

## **Conceptualising the power of outdoor adventure activities for subjective well-being: A systematic literature review**

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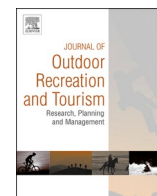
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## Research Article

## Conceptualising the power of outdoor adventure activities for subjective well-being: A systematic literature review

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## A B S T R A C T

This study examines the key research concepts associated with the subjective well-being outcomes of outdoor adventure activity participation. The landscape of adventure research is changing, and scholars are increasingly focusing on the beneficial outcomes of engaging in nature-based adventure activities. Yet, little is known about the interplay between adventure and subjective well-being. Therefore, this research presents the key findings from a systematic review of pertinent literature which was carried out using the Preferred Reporting Items for Systematic Review and Meta-Analyses (PRISMA) protocol, content analysis and thematic coding. We reviewed the abstract, introduction, methodology and findings for 125 journal articles and textbook chapters. Five intertwined metathemes and 16 subthemes, which reflect subjective well-being, emerged from this review. The metathemes are Extraordinary Experiences, Physical and Mental Balance, Personal Development, Immersion and Transformation, and Community. These formed the basis of the conceptual framework, which illustrates how adventure activity participants can gain, maintain, and enhance their subjective well-being by experiencing at least one subtheme within one or more of the five metathemes during or after their adventure activity. Further empirical research should be carried out on these metathemes to root the subjective well-being construct more firmly within the adventure literature.

*Management implications:*

- From a systematic literature review, five metathemes and 16 subthemes emerged which reflect the key subjective well-being (SWB) influences on, and benefits of, adventure activity participation.
- The metathemes are *Extraordinary Experiences*, *Physical and Mental Balance*, *Personal Development*, *Immersion and Transformation*, and *Community*.
- The conceptual framework, metathemes and subthemes can assist adventure organisations to better understand the SWB needs, motives and expected benefits of their existing and potential new clients.
- These organisations can operationalise some or all of the metathemes and subthemes into their product offerings. For instance, clients may seek opportunities to develop their individual identity (*Personal Development*) or desire natural highs and flow (*Extraordinary Experiences*) from their adventure experiences.

## 1. Introduction

Adventure tourism and adventure recreation are enjoying sustained growth, which is unsurprising given that adventure activity participation positively influences health and well-being, and contributes to overall happiness (Buckley & Westaway, 2020). Our research examines the interplay between outdoor adventure activity participation in a recreational or tourism context, and subjective well-being (SWB). Adventure tourism brings together nature, activity, and culture 'to deliver specific types of experiences for travelers who are motivated by goals such as transformation, challenge and wellness' (Adventure Travel

Trade Association [ATTA], 2020). Adventure activities are available at differing levels of challenge, skill, adventurousness, and degrees of commodification to cater for the diverse profile of adventurers who engage in these (Rantala, Rokenes, & Valkonen, 2018). Adventure scholars do not always refer to or apply the well-being construct in their research when appraising the benefits of activity participation. For instance, adventure research on empowerment (Doran, 2016) and freedom (Brymer & Schweitzer, 2013) resonate with well-being, yet this construct is given limited attention. Consequently, scholars (Clough, Houge Mackenzie, Mallabon, & Brymer, 2016) argue that there is a limited recognition of the well-being outcomes related to adventure and

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call for further research in this area.

Although we use the term well-being in everyday life, its meaning is uncertain, it is conceptually ambiguous, and multidimensional in nature (Morrow & Mayall, 2009). The interchangeability of well-being with other constructs, such as quality of life and happiness, also make delineating it a challenge. Most scholars examine the dimensions of well-being rather than defining it (Dodge, Daly, Huyton, & Sanders, 2012). Researchers (Forgeard, Jayawickreme, Kern, & Seligman, 2011) argue that this approach is too broad and obscures the meaning of well-being. Against this complex backdrop, some suggest that well-being involves positive emotions, engagement, relationships, meaning and accomplishment (PERMA) for a flourishing life and society within which people are healthy, happy, engaged, and capable (Seligman, 2011). Autonomy, realising potential, self-acceptance, environmental mastery, purpose, life satisfaction, positive functioning, and maintaining a state of equilibrium are also key well-being elements (Linley & Joseph, 2004).

SWB is an umbrella term which describes types of individual well-being. It concerns the cognitive evaluations that people make about their lives, including their satisfaction with work, family, health, goal fulfilment, and their positive or negative affective responses to life events (Sirgy, 2010). It involves the interplay between personality, the environment, psychological resources, personal circumstances, social activities, and coping styles (Ryff, 2014). Adventure activity participation helps to maintain homeostasis (Pomfret, 2021) as participants use their physical, psychological, and social resources, such as their skills in and experiences of an adventure activity, and their physical fitness, to deal with challenges either within the natural setting or within their everyday lives (Dodge et al., 2012). Relatedly, SWB outcomes result from participants engaging with their bodies and their senses, and adapting their physiological states (Huta & Ryan, 2010). Furthermore, partaking in guided adventure activities within national parks, or simply visiting these, can facilitate improved visitors' health and well-being (Buckley, 2020; Wolf, Stricker, & Hagenloh, 2015). Therefore, there are obvious SWB outcomes from these adventure pursuits.

The aim of this research is to identify and understand the research concepts associated with the SWB outcomes of outdoor adventure activity participation. We define the latter as 'participating in nature-based outdoor adventure tourism or recreation activities which may be challenging and may include perceived or real risk.' Although there is considerable research on the motives encouraging outdoor adventure activity participation (e.g., Buckley, 2012; Cater, 2008; Houge Mackenzie & Hodge, 2020), there is an absence of work on the SWB benefits. However, scholars (Ewert, Gilbertson, Luo, & Voight, 2013) argue that adventurers' original motives transform into benefits as they facilitate continued activity participation. Accordingly, the SWB benefits we report in this study also provide insights into participants' initial motives. The research questions are: 1. What key SWB themes are prominent in extant adventure tourism and recreation research to date? 2. What SWB themes are underrepresented in extant adventure tourism and recreation research? We address questions 1 and 2 through a systematic literature review to ascertain the current state of knowledge in this field. 3. How can these themes be categorised into a conceptual framework to demonstrate the synergies between SWB and outdoor adventure activity participation? 4. What are the implications for future research on outdoor adventure activity participation and SWB?

This study contributes to current research in several ways. Systematic literature reviews investigate pertinent research from different disciplines, research designs and contexts, and highlight the extant knowledge base in a particular field (Furunes, 2019). They bring together 'fragmented understandings' and 'contradictory opinions' (Yang, Khoo-Lattimore, & Arcodia, 2017, p.89), and offer 'an important avenue for scholars and practitioners to apply existing knowledge for further action (i.e., policy) and research' (Pahlevan-Sharif, Mura, & Wijesinghe, 2019, p.164). We adopt this process to investigate the status of research regarding the synergies between outdoor adventure activity participation and SWB.

Scholars have already used this approach to examine, e.g., flow and adventure recreation (Boudreau, Houge Mackenzie, & Hodge, 2020), risk and nature-based tourism (Gstaettner, Lee, & Rodger, 2018), and personality traits of high-risk sport and hard adventure participants (McEwan, Boudreau, Curran, & Rhodes, 2019), yet SWB has not featured in these studies. Other work provides insights into the relationship between outdoor adventure activity participation and SWB (Houge Mackenzie & Hodge, 2020; Houge Mackenzie, Hodge, & Filep, 2021). It recognises the absence of research which applies SWB frameworks to adventure settings and investigates the psychological mechanisms which facilitate SWB from outdoor adventure activity participation. Consequently, our study builds on this research by adopting a systematic literature review approach, which is overdue given the importance that adventure seemingly has on participants' SWB. This research is timely given the many demands that we currently face in everyday life. Amongst other challenges, the ongoing environmental crisis, the tendency for citizens in western societies to spend too much time indoors, and an ageing society has prompted the United Nations to develop a global agenda which prioritises individuals' well-being and mental health (Brymer et al., 2021). The emphasis is on strengthening people's relationship to nature, and nurturing the SWB benefits that grow from this. The Covid-19 pandemic has negatively affected people's mental health, yet being active in green spaces has helped them to develop good coping skills and improve their well-being (Geng, Innes, Wu, & Wang, 2021).

Scholars are moving away from traditional perspectives of adventure such as risk, conquering nature, and deviant personalities. Scholars who advocate this approach assume that particular personality types and demographic profiles engage in adventure. Yet, the strong growth rates in adventure activity participation suggest that a diverse range of markets, who seek a range of beneficial outcomes, now partake in these pursuits (Houge Mackenzie & Brymer, 2020). Accordingly, there is an increasingly stronger focus on the positive outcomes of activity participation (Farkić, Filep, & Taylor, 2020). This 'turning point' therefore provides the impetus for our study. The review maps out what we already know about outdoor adventure activity participation and SWB, highlights key themes which are less well represented in the literature, and identifies opportunities for further research and conceptual development. We therefore make a 'neglect spotting' contribution (Nicholson, Laplaca, Al-Abidin, Breese, & Khan, 2018, p. 213) to the adventure literature by addressing the gap in systematic reviews which examine outdoor adventure activity participation and SWB.

A second theoretical contribution is the development of a conceptual framework which integrates the key research concepts, i.e., metathemes, from extant research on the SWB outcomes of outdoor adventure activity participation. This framework is based on the five metathemes which emerged from the review findings. It brings these together, drawing on literature from different disciplines. Furthermore, it demonstrates the process of gaining, maintaining, and enhancing SWB through a combination of some or all the metathemes, including the subthemes of each metatheme. Accordingly, this conceptual framework conceptualises the strong association between outdoor adventure activity participation and SWB. Researchers and practitioners can use this as a tool to guide further theoretical and applied investigations. Consequently, this framework advances knowledge and understanding, and can influence the design of adventure experiences in tourism and recreation contexts. It can assist the tourism industry to better understand why people feel good in nature and emphasise the importance of different SWB benefits within their nature-based product offerings. Accordingly, responding to further calls for research into the 'mechanisms that underpin diverse adventure outcomes' (Houge Mackenzie & Hodge, 2020, p. 4) the conceptual framework explains why outdoor adventure activity participation works for SWB, rather than merely confirming that it works. Moreover, it contributes towards developing 'more robust, integrated models of adventure participation that can inform policy and practice' (p.4).

Alongside strong industry growth, there is a need to 'better

understand the factors associated with [adventure activity] participation' (Boudreau et al., 2020, p. 2). Our findings demonstrate that engagement in adventure pursuits potentially generates a raft of well-being outcomes for individuals. A deeper awareness of these connections incentivises the adventure industry to develop corresponding products. Relatedly, understanding which outcomes are important to SWB can help adventure organisations to ensure their product offerings and experiences fit with the needs of their clients. In pandemic times, engaging in nature-based activities, particularly microadventures close to home, has become important to people's SWB (Houge Mackenzie & Goodnow, 2021). Notably, Nordic countries have extolled the benefits of regular outdoor activity engagement for many years. Their friluftsliv culture is integral to their education and health programmes, and is highly valued for promoting healthy, socially integrated individuals and access to nature (Henderson & Vikander, 2007). Additionally, practitioners use adventure experiences as interventions to improve mental health (Clough et al., 2016). Such measures are becoming increasingly important as the pandemic has severely affected people's mental health and well-being worldwide with a global increase in anxiety and depression by an estimated 25% in 2020 (United Nations, 2022). Although nature-based interventions are not new in preventing or treating mental health conditions, there needs to be more 'evidence-based knowledge' (Britton et al., 2020, p.52) to develop a comprehensive understanding of the effects of such experiences on SWB. This would help healthcare services to focus their efforts on green and blue social prescribing programmes.

The article continues with the Methodology, including the systematic literature review (stage one) and thematic coding (stage two). The Conceptual framework section follows, which identifies the key research concepts associated with the subjective well-being (SWB) outcomes of outdoor adventure activity participation. The Findings and Discussion section discusses the five metathemes and 16 subthemes which emerged from the content analysis process. The Conclusion section summarises the key contributions of this study, outlines its limitations and makes suggestions for further research.

## 2. Methodology

### 2.1. Stage one: systematic literature review

Stage one involved a systematic literature review of adventure, well-being, and benefit studies to determine the key research concepts within the literature. This type of review synthesises extant studies in a particular field, evaluates the state of knowledge, and identifies research gaps. It applies a rigorous search strategy, which involves using key words and terms to select documents for inclusion and exclusion in the review (Snyder, 2019). This approach, therefore, reduces reviewer bias when selecting literature, produces reproducible and coherent data, and provides reliable results which scholars can draw conclusions from (Collins & Fauser, 2005). Accordingly, it is the 'gold standard' for literature reviews (Davis, Mengersen, Bennett, & Mazerolle, 2014).

We used a reporting flowchart, the Preferred Reporting Items for Systematic Review and Meta-Analyses (PRISMA) bibliometric protocol (Moher, Liberati, Tetzlaff, Altman, & Prisma Group., 2009) (see Fig. 1), to gather data on the main research constructs within the fields of outdoor adventure activity participation and SWB. We employed a flowchart specifically adapted for tourism and hospitality systematic literature reviews (Pahlevan-Sharif et al., 2019). It comprises 18 checklist items and four data collection phases: identification, screening, eligibility, and included (see Fig. 1).

### 2.2. Systematic search strategy

This systematic approach requires searching for pertinent literature using databases to establish high quality reporting of the key themes and a thorough, accurate, objective, and traceable review process (Furunes, 2019). At the identification phase (Fig. 1), we used five databases for the search: Scopus, Web of Science, SPORTDiscus, PsycINFO and ProQuest Central. These multidisciplinary databases feature research which has undergone a rigorous selection process. Scopus publications are scrutinised by expert reviewers in the field and represent authoritative research, which is frequently cited (Elsevier, 2022). Scopus is 10–15%

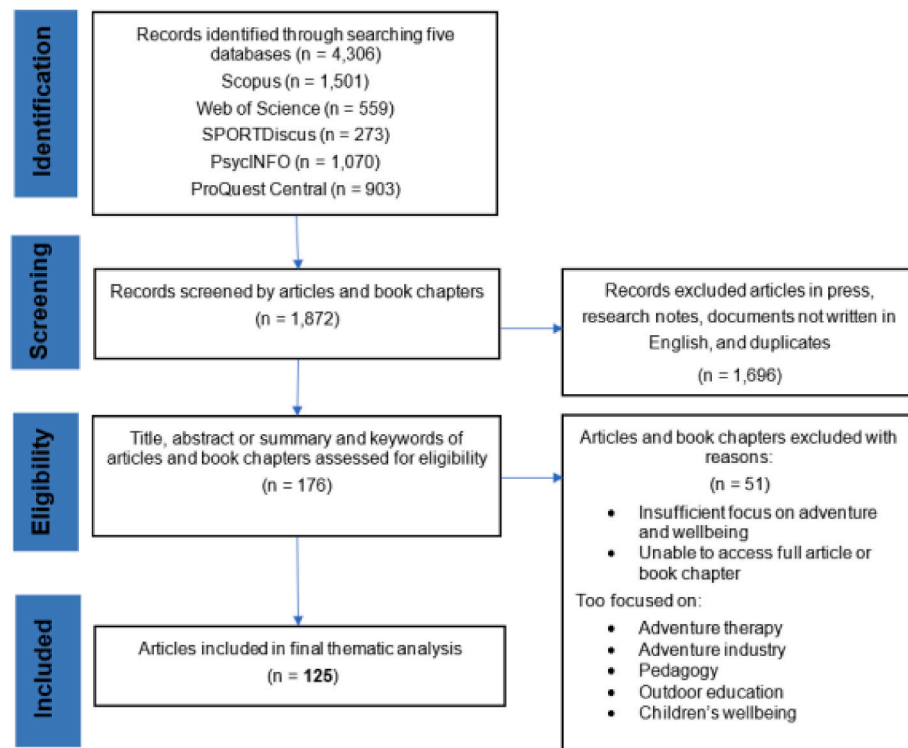


Fig. 1. PRISMA flow chart illustrating study selection process.

larger than other databases (Ritchie & Jiang, 2019) and searches for documents from a combination of other databases (Khoo-Lattimore, Mura, & Yung, 2019). It is extensively used in tourism systematic literature reviews (e.g., Booth, Chaperon, Kennell, & Morrison, 2020; Huang, Jin, & Coghlán, 2021; Khoo-Lattimore et al., 2019) alongside Web of Science (Demiroglu & Hall, 2020). Other systematic reviews use all five aforementioned databases (Boudreau et al., 2020; Britton, Kindermann, Domegan, & Carlin, 2020).

The timeframe for the search was from January 1990 to February 2021 as this covers the period when adventure tourism research gained traction in tourism studies with many notable studies published. There was already an established body of research in the field of adventure recreation by this time, providing the opportunity to also examine this literature. We developed keywords and terms to use in this initial phase (see Table 1) based on our research expertise. We searched the databases, starting with Scopus and Web of Science, and the stage one keywords and terms, followed by stages two and three. This search returned a total of 4306 records.

At the screening phase (Fig. 1), we limited the search to journal articles and book chapters, which returned 1872 records, of which 1696 records were excluded. Therefore, 176 journal articles and book chapters progressed to the eligibility phase. Using specific exclusion criteria, we undertook a series of data cleanses, which involved reviewing the title, abstract and keywords of each document for their relevance to outdoor adventure activities, well-being, and benefits. We then discussed and reviewed ambiguous cases before we decided on their inclusion in the data analysis stage. The final included phase comprised 125 documents.

### 2.3. Stage two: data analysis

Although scholars often use statistical methods to analyse literature from systematic reviews, these are not appropriate when assessing studies with different methodologies (Tranfield, Denyer, & Smart, 2003), as in this research. Our study was not concerned with statistical frequencies and correlations in a quantitative sense. Rather, its purpose was to illustrate prominent themes and interrelationships between outdoor adventure activity participation and SWB. Therefore, in analysing the 125 publications, we continued with the same qualitative thematic coding approach (Saldaña, 2009) used in recent studies (Booth et al., 2020; Boudreau et al., 2020; Britton et al., 2020). We developed colour codes based on the preliminary findings from the abstract coding process and our prior knowledge and research expertise in outdoor adventure activity participation and well-being. We deliberately kept the coding system open-ended so that we could extract themes which materialised from the literature and develop new codes for these. The coding system therefore continuously expanded as new themes emerged while working through the texts. We then allocated a third of the 125 documents to each researcher and reviewed the abstract, introduction, methodology and findings for each. For empirical papers, we did not appraise the literature review content as we wanted to assess new knowledge generated from the primary research findings. Concurrently, we highlighted words and phrases within the publications which reflected the assorted colour codes. We then copied these on to the spreadsheet under the correct code. Secondly, for each set of words and

phrases per code, we developed subcodes. For instance, the subcodes for the code mental health and emotional balance were reduced stress, balance, clearness, coping strategy and mental health restoration. This stage led to many subcodes for each code, which we constantly reviewed, refined, and reduced to avoid a profusion of these. Thirdly, we appraised the codes and subcodes, and developed five metathemes and 16 subthemes, which best represented the key findings from this thematic analysis. Finally, the team counted the number of mentions that each subcode had, which produced an overview of the key findings.

Our team comprised UK and German researchers, and we recognised that there may be differences in our interpretation of outdoor adventure activity participation and SWB. Therefore, we continuously checked our interpretations of relevant content for each document against the codes and subcodes. We discussed the latent meaning of the prominent themes within the literature to ensure these reflected SWB, to facilitate coding decisions and to gain richer insights. Additionally, we produced an audit trail with detailed meeting notes to document this systematic review process and to check back on our methodological decisions.

### 2.4. Conceptual framework: adventure activity participation and subjective well-being

The conceptual framework (see Fig. 2) addresses the primary aim of this study, which is to identify and understand the key research concepts associated with the SWB outcomes of outdoor adventure activity participation. It illustrates the well-being starting point for participants: *current subjective well-being (SWB) in everyday life*. Our conceptual approach is based on the existing literature and includes the key themes from the systematic literature review process. These themes will be explained in more detail in the results section. The framework highlights the synergies between *adventure activity participation in dynamic nature* and SWB, and the multifaceted and cyclical journey that adventurers take in their quest for SWB. The term "dynamic nature" emphasises that natural settings explicitly offer opportunities for action, where body and nature converge, rather than solely providing passively consumed scenic backdrops. Regarding adventure activities, nature confronts its participants within a multi-layered environment which can be experienced with its own voice and which touches body and mind (Rosa, 2019).

The conceptual framework comprises five intertwined metathemes which represent the key SWB influences on, and benefits of, adventure activity participation. These are *extraordinary experiences, physical and mental balance, personal development, immersion and transformation, and community*. Each metatheme includes several subthemes, amounting to 16 in total. The model shows that the five metathemes overlap, and that there are no stringent boundaries, as indicated by the grey lines between each. During and after activity participation, the importance of these metathemes can differ for the same person, based on the situation and their experience.

The arrows in the centre of the framework represent different levels of SWB, and highlight that gaining, maintaining, and enhancing SWB is an ever changing, ongoing process. Accordingly, the framework embeds the notion of building SWB from a low level, i.e., *gained SWB* (light grey smallest arrow), to a high level, i.e., *enhanced SWB* (largest black arrow). We propose that participants will enjoy these different levels of SWB if they experience one or more subthemes within one or more of the five metathemes during and/or at the end of their activity. Additionally, frequent participation in adventure activities should encourage higher levels of SWB. Consequently, adventure holidays offer plentiful opportunities for people to enhance their SWB through continued engagement in activities. They connect people to natural environments, facilitate an increased awareness of the need to protect nature and to proactively engage in this, and encourage them to lead sustainable lives (Hanna et al., 2019). Similarly, regular recreational participation can foster a stronger sense of SWB. Moreover, if individuals are strongly motivated to engage in adventure activities, particularly for the purpose of improving their SWB, they may experience a greater sense of SWB. This

**Table 1**  
Keywords and terms used in the PRISMA identification phase.

Stage one: Adventure AND ...	Stage two: Outdoor activities AND ...	Stage three: Adventure AND ...
wellbeing	wellbeing	friluftsliv
benefits	benefits	flow
well-being	well-being	peak experience
well being	well being	optimal experience
wellness	wellness	nature experience



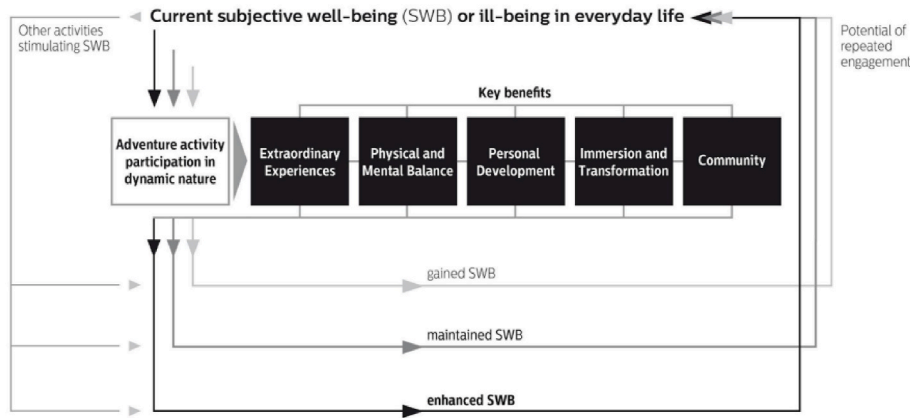


Fig. 2. Conceptual framework: Outdoor adventure activity participation and subjective well-being.

aligns with the idea that ‘the greater the level of need satisfaction and internalisation, the greater the likelihood that participants will report high levels of key psychological well-being markers’ (Houge Mackenzie & Hodge, 2020, p. 33).

Although our framework focuses on how adventure activity participation can build SWB, we acknowledge that individuals enjoy SWB in many other aspects of their lives, aside from adventure pursuits. This is shown as *other activities stimulating SWB* (left hand side), e.g., socialising with friends, or other hobbies such as learning a language, reading, or playing a sport. Some adventurers may participate in outdoor activities less regularly, perhaps only enjoying these while on holiday. Therefore, they will maintain their SWB through a mix of non-adventurous and adventurous activities. Accordingly, not everyone is looking to increase their SWB through repeated participation in outdoor adventure activities. Nevertheless, the SWB induced by adventure can influence and even strengthen further engagement in such activities, which is presented in the conceptual framework as *potential for repeated engagement* (right hand side).

### 3. Findings and discussion

This section discusses the five metathemes and 16 subthemes which emerged from the thematic coding analysis process. It addresses RQs 1 and 2 in detail and, therefore, considers the prominent SWB themes in extant literature as well as the underrepresented themes. Although SWB does not feature in much of the literature we examined, certain scholars apply and make overt references to this construct in their research,

demonstrating how its elements reflect our five metathemes. For instance, *Personal Development* (Kerr & Houge Mackenzie, 2020), *Immersion and Transformation* (Wolsko & Lindberg, 2013), *Physical and Mental Balance* (Carpenter & Harper, 2016), *Extraordinary Experiences* (Boudreau et al., 2020) and *Community* (Costello, McDermott, Patel, & Dare, 2019). Fig. 3 demonstrates that *Personal Development* (25%) is the most frequently cited metatheme within the reviewed literature. Next are *Immersion and Transformation* (24%), *Physical and Mental Balance* (22%), *Extraordinary Experiences* (18%) and *Community* (12%). These citation variations do not suggest that *Personal Development* is the most important metatheme, rather they reflect the status of research in this area, and the literature gaps which necessitate further investigation.

#### 3.1. Extraordinary Experiences

Individuals enjoy *Extraordinary Experiences* (18% of the findings) during and after adventure activity participation. Scholars (e.g., Houge Mackenzie, Hodge, & Boyes, 2011) often mention *flow* as key to adventure, and 42% of this metatheme’s findings relate to this optimal experience. Flow causes individuals to worry less, making them feel happy and relaxed, and contributing towards enhanced SWB (Boudreau et al., 2020). Several reviewed studies mention positive flow-related emotions such as happiness, fun or pleasure (Costello et al., 2019; Farkić et al., 2020). Other articles focus on the specific dimensions of *optimal flow* and *peak experiences* such as immersion, altered perception of time or challenge (Buckley, 2012; Reid & Kampman, 2020). Research also examines the positive outcomes of optimal experiences such as

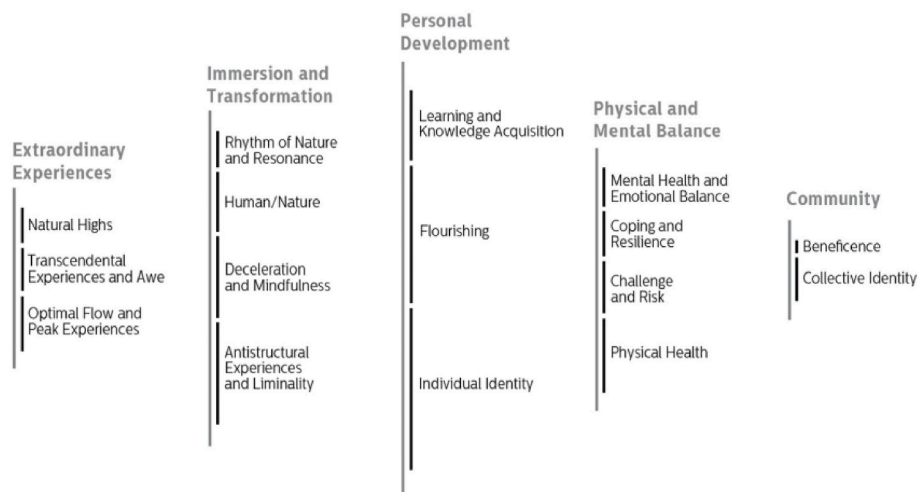


Fig. 3. The subjective well-being metathemes and subthemes of outdoor adventure activity participation.

strong performance and contentment (Cater, Albayrak, Caber, & Taylor, 2020).

During physical activity, and in extreme situations, the human body releases drug-like substances. These are essential for survival as they lead to increased physical strength, reduced feelings of pain, and states ranging from satisfaction to euphoria. These reflect the subtheme *natural highs* (32%). Relatedly, research reports that adventure activities lead to a state of heightened arousal (Buckley, 2012; Reid & Kampman, 2020). While normal exercise can encourage this, the thrill and excitement of adventure activity participation intensifies these natural highs (Giddy, 2018; Hanna et al., 2019).

The third subtheme is *transcendental experiences and awe* (27%). Adventure activity participation leads to spiritual experiences (Gstaettner et al., 2018). Being outdoors facilitates a spiritual connection with nature and the world (Löetter & Welthagen, 2020), and spiritual well-being (MacBride-Stewart, 2019). Awe reflects experiences regarding the beauty of nature and a sense of belonging to something bigger (Piff, Dietze, Feinberg, 2015). Several studies relate to awe (e.g., Reid & Kampman, 2020) or feeling part of something bigger (Kerr & Houge Mackenzie, 2020; Mykletun & Mazza, 2016). Awe reflects transcendental experiences, which are also reported in the reviewed literature. Escapism from the self and the positive feelings associated with being part of nature represent such experiences (Hanna et al., 2019).

Adventure activities enable extraordinary experiences and flow states, and therefore reduce worrying and enhance SWB. Natural highs released due to adventure participation, risk and overcoming challenges amplify these.

### 3.1.1. Physical and mental balance

The *Physical and Mental Balance* metatheme (22% of the findings), not only involves the health benefits of adventure activity participation, but also the positive outcomes of coping with challenges and taking risks, which result in increased resilience. Although this is an important metatheme, certain subthemes are not well-represented in research. *Physical health* has the most mentions (35%) as participating in adventure activities leads to an increase in fitness (Brymer & Feletti, 2020; Farkić & Taylor, 2019). While some people need to physically challenge their body and test their endurance (Gstaettner et al., 2018), others recognise that adventures make them feel physically well and at home in their own bodies (Carpenter & Harper, 2016). This positive attitude also develops through leading and maintaining a healthy lifestyle (Rocher et al., 2020). Elderly microadventurers enjoy health improvements (Spencer, Jones, Leyland, van Reekum, & Beale, 2019), adventure encourage physical activity in the everyday lives of young people (Brymer & Feletti, 2020). While all types of exercise bring increased physical fitness and health benefits, Howes (2016) finds that mastering adventurous situations helps to change a person's lifestyle. Adventures can also lead to increased vitality (Wolsko & Lindberg, 2013) and to stimulating, positive bodily experiences, such as feeling the snow under your feet (Doran, 2016) or experiencing cold water during ocean swimming (Costello et al., 2019).

A healthy body does not always reflect a healthy mind. Therefore, the subtheme of *mental health and emotional well-being* is also important, although only mentioned in 18% of this metatheme's findings. Participating in adventure activities in nature leads to reduced stress levels (Reid & Kampman, 2020), improved sleep, and more mental energy (Löetter & Welthagen, 2020). Others show that emotional balance, concentration and clarity are beneficial participation outcomes (Buckley & Westaway, 2020). People who take up adventure pursuits report that these help to restore and strengthen their mental health and SWB. An under researched aspect is that of healthy behavioural changes through nature-based adventure activities that lead to a more relaxed, more positive, and more conscious lifestyle (Houge Mackenzie & Brymer, 2020).

On first thoughts, *challenge and risk* (25%) may seem an unsuitable fit with *physical and mental balance*. However, risk is frequently an essential

aspect of adventure tourism (Sand & Gross, 2019), and overcoming risks leads to positive development (Houge Mackenzie & Hodge, 2020). Engaging in adventure activities often means voluntarily taking risks that are challenging, but that can be controlled and mastered (Giddy, 2018). It is the participant that negotiates the boundaries between safety and control, and it is about knowing your own abilities but also recognising your limits (Simpson, Post, & Tashman, 2014). Being out of your 'comfort zone' is a term often used when describing adventure experiences (Mutz & Muller, 2016). Stepping out of your familiar, sometimes monotonous routine, and testing yourself in new and challenging situations, facilitates learning and feelings of mastery and satisfaction (Robertson et al., 2020). It is the managing of risks and facing risky situations that make participants stronger by enhancing their self-efficacy (Houge Mackenzie & Brymer, 2020).

This leads to the fourth and final subtheme of *coping and resilience* (22%). Mastering risk and overcoming challenges lead to enhanced resilience (Buckley & Westaway, 2020). Participants of adventure activities report that they recover faster from setbacks, are more positive when facing difficult situations, and develop an enhanced ability to problem-solve (Gstaettner et al., 2018). Finding ways to tackle challenges outdoors enables people to deal with challenges in their daily lives (Pomfret & Varley, 2019). Participants learn different strategies for coping with difficult and demanding situations, and these enable them to prevent stress and to endure difficult phases in their lives (Reid & Kampman, 2020).

Overall, risk, challenge, and coping are important parameters for gaining, maintaining, and enhancing well-being, and positively influence mental health and SWB.

### 3.2. Personal development

*Personal Development* is the most cited metatheme (25% of the findings). Many of the studies (e.g., Ashworth, 2017; Doran, 2016) reviewed address the potential of outdoor activity participation for personal development. Facing challenges and unpredictable situations through adventure facilitates the acquisition of knowledge and learning, the building of confidence, and identity formation. These benefits can instil the feeling in individuals that they are thriving.

*Individual identity*, with the most mentions (44%) in this metatheme, is a dialectical process of "being" and "becoming", whereby individuals work towards a balanced self and freely shape their identity (Kaufmann, 2010). Therefore, engaging in adventure activities demonstrates 'who you are or equally who you are not and also who you'd like to be' (Myers, 2010, p. 118). Participants develop their adventure identity through interacting with the unpredictable forces of nature and being able to improvise. Researchers (e.g., Mykletun & Mazza, 2016; Reid & Kampman, 2020) have explored identity development as a beneficial outcome from different types of adventure activity participation. Ashworth (2017) found that tall ship sailing trainees relinquish their 'everyday status' (p.220) during training so that they are on a level playing field with others. This prompts them to 'reinvent themselves' (p.220) and they strengthen their identity and *communitas* through accepting challenges, taking risks, pushing personal boundaries, enjoying new experiences, and taking on responsibilities. Scholars (Doran, Schofield, & Low, 2020) have also investigated how women construct their adventure identity through having the freedom to pursue their outdoor interests, learning skills to overcome their fears, developing self-reliance and confidence, and feeling empowered.

The *learning and knowledge acquisition* subtheme (19%) focuses on learning, practising skills, and mastery (Ewert, Zwart, & Davidson, 2020). Participants' acquisition of knowledge through adventure activities can enhance their reputation within an outdoor community and shape their identity (Cater et al., 2020). Lovoll's (2019) study highlights that glacier hiking involves immersive experiences, which can lead to flow, and non-immersive experiences, where learning, concentration, feelings of interest and eudaimonic emotions are important, yet

participants do not experience flow. Accordingly, although this sub-theme is currently under-researched, there is scope for further work which explores the beneficial role of non-immersive learning experiences in adventure.

*Flourishing* (37%) is a multidimensional aspect of well-being (Seligman, 2011) which reflects 'life going well' and enjoying 'me time' (Hone, Jarden, Schofield, & Duncan, 2014, p. 165). It is an important outcome of adventure activity participation (Buckley & Westaway, 2020). Tour guides observe that slow adventure experiences facilitate the reduction of stress, meaningful moments, feelings of relaxation, a sense of freedom, transformation, fulfilment, and deep connections with the natural environment. Such holistic, sometimes epiphanic, experiences culminate in flourishing (Farkić et al., 2020). Furthermore, participants of appreciative activities, such as canoeing and hiking, enjoy high levels of flourishing and psychological well-being through their immersion in nature. They develop pro-environmental attitudes and conservation behaviours (Wolsko & Lindberg, 2013). Relatedly, tourism experiences which facilitate flourishing can promote social sustainability as people 'realise their own abilities, can work more productively, cope with change, and contribute to their communities' (Coghlan, 2015, p. 385).

Considering the above, it is unsurprising that much of the literature reviewed for this study highlights how the interaction between individuals and their dynamic space during activity participation leads to personal development by creating meaning in life, pushing boundaries, and developing awareness of one's capabilities. Such engagement offers the opportunity to test personal skills and embodied practices in a playful yet self-controlled and challenging way.

### 3.3. Immersion and transformation

The *Immersion and Transformation* metatheme (24% of findings) highlights the captivating and life-changing aspects of outdoor adventure. Escaping everyday environments and routines, slowing down, and adapting to the rhythms of nature facilitate these beneficial outcomes.

The subtheme *antistructural experiences/liminality* (29%) refers to the high-speed, technical, gendered, results-oriented nanosecond culture we live in, and how this pushes us to seek experiences in nature which are freeing and encourage creativity. For women, a sense of freedom, where there are opportunities to escape the stereotypical gender roles imposed by society, is a key benefit which drives their activity participation (Doran, 2016). Temporarily distancing ourselves from everyday commitments and entering a new environment where we can disconnect from our usual surroundings encourages feelings of liminality (Turner, 1974). Engaging in adventure pursuits in nature further facilitates these feelings because they are so immersive and allow us to fully escape (Goodnow & Bordoloi, 2017). Relatedly, microadventures also have the potential to instil a state of liminality, alongside other benefits such as novelty and changing perspective (Houge Mackenzie & Goodnow, 2021). We temporarily counteract our experiences of space and time in urban society to enjoy a range of hedonic and eudaimonic benefits, particularly with slow adventure activities (Farkić et al., 2020; Varley & Sample, 2015).

The *human-nature* subtheme has the most mentions (37%). It reflects how nature is dynamic and unpredictable, and how it challenges individuals and encourages self-expression through active engagement. Adventure activity participants understand their relationship with nature and sometimes feel the need to fight against the natural environment to demonstrate their capabilities and self-efficacy. Natural environments facilitate our convergence with nature during activity engagement and we interact with it in real time using all our senses. Through seeing, hearing, smelling, feeling, and touching, adventure activity participants become immersed in nature in such a way that they may not otherwise realise. They encounter intense and enriching experiences, feel at one with nature, and enjoy enhanced well-being (Folmer, Tengxiage, Kadijick, & Wright, 2019). This can lead to a reassessment of

their relationship with nature and the adoption of pro-environmental behaviour (May, 2019).

Closely intertwined with *human-nature, rhythm of nature and resonance* (13%) is concerned with synchronising nature's rhythms with one's own personal rhythms to experience inner nature. Sea kayakers followed a diurnal rhythm and the lunar cycle while circumnavigating a tidal island, which is 'measured by the arc of the sun and the pull of the moon in a natural world in which the kayaker is suspended' (Varley & Sample, 2015, p. 84). They become attuned and responsive to the constantly changing sea conditions, using their senses to deal with the different aspects of their journey (Kronsted Lund, Gurholt, & Dykes, 2020).

*Deceleration and mindfulness* (22%) refers to slowing down and fully experiencing adventure. Mindfulness is concerned with freeing your mind, living in the present, and enjoying what is happening when it is happening (Kabat-Zinn, 1994). The multidisciplinary, challenging nature of adventure racing offers opportunities for extreme adventurers to be mindful. They pay more attention to the colours and textures around them, and enjoy feelings of freedom, pleasure, and peace from their immersion in nature. Such feelings help participants to overcome stressful and painful times when racing (Mykletun & Mazza, 2016). Similarly, Mutz and Muller (2016) report increased mindfulness amongst youths and young adults participating in hiking and friluftsliv. They experience a heightened state of arousal, focusing only on the present moment during activity engagement. Furthermore, they remove themselves from their usual environment and, therefore, encounter fewer distractions. This helps them to reflect on their own feelings while immersing themselves in nature, resulting in mindfulness.

The dynamics and unpredictability of natural spaces challenge adventure activity participants yet also encourage creativity and self-expression. Adventurers feel transformed through (re)connecting with nature, adapting to its forces and rhythms, developing their spatial knowledge and improvisation skills, and actively engaging with their surrounding environment.

### 3.4. Community

This metatheme, which represents just 12% of the findings, is about how outdoor adventure activity participation can create a sense of *Community*. Adventure experiences connect and reconnect individuals so that they develop a powerful sense of 'we,' leading to shared values and beliefs. Being in natural, often fragile, environments, can instil a desire to have a positive impact on the lives of other people through engaging in prosocial and environmentally conscious behaviour. Scholars acknowledge the community building benefits of adventure activity participation (Simpson et al., 2014).

*Collective identity*, which represents the most mentions (77%), reflects individuals' social identity and their sense of belonging. Adventure activities encourage participants to connect with a group based on their shared interests and experiences. For instance, ocean swimmers enjoy being part of a group because they have shared values and commitment, and they experience increased social connectedness and enhanced SWB. Furthermore, as they become more immersed in, and deeply appreciative of, the ocean environment, their collective identity is stronger than those who use outdoor spaces more superficially (Costello et al., 2019). As certain adventure locations are remote, human interaction is necessary for the progress, comfort and, potentially, the group's survival. For example, sailing a yacht requires a shared understanding of seamanship whereas mountaineers rely on the rope party to safely interact with nature. Working together to overcome adventure challenges creates and strengthens social bonds, friendships, and feelings of belongingness (Carpenter & Harper, 2016; Rocher et al., 2020). Moreover, collectively gaining control of, and mastering challenging situations can facilitate strong connections amongst activity participants (Brymer & Feletti, 2020). Relatedly, collective efficacy, i.e., a group's belief in its ability to organise and manage outdoor activities using the



different skills of its members, helps participants to deal with the demanding nature of adventure (Pomfret & Varley, 2019).

A key benefit of collective interaction with nature is engagement with ecological and social welfare (Hanna et al., 2019; Huynh & Torquati, 2019). This reflects *beneficence* (24%), which refers to prosocial behaviour and ‘acting in ways that benefit others’ (Houge Mackenzie & Hodge, 2020, p. 31). It is a psychological need that facilitates SWB, even in the absence of direct contact with beneficiaries. Engaging in adventure activities can generate environmental awareness in previously disinterested individuals who did not feel strongly connected to nature. A desire to protect nature, particularly where individuals experience place attachment, can encourage environmental stewardship and participation in environmentally friendly activities, such as educational and litter collection campaigns and initiatives (Rocher et al., 2020; Wolf et al., 2015). Some individuals also pass on their environmental experience, working to connect others with nature (Huynh & Torquati, 2019).

Regardless of whether they are done collectively or individually, participating in adventure activities facilitates a strong affinity with nature, environmentally friendly behaviours and attitudes, and fosters SWB.

#### 4. Conclusion

This study has identified and discussed five interlinked metathemes and 16 subthemes from a systematic review of adventure-related literature. It emphasises the multiple SWB outcomes associated with outdoor adventure activity participation, and we represent these in a conceptual framework which illustrates how participants can gain, maintain, and enhance their SWB. This study contributes valuable insights into conceptualising SWB in an adventure context. Fundamentally, scholars can use the key findings and framework as a basis for future research in this field. They can assist adventure practitioners and organisations to better understand the needs and motives of their clients. The beneficial outcomes of their activities can be embedded into the design and marketing of products, and the metathemes can form an integral part of the adventure tourism or recreation experience.

Our study findings indicate that researchers have not comprehensively applied the SWB concept within an adventure context as many of the studies we reviewed did not overtly examine SWB but alluded to specific dimensions. Furthermore, we argue that although *Personal Development* is the most cited metatheme, and *Community* is the least cited metatheme in the literature, this does not reflect their importance to SWB. Rather, it demonstrates a lack of research attention on specific metathemes, as well as subthemes, and highlights potential areas for further research. We advocate that the five metathemes and their 16 associated subthemes are of equal importance to each other relative to their influence on SWB. Yet, we also acknowledge that there are variances in individuals’ experiences of adventure activities. Therefore, one participant may desire *natural highs* and *flow* for their SWB, whereas another may seek opportunities to develop their *individual identity*. Their experience may also vary due to e.g., weather conditions, terrain, or personal circumstances. Another influence is whether participants are doing their activity through a commercial operator or on their own. For the latter, individuals are using their skills to tackle challenges and are responsible for the outcome of their adventure. By default, this enhances their self-efficacy and coping strategies in a unique way. Contrastingly, participants who experience a commercially run adventure are ‘protected’ to a certain extent, although they need to acknowledge the possibilities of risk and challenge as part of their experience.

By highlighting the varied levels of citations for the different metathemes and subthemes, this study invites scholars to investigate the under researched constructs. This said, we recommend further research on all five metathemes to root the SWB construct more firmly within the adventure literature, yet we offer specific ideas for future studies here. Given the rise in demand for outdoor adventure activities throughout

the pandemic, and the recognition that participation contributes to stress reduction and improved mental health (Buckley & Westaway, 2020), there should be more scholarly engagement with the *Physical and Mental Balance* metatheme. Researchers should address the *mental health and emotional well-being* subtheme, which is less prominent in adventure tourism literature, although there is a more established body of adventure recreation research (e.g., Houge Mackenzie & Brymer, 2020). Researchers should examine how outdoor adventure activity participation can facilitate improved mental health for those with existing conditions, or how it potentially prevents the onset of these. Ordinarily, tourists engage with outdoor adventure activities on a more sustained basis than their recreational counterparts. Consequently, there are plentiful opportunities for them to nurture their mental and physical health while on holiday and to enjoy SWB. Changing trends in adventure tourism, such as the growth of slow adventure holidays (Farkić et al., 2020), focus on reducing stress, facilitating relaxation, deceleration, and mindfulness, and *flourishing* (*Personal Development*). Similarly, microadventures encourage participants to ‘cognitively or emotionally disconnect from everyday life’ (Houge Mackenzie & Goodnow, 2021, p. 64) to enjoy *antistructural experiences/liminality* (*Immersion and Transformation*). Therefore, researchers should investigate the SWB benefits derived from engaging in these more recently recognised forms of adventure.

The *coping and resilience* subtheme (*Physical and Mental Balance*), and how adventure activity participation can promote these elements of SWB in everyday life, is another neglected area of research. Researchers tend to examine participants of more extreme adventure activities (e.g., Reid & Kampman, 2020) where the opportunities to develop long-term coping strategies and resilience are more evident as participants may push themselves to their absolute limits. Yet, given the beneficial role they play in the development of healthy ageing and self-efficacy (Costello et al., 2019), we call for further research on this subtheme. This could include an examination of activities across the adventure spectrum, which offer differing degrees of challenge, to ascertain their influence on how participants cope with stressful situations and events in everyday life and how they develop resilience. *Beneficence (Community)* is another under researched subtheme, which has recently appeared in the adventure literature (e.g., Houge Mackenzie & Hodge, 2020), and merits further investigation. Against a backdrop of rising environmental concern and climate change, there is considerable value in understanding the interplay between adventure activity participation and beneficence. With this knowledge, organisations can encourage beneficence in their clients through designing holidays which involve environmentally friendly activities and opportunities to develop prosocial behaviour.

This study is not without limitations. As noted by others (e.g., Boudreau et al., 2020), the findings cannot be applied to indoor artificial adventure settings, as the natural environment strongly influences the participant’s experience and their SWB. However, future research could compare the influence of indoor and outdoor adventure activity participation on individuals’ experiences and their propensity to gain, maintain and enhance SWB from these. Another consideration is that most scholars currently conducting adventure tourism and recreation research are based in developed countries. Accordingly, their study findings, as reflected in this review, may differ in other cultural contexts and less developed countries. However, it should be reiterated that journal articles and textbook chapters not written in English were excluded from our review. We acknowledge that a review of research written in different languages would have presented a different set of findings. With this in mind, further examination of cultural contexts are planned for phase two of this research project. The research team comprises scholars from countries where English is not the native language. Therefore, there is scope to examine studies written in other languages. This will be a starting point in adopting a more ‘cross-cultural approach’ (Janowski, Gardiner, & Kwek, 2021) to understanding outdoor adventure activity consumers and similar or differing nuances across cultures. In addition, although we based this review on 125

academic journal articles and textbook chapters, the study could have been more extensive to include grey literature, such as reports and conference proceedings and possibly literature in other languages. Relatedly, a key limitation of systematic literature reviews is their use of specific databases, which may not have captured all the academic studies in this field. Nonetheless, we tried to mitigate this by using several authoritative databases. Finally, while we recognise that qualitative research is always interpretive, use of PRISMA facilitated objectivity, the development of clear metatheme and subtheme descriptions using extant research, and a team of researchers worked together to verify each other's work. In summary, therefore, this study forms the basis for further research which examines the power of outdoor adventure activity participation for SWB.

## CRediT authorship contribution statement

**Gill Pomfret:** Conceptualization, Methodology, Validation, Formal analysis, Investigation, Data curation, Visualization, Writing – original draft, Writing – review & editing, Supervision, Project administration. **Manuel Sand:** Conceptualization, Methodology, Validation, Formal analysis, Investigation, Data curation, Visualization, Writing – original draft, Writing – review & editing. **Carola May:** Conceptualization, Methodology, Validation, Formal analysis, Investigation, Data curation, Visualization, Writing – original draft, Writing – review & editing.

## Declaration of competing interest

None.

## Data availability

The data used in this research is in the form of academic research articles and textbook chapters. These are available in University libraries or through Google Scholar.

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