

Evaluate the proposed psychological benefits and any potential issues associated with taking part in outdoor adventurous activities.

Outdoor adventurous activities like kayaking, climbing and hill-walking, typically involve taking part in physical activity within the natural environment, which provides ‘challenge, exploration and moving beyond the norms of the everyday experience’ (Hopkins and Putnam, 1993, p.69). Participation can have many psychological benefits on participant’s ‘cognitive, mental and emotional state’ (Oxford Dictionary, 2024). Taking part can improve or prevent mental disorders, boost self-determination and self-efficacy, increase general well-being, happiness, and learning ability. Despite this, there are some potential issues relating to participating in these activities, as if individual differences are managed incorrectly, the anxiety and stress levels of participants and leaders, can have potentially long-lasting negative psychological implications. It is therefore important to evaluate the psychological effects of outdoor adventurous activities to assess their value and ensure their practical application, achieves maximal psychological benefit for participants.

The challenging nature of outdoor adventurous activities leads them to provide psychological benefits including increased self-determination and self-confidence. Bandura’s self-efficacy theory (1977, p.191), explains this is achieved through ‘performance accomplishments’, ‘vicarious experiences’ (seeing others succeed), ‘verbal persuasion’ from credible and valued persuaders and ‘emotional arousal’ for participants. Mortlock’s stages of adventure (1984) state that when participant’s levels of perceived risk and competence are balanced, the ‘optimal level of arousal’ achieved can allow ‘frontier adventure’ to occur and peak performance is likely. Successfully focusing, problem-solving and performing in challenging situations can promote greater self-efficacy, with confident participants being likely to select ‘more difficult goals’ and have ‘greater commitment’ to them (Locke *et al*, 1984, p.241). Referencing Basic Psychological Needs Theory (Ryan and Deci, 2017, p.183), when ‘competency’ is satisfied, ‘autonomy’ is also more likely, with success boosting intrinsic motivation, increasing the chance of long-term participation. Self-efficacy can be built in outdoor adventurous activities through positive self-talk and mental imagery (Hall, 1985), resulting in ‘greater self-regulation of arousal, relaxation and anxiety control’ (Maynard *et al* 1995, p.428). For example, a kayaker picturing themselves successfully completing a slalom run, is likely to have greater focus and better technique, having gained self-belief that they can

achieve the task. Feeling intrinsically motivated and capable in difficult scenarios is shown to be psychologically beneficial in Cognitive Evaluation Theory (Ryan and Deci, 2017, p.20), which states ‘when self-determined, people experience a sense of freedom to do what is interesting, personally important, and vitalizing.’ Having positive experiences can influence future activities to be enjoyable too, proven by general trends in temporal patterning. Outdoor adventurous activities are therefore ideally situated to benefit participants psychologically, with their challenging nature increasing self-determination and self-efficacy, which can catalyse long-term beneficial participation. However, more causal studies are needed to determine whether self-confidence produces good performance, or vice versa, to allow for effective practical application in outdoor adventurous activities.

Participating in outdoor adventurous activities can cause potentially harmful psychological issues if the level of perceived risk and challenge is greater than a participant’s competence or confidence. When these two factors are unbalanced, disaster and devastation, which can result in ‘permanent psychological trauma’ may occur (Carpenter and Priest, 1989, p.68). For example, when coasteering if the perceived risk level is not matched with participant’s competence, psychologically detrimental events can happen, such as ‘near drowning, or embarrassment from failing in front of peers’ (Carpenter and Priest, 1989, p.68). These negative emotions can be long-term, reducing self-esteem, and preventing future participation and any potential psychological benefits. Mismatching challenge levels within outdoor adventurous activities is dependent on individual differences and outdoor adventure leader’s abilities to choose the correct level of difficulty and therefore perceived risk for participants. ‘An effective leader may use fear as a tool to promote growth and understanding creating a positive experience, while a less effective leader may abuse those fears creating a potentially negative one’ (Ward, 2008, p.58). These individual differences can be explained by Weinberg and Gould’s (2003) ‘individual zones of optimal functioning’, where a positive or negative outcome depends on an individual’s levels of trait and state anxiety, and how much stress they can cope with before experiencing negative psychological impacts. Stressful situations may also lead individuals with low self-efficacy to give up and attribute failure internally (Bandura, 1982), decreasing confidence further. A potential issue with outdoor adventurous activity participation is therefore the difficulty of matching participants with an appropriate level of challenge, especially when competency and confidence vary within a group, as if done incorrectly there are ‘unlikely to be any advantageous outcomes from the activity and

psychological damage is likely to occur' (Hodgson and Berry, 2011, p.12), resulting in long-lasting emotional distress or self-efficacy loss.

The natural environments that outdoor adventurous activities usually take place in can provide further psychological benefits, with nature connection increasing general well-being and overall mood. A Natural England report (2016, p.2), demonstrates this, finding 'spending time or being active in natural environments is associated with positive outcomes for anger, fatigue and sadness and lower levels of negative affect mood/emotion'. Furthermore, taking part in nature-based activities has been reported to produce 'rises in life satisfaction and happiness' (Pretty and Barton, 2020, p.15). A practical example of outdoor adventurous activities implementing these psychological health benefits, is the use of blue prescriptions, where outdoor swimming interventions can 'support recovery from depression,' with long-term participation 'reducing cortisol responses and inflammatory responses' (Massey *et al*, 2023, p.1). This suggests participation can also aid those struggling with neurotic disorders, when used as psychological therapy. Additional evidence supporting this was gathered during the pandemic, where it was found that 'interactions with blue spaces can be beneficial for mental health, especially in a potentially stressful time' (Maharja *et al*, 2023, p.1). This demonstrates that outdoor adventurous activities are beneficial for general psychological well-being and can be both curative and preventative for mental disorders; significantly important when considering '1 in 4 people in the UK experience a mental health problem each year' (Mind, 2017). Adventurous outdoor activities could combat the current rise in mental disorders and cut public health costs, providing long-term psychological benefits, with a study by Pomfret (2021, p.1) showing adventure tourism activities promote eudaimonic well-being, through 'meaning and purpose' and not simply hedonistic 'momentary enjoyment and pleasure'. Physical activity is also an element of outdoor adventure activities which can be psychologically beneficial, improving learning through increasing 'cognitive function, memory and attention, impulse inhibition, as well as imagination and creativity' (Bratman *et al*, 2019, p.3). Outdoor adventurous activities have also been found to be more psychologically beneficial than their indoor counterparts, with a study by Thompson, *et al* (2011, p.1761) concluding, 'well-being was greater in physical activity in the natural outdoor environment'. It must however be mentioned that this was not statistically significant, and therefore more research needs to be done into the psychological effects of outdoor adventurous activities to allow their full benefits to be practically implemented.

Another potential issue with participating in outdoor adventurous activities is the negative psychological impact of stress on the leader, as they are under pressure to make correct decisions in potentially high-risk situations. Sustained stress caused by responsibility has been shown to increase the likelihood of ‘memory disorders’ (Lupien and Lepage, 2001, p.137), have ‘negative effects on cognition,’ (Yaribeygi, *et al*, 2017, p.1061) and ‘suppress the immune system’ (Reiche *et al*, 2004, p.617). These issues have been practically demonstrated in the outdoor adventure sector, with a study on expedition leaders finding ‘increases in anxiety and a reduction in self-confidence were symptomatic of instances where the leader felt that they could not directly influence an event’ (Bunyan and Boniface, 2000, p.37). This shows long-term over activation of the sympathetic nervous system can not only increase levels of cortisol and cause chronic stress, depression, and other non-communicable diseases, but can also reduce leader’s self-efficacy and confidence in their actions, potentially impacting their performance and vital judgement making abilities. There are however ways to combat these negative psychological impacts with ‘the support of peers being linked to a reduction in stress and anxiety’ (McGovern, 2021, p.1904). Having multiple instructors running activities would therefore allow the feelings of stress and responsibility for decision-making to be shared. Overall, psychological stress on leaders is a potential issue of outdoor adventure activities, however taking a psychosocial approach could help to alleviate these issues (Engel, 1977, p.129). Again, individual differences must be considered, as impacts are dependent on ‘the cognitive demands of the task being performed and the psychological characteristics of the individuals performing it’ (Jones and Hardy, 1989, p.41) and so may not arise for all leaders.

In conclusion, outdoor adventurous activities can be said to have many psychological benefits including improving cognition and learning ability, increasing self-esteem and self-efficacy, and being both curative and preventative for mental health disorders. Participating in these activities could have globally positive implications in relation to wider issues such as the mental health crisis and our currently overstretched health services, as they can boost life-satisfaction and overall well-being levels. The fact that outdoor adventurous activities often involve the elements of challenge and risk, social physical activity and natural environments, make them uniquely impactful in providing psychological benefits, due to their biopsychosocial approach. They have the potential to provide greater benefits than alternative

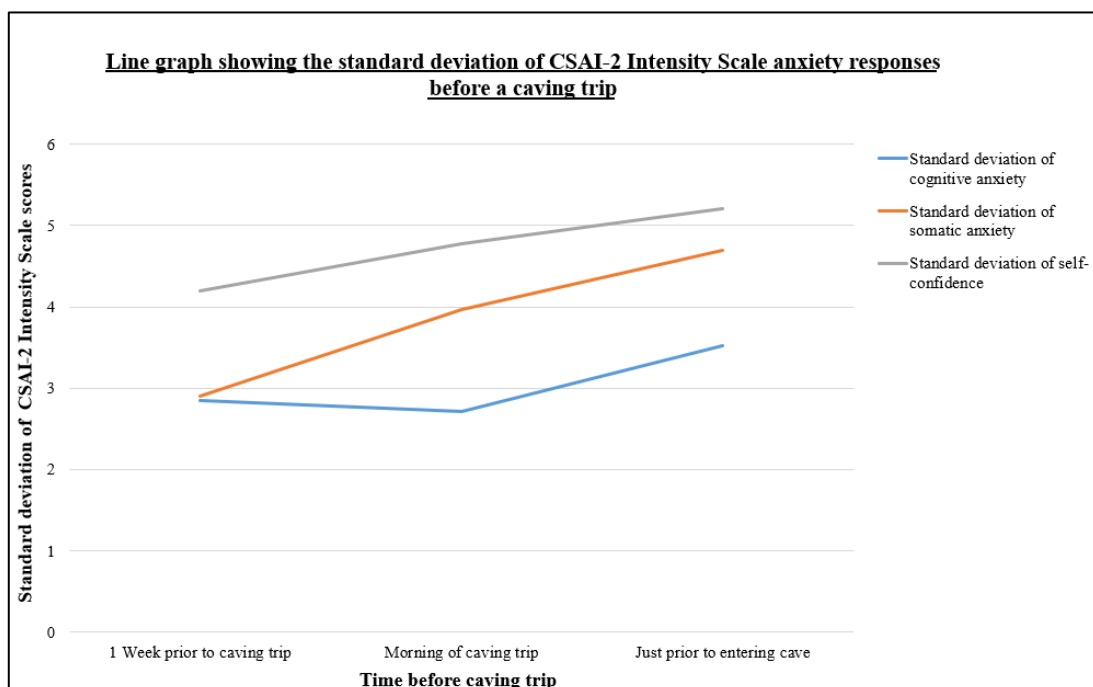
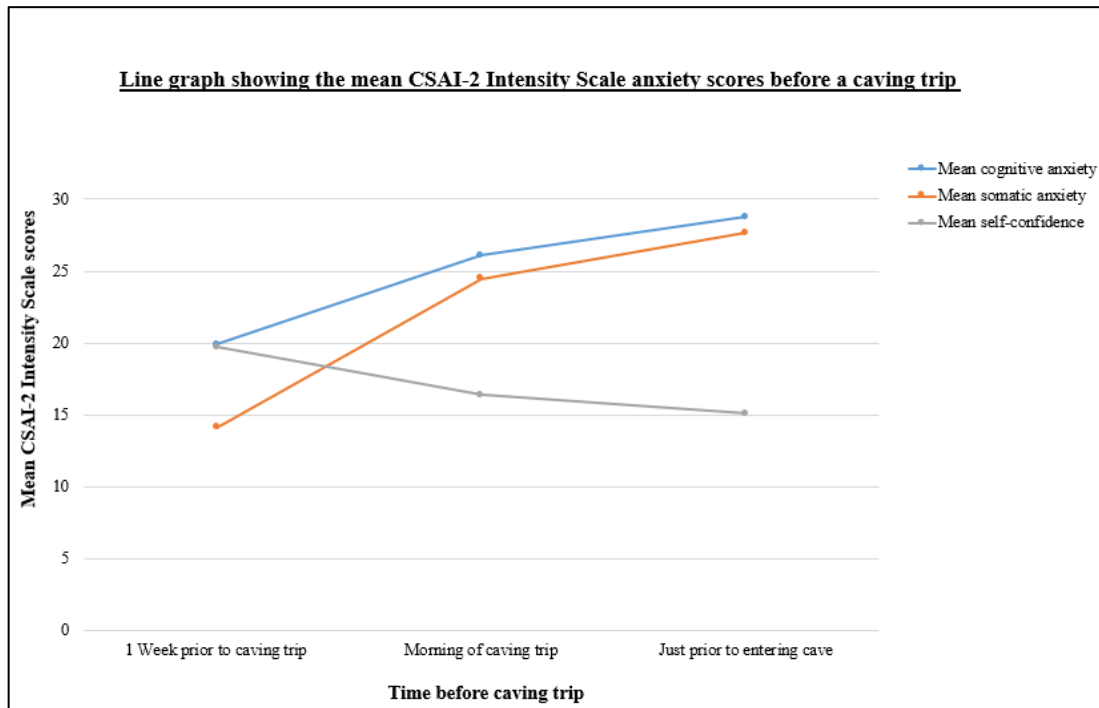
indoor activities, however more research is needed within the field of outdoor adventure psychology to determine the specific factors which make them beneficial. There are however some potential issues regarding anxiety and stress for leaders and participants if perceived risk levels and competence are mismatched, but these issues can be combatted through considering individual differences and social support for leaders. Therefore, outdoor adventurous activities can be seen as overarchingly beneficial psychologically and could have a far-reaching positive impact on wider global issues.

Word Count: 1594

**Evaluate the dataset in relation to relevant psychology and outdoor
adventure education research.**

Chart to show the mean and standard deviations of CSAI-2 Intensity Scale anxiety responses before a caving trip

	1 Week prior to caving trip	Morning of caving trip	Just prior to entering cave
Mean cognitive anxiety	19.9	26.1	28.75
Standard deviation of cognitive anxiety	2.85	2.71	3.52
Mean somatic anxiety	14.1	24.45	27.65
Standard deviation of somatic anxiety	2.9	3.97	4.69
Mean self-confidence	19.7	16.4	15.1
Standard deviation of self-confidence	4.19	4.78	5.21



There was a clear positive trend in somatic and cognitive anxiety levels as the caving activity got closer. Mean Somatic anxiety started at a lower level than cognitive anxiety but climbed more steeply the morning of the event, rising again just before entering the cave. Mean cognitive anxiety followed the same upward trend across all three times, starting at a higher level than semantic anxiety but increasing less sharply and less overall, resulting in both anxiety responses reaching similar levels just before starting. These temporal patterns support previous research results where ‘cognitive anxiety symptoms remained relatively stable in the lead up to competition, whereas somatic anxiety peaked sharply at the onset of performance’ (Hanton, Mellalieu and Young, 2002, p.911). Practical examples echoing this increase in physical anxiety show that climbers experienced ‘higher heart rates, muscle fatigue, and blood lactate concentrations’ just prior to a climb, and that ‘state anxiety affected participants’ movement behaviour, evidenced by decreased efficiency and longer climbing times’ (Pijpers, *et al.* 2003, p.283). This suggests that higher anxiety levels prior to outdoor adventurous activities can be detrimental for performance and highlights ‘the ability to regulate fear and anxiety are important psychological skills and traits that impact on safety’ (Holland-Smith and Olivier, 2013, p.1092) within high-risk adventurous activities.

Conflictingly, Sanchez, Boschker and Llewellyn, (2010, p.359) found ‘Successful climbers reported higher pre-performance levels of somatic anxiety’, showing more research is needed into anxiety affects within climbing. Moreover, activity type and experience may impact whether anxiety is beneficial, with ‘gross explosive sports indicating symptoms of anxiety as more facilitative to performance than fine motor-skill sports’ and ‘experienced performers reported more facilitating interpretations of symptoms than their less experienced counterparts’ (Mellalieu, Hanton and O’Brien, 2004, p.326). Applied practically, powerful kayaking may benefit more from pre-performance anxiety than technical climbing.

Mean self-confidence steadily decreased across the time periods, a lesser change than in both anxiety responses. This was replicated by Thomas, Maynard and Hanton (2004, p.172) who found, ‘cognitive and somatic responses increased, and self-confidence decreased near competition’, with the ‘intensity and frequency’ of anxiety symptoms increasing as the activity approached (Thomas, Hanton and Maynard, 2007, p.379). My own caving data followed the same trends, experiencing more physical and mental anxiety the closer the activity got, whilst simultaneously losing self-confidence, doubting my ability.

Standard deviation for somatic anxiety rose most, whilst cognitive anxiety increased just before starting, suggesting the data became more spread and individual differences regarding anxiety became more prominent closer to beginning caving. Standard deviation range was consistently higher for self-confidence, showing the greatest spread of results, possibly linked to whether participants were 'facilitators', reporting more positive feelings or 'debilitators', who 'interpret their anxiety symptoms as more negative toward performance' (Jones and Hanton, 2001, p.385), therefore losing self-confidence as anxiety increases. Additionally, Hardy and Hutchinson (2007, p.147) found 'individual difference variables play an important part in determining the extent to which individuals may be able to make use of anxiety-induced effort'. Outdoor adventurous activities should therefore practically accommodate this increased range in anxiety and self-confidence scores just prior to an activity, by using warm up games (e.g. tag in canoeing), starting at a low challenge level to ensure all participants can perform adequately and their anxiety levels are not so high they feel reluctant or unable to participate.

Word Count: 548

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