates of anxiety and stress than comparable populations.</p>	<p>This evaluation appears to be internally conducted by practitioners at the University of Liverpool. Developed structured, semi-structured and unstructured series of writing support sessions. Each session lasted 3 hours, with a series over a one-month period per academic term. Perceptions of wellbeing associated with academic writing were measured using an online survey (1-5 scale). 29 participants who had signed up for three structured sessions and 30 participants for two structured sessions were invited to complete the survey pre sessions and post writing sessions. Only 23 participants responded to the pre-session survey.</p> <p>Following this, 160 students who had taken part in any thesis writing workshops during the 2017/18 academic year were invited to participate in focus groups. 12 students agreed to participate in 1 of 3 focus groups regarding whether the workshop met expectations, feelings during/after the workshop and whether they felt more confident about writing following the workshops.</p> <p>Transcribed focus group data was analysed using Thematic Analysis.</p>	<p>Only 16 respondents could be matched for pre and post session survey responses.</p> <p>Participants reported a strong positive impact on their perceived procrastination. Their sense of anxiety and stress were less pronounced when pre and post responses were compared.</p> <p>Workshop (session) type was not a significant explanatory factor for any response variables, suggesting all workshop types positively impacted perceived levels of stress and anxiety.</p> <p>Focus group themes:</p> <p>Tangible benefits – workshops provide tips, tricks and add productivity (working habits & writing plans) which helps reduce procrastination, stress and anxiety.</p> <p>Supportive environment – being surrounded by supportive peers positively impacted on wellbeing (social engagement & empowering).</p>	<p>Shows that short writing interventions do positively impact on students' wellbeing (stress and anxiety) related to thesis writing.</p>

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<p>Yomtov et al. (2017) https://doi.org/10.1177/1521025115611398</p>	<p>To evaluate the impact of peer mentoring on students' perceptions on integration and support at university.</p>	<p>The current evaluation study attempted to remedy some of the methodological issues in prior research.</p>	<p>This research was funded by the Developing Hispanic-Serving Institutions Program Title V of the U.S. Department of Education. Used a pretest-posttest, comparison group design (i.e., Quasi-experimental). Pretest/posttest data was collected using self-report surveys, that included demographic information, forced response choice questions and open-ended questions. Participants were American undergraduate university students in UNIV 100 classes. In the experimental group, students received peer mentors, whilst students in the comparison group did not receive peer mentors. 162 students with peer mentors could be matched with complete pretest and posttest surveys. 142 students without peer mentors could also be matched for complete pretest and posttest surveys.</p>	<p>The results indicated that students with mentors felt significantly more connected to the university, more active and felt more supported compared to students without a mentor.</p> <p>Mentored students were significantly more likely to report they had at least one person they could turn to for emotional and academic support, compared to non-mentored students.</p> <p>In open ended questions, peer mentored students claimed their mentors were beneficial as they gave emotional support, encouragement and help with personal issues (21.6%).</p>	<p>Study shows that peer mentoring interventions to help with academic skills also positively impact on student wellbeing.</p>

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<p>Paolucci et al. (2021)</p> <p>https://www.emerald.com/insight/content/doi/10.1108/SGPE-07-2020-0041/full/html?skipTrackin g=true</p>	<p>To explore how peer mentorship (formal/informal) impacts the social connectedness and wellbeing of graduate students across four disciplines.</p>	<p>Due to students' mental wellbeing becoming an increasing concern for universities.</p>	<p>This research was internally funded by the University of Calgary and conducted by internal practitioners.</p> <p>Materials: Online survey and semi structured interview (9 open ended questions).</p> <p>Participants: Recruited via snowballing sampling. Students were Masters, doctorate (EdD) and PhD level, from four-degree disciplines.</p> <p>Participants were required to have prior experience in peer mentoring programs.</p> <p>62 participants completed the semi structured interview, with 47 also completing the online survey.</p> <p>Analysis: Quantitative data was analysed by calculating descriptive statistics, whilst a thematic analysis approach was applied to the qualitative data.</p>	<p>Peer mentoring helped students experience a sense of community belonging, developed friendships, remain motivated and seek emotional support during their studies.</p> <p>Students also developed in confidence, fulfilment, and personal growth which was also reciprocated in the mentors.</p>	<p>Useful study into the positive impact of peer mentoring on wellbeing.</p>

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<p>Hanson et al. (2016). https://doi.org/10.1080/13562517.2015.1136274</p>	<p>Seeks to determine the effects of peer learning on psychological wellbeing in undergraduate university students. Also wants to see understand if this effect is moderated by sex, race, or academic ability.</p>	<p>Prior research investigating the impact of peer learning on students' psychological wellbeing has been limited to cross sectional studies. This study utilises a longitudinal design.</p>	<p>This evaluation was internally funded by the University of Iowa and conducted by internal practitioners. Participants: First year undergraduate students, recruited via random sampling at American Universities. Original sample of 4501 students. Students were informed they were participating in a longitudinal study of how peer learning experiences during university affects students. Data collection: Initial data collection lasted between 90-100 minutes during the first semester (Autumn 2006). Participants completed a survey for demographic information, along with cognitive and psychosocial instruments. Final data collection was conducted in Spring 2010. Participants completed the cognitive and psychosocial instruments, along with the National Survey of Student Engagement and the WNS Student Experience Survey. 1792 students had useable data at both time points. 62.5% were female and 81.6% were White students. Analyses: Regression based analysis to understand the relationship between peer learning on 6 wellbeing subscales. Also examined whether peer learning influenced certain groups differently (sex, race, academic ability).</p>	<p>The results revealed that peer learning had a small but positive influence on psychological wellbeing at the end of the four years.</p> <p>The influence of peer learning on wellbeing was not moderated by sex, race, or academic ability.</p>	<p>Longitudinal study is useful to assess changes in students' wellbeing over time due to this particular intervention.</p>

Source, author, date, and publication	Aim of paper	Motivation	Methods	Results / Findings	Impressions
<p>Upsher et al. (2022). https://doi.org/10.3390/educsci12090622</p>	<p>To evaluate the effectiveness of curriculum - embedded interventions on improving undergraduate students' wellbeing.</p>	<p>The literature around universal and preventative interventions to help mental health in students is of poor quality in terms of methodology and results. Thus, prior findings cannot be synthesised for meta-analysis.</p>	<p>This research was externally funded by the Office for Students, England, UK. One evaluator was partially funded by UK Research and Innovation grant.</p> <p>Undergraduate students were recruited using a convenience sample. Participants either enrolled onto the intervention module or the control module.</p> <p>After calculating the effect size, the required sample size was 134 participants (67 min per group).</p> <p>Intervention: Teaching staff/module leaders approached the research team if they thought their module met the criteria of "aiming to improve student mental wellbeing".</p> <p>Modules within Psychology, Nursing, English studies, and international politics were identified as the intervention conditions.</p> <p>These modules aimed to improve wellbeing via academic skill development, including communication and digital skills as well as self-care.</p> <p>Control conditions: As Psychology and English studies targeted all undergraduate students, students who attended fewer than 4 intervention sessions were classified as the control condition. For Nursing and Politics, the control conditions included students who enrolled on a module that was mutually exclusive from the intervention condition.</p> <p>Outcome measures: Social connectedness, loneliness, wellbeing, flourishing, self-compassion, burnout & self-esteem.</p> <p>Data was collected pre module (Time1) and post module (Time2).</p>	<p>Wellbeing outcomes: There were non-statistically significant improvements for the interventions group compared to the control group in mental wellbeing. This included loneliness, self-compassion, and burnout.</p> <p>There was no change in self-esteem levels for the intervention's groups compared to the control groups.</p> <p>Views on embedding wellbeing into curriculum: There was a non-statistically significant decrease in agreement to universities embedding wellbeing into the curriculum for the interventions group compared to the control groups.</p>	<p>The findings are interesting; however, the study does have a few limitations including a low response rate (10%) and group differences (gender, part time job) were not controlled which can affect wellbeing.</p>

Source, author, date, and publication	Aim of paper	Motivation	Methods	Results / Findings	Impressions
<p>Young et al. (2022). https://doi.org/hallam.idm.oclc.org/10.1080/03075079.2020.1793932</p>	<p>The current research examines the effects of a wellbeing program that is integrated into UG psychology classes.</p>	<p>A growing body of research shows that university students are experiencing high levels of mental illness, stress, and burnout.</p>	<p>This research appears to be internally conducted by practitioners at Melbourne University. Used different undergraduate psychology students who enrolled on the elective Positive Psychology module.</p> <p>There was a total of three studies: All experimental participants completed the university wellbeing programme (UWP intervention).</p> <p>Study1 (pilot): Conducted in 2016. 67 participants and their wellbeing was assessed at 8 time points during and after the intervention. This included baseline and once per week (MHC-SF).</p> <p>Study2: Conducted in 2017. 155 participants taking the same Positive psychology module as study1. Wellbeing, positive and negative affect was measured at two-time points; pre and post the UWP intervention.</p> <p>Study3: Quasi experimental study conducted in 2018. Active control group was included with students from another elective psychology module. 188 participants, with 105 experimental and 83 control participants.</p> <p>Experimental participants completed the UWP, whereas controls completed their semester as usual. Both sets of participants completed the wellbeing, positive and negative affect measures at the same time (pre [Time1] and post [Time2] intervention timeframe).</p>	<p>Study1 findings: Participation in the UWP led to significant increases in student wellbeing over time. These wellbeing gains were still maintained one month after the completion (last time assessed).</p> <p>Study2 findings: The results indicated that the UWP significantly increased students' wellbeing and positive affect, whilst decreasing negative affect.</p> <p>Study3 findings: A mixed factorial ANOVA revealed there was no significant difference in wellbeing between Time1 and Time2. There was also no significant main effect of group, with no significant difference between the experimental and control group for wellbeing.</p> <p>However, there was a statistically significant interaction between time and group. The effect of time for the experimental group indicated that the increase in wellbeing from Time1 to Time2 was not significant. However, the effect of time for the control group was significant, which indicated there was a significant decline in wellbeing for the controls between Time1 and Time2.</p> <p>This suggests that although the UWP does not increase students' wellbeing, the difference between the two groups suggests the UWP prevents a decrease in wellbeing.</p>	<p>Testing a wellbeing program that is embedded into the curriculum over three studies provides robust results.</p>

Annotated References

Are there any nuances in this evidence for particular student groups (e.g., indigenous students, students with disabilities, international students, LGBTQ+ students, mature students)

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<p>Hillier et al. (2019). https://doi.org/10.1080/13611267.2019.1675850</p>	<p>The study aimed to examine the outcomes for students with disabilities participating in a student-to-student mentoring program.</p>	<p>There is an increasing number of disabled students attending higher education, whilst peer mentoring is becoming more frequently implemented.</p>	<p>Participants: 46 first year undergraduate students (USA) registered with a disability signed up for the mentoring programme which lasted for 14 weeks (1 hour per week).</p> <p>Comparison group contained 28 disabled students who did not participate in peer mentoring programme to compare outcomes.</p> <p>A mixed methods approach was implemented. Two quantitative questionnaires were completed at the beginning and end of the programme (e.g., adapting to university).</p> <p>A third questionnaire was with both qualitative and quantitative items was completed in a one year follow up. This questionnaire asked about the benefits during the programme and a year later. Items included: academic, social, confidence, motivation & time management.</p>	<p>Mentee students reported worrying significantly less about being successful at university, better understood academic expectations, how to access support and how to meet other students.</p> <p>Mentees did not report significant changes in managing their time and selves, self-advocacy, and study skills.</p> <p>94% of students stated they would recommend the programme.</p>	<p>Shows the impact of peer mentoring on disabled students' academic outcomes but also ties in wellbeing aspects.</p> <p>Small sample size – generalisability issues?</p>

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<p>Siew et al. (2017). https://doi.org/10.1371/journal.pone.0180854</p>	<p>To investigate the feasibility of a specialised peer mentoring programme for students with autism spectrum disorder (ASD) and its potential for improving wellbeing, retention, and academic performance.</p>	<p>Limited interventions have been implemented to assist students with ASD in higher education institutions.</p>	<p>Design: A one group pre and post-test design was implemented. Prior to commencement with the peer mentoring programme, students were asked to complete a questionnaire which measured wellbeing and communication. The same questionnaire was re-administrated 5 months afterwards. Semi structured interviews were conducted to assess effectiveness.</p> <p>Participants: 10 Australian undergraduate students who self-reported a DSM-IV diagnosis of autistic disorder or related condition.</p> <p>Intervention: Mentee and mentors met weekly for 90 minutes during teaching weeks of the university semester. Also met off-campus in safe environments for the purpose of improving social communication/interaction outcomes.</p>	<p>Qualitative findings: After the programme, students reported increased perceived social support and decreased general communication apprehension.</p> <p>Mentees reported that the programme had helped them manage negative emotions (stress, anxiety, and low mood) and instil more positive emotions (confidence and support).</p> <p>Quantitative findings: Results showed no significant pre-post change in overall anxiety and communication apprehension scores.</p> <p>93.9% of students passed their assessments and students achieved a distinction or high distinction in 62.5% of modules taken in the semester.</p> <p>Only one student withdrew from university during the mentoring programme.</p>	<p>Shows that specialised peer mentoring programmes do improve wellbeing in students with ASD. However, there was limited focus on academic skills in the mentoring programme.</p>

Source, author, date, and publication	Aim of paper	Motivation	Methods	Results / Findings	Impressions
Papadatou-Pastou et al. (2019) https://doi.org/10.1186/s13033-019-0308-5	<p>To investigate the feasibility and acceptance of an online psychological wellbeing and study skill support system called MePlusMe, which provides personalised support to users.</p>	<p>Substantial number of students are facing mental health and academic skill difficulties.</p> <p>Face to face support may not appeal to students who feel embarrassed by their problems/fear stigmatisation</p>	<p>Participants: 13 UK university students (including UG and PG) presenting with mild or moderate mental health difficulties (Mean age 31.3 years).</p> <p>Procedure: The study was conducted over an 8-week period between October 2017 and January 2018.</p> <p>Participants initially attended a face-to-face group session (baseline), taking them through the systems assessment's routes (Symptoms questionnaire or techniques library). This created a tailored package of techniques to meet their individual needs. After setting up their MyPlusMe system, participants were encouraged to watch the technique videos and apply them in their own time.</p> <p>Participants were asked to attend 3 online follow up sessions during week 2, 4 and 8. This was to assess current functioning, their mental wellbeing and self-efficacy relating to study skills.</p> <p>During the follow up sessions, participants were also asked to evaluate the system and its functionalities.</p>	<p>Students found the contents easy to understand and non-judgemental.</p> <p>The techniques in MePlusMe attracted positive comments, including improvements in positive thinking, self-confidence, and reassurance.</p> <p>All participants reported decreased symptoms of anxiety and depression and increased (weeks 2&4) or stable (week 8) wellbeing scores compared to baseline. All participants that completed the self-efficacy measure for study skills had improved scores by week 8 compared to baseline ratings</p>	<p>Due to the mean age of 28.8 years for female students and 36.5 years of age for male student, this suggests that an academic skills/wellbeing intervention is effective for increasing mature students' wellbeing in HE.</p>

**Sheffield
Hallam
University**

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