

Critically evaluate the impact of outdoor adventure on the health and well-being of a specific demographic group in your local area and make recommendations for removing barriers to participation.

Health and Well-Being in the Outdoors

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AI Acknowledgement

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Introduction

The relationship between outdoor adventure and health and well-being is well-documented in contemporary research. In general, the evidence suggests that outdoor and adventure-based experiences can enhance physiological functioning, reduce stress, build resilience, and strengthen social connectedness (Okudan et al., 2025; Brymer and Feletti, 2020; Richmond and Sibthorp, 2019; Houge Mackenzie and Hodge, 2019). However, there are many barriers to participation in outdoor adventure (Richmond and Sibthorp, 2019), meaning many populations are unable to experience these benefits. University students are frequently identified as a population facing barriers to participation (Puhakka, 2021; Hines et al., 2019; Flood and Parker, 2014) and have also been recognised as an at-risk population in terms of health and well-being, with studies reporting elevated levels of psychological distress and lower rates of subjective well-being in students compared to the general population (Hughes, Priestley and Spanner, 2025; Broglia, Millings and Barkham, 2021).

The purpose of this essay is to evaluate how outdoor adventure contributes to health and well-being, and to develop recommendations for removing barriers to participation for university students who are studying within proximity to the Peak District National Park (PDNP), England. Namely, this is aimed at students who are located in the cities of Manchester and Sheffield, where over 175,000 students enrolled in higher education institutions in the academic year 2023/24 (Higher Education Statistics Agency [HESA], 2025). This essay agrees that outdoor adventure can offer significant well-being benefits for local students; however, participation is constrained by barriers that disproportionately affect those most at-risk of poor well-being. Effective and ethical implementation of outdoor adventure as a well-being resource for local students requires coordinated, institutionally supported approaches. Recommendations are therefore framed not as isolated solutions, but as part of a broader, collaborative strategy involving universities and other local stakeholders.

Literature Review

The World Health Organization (1948) summarises health as "a state of complete physical, mental and social well-being". While often critiqued as an unattainable ideal, this definition does establish a holistic, multi-dimensional framework for health and well-being, beyond purely biomedical parameters (van den Berg, de Groot and Steg, 2013). Within higher

education contexts, attributes such as resilience and a sense of belonging have also been increasingly recognised as important components of students' well-being (Kelly et al., 2024; Allan and McKenna, 2019). For the purpose of this essay, health and well-being will be assessed through physical, psychological, and social dimensions. This includes indicators such as students' levels of physical activity, the prevalence of psychological factors (such as mental health disorders), and subjective feelings of social connection. Ewert and Sibthorp (2014) refer to outdoor adventure as a purposeful engagement with natural settings that involves challenge, uncertainty and risk. In many cases, outdoor adventures are designed as learning experiences concerning the whole person (physical, emotional and social).

University life often involves long hours sitting and indoors, and this leaves students at-risk of unhealthy, sedentary behaviours that are associated with poor physical and mental well-being (Wood et al., 2024; Edelman et al., 2022; Castro et al., 2020). Regular engagement with outdoor activities and nature has been linked to enhanced physical health indicators, including increased cardiovascular fitness, muscle strength, and decreased risk of hypertension (Nugraha et al., 2024; Jimenez et al., 2021; Twohig-Bennett and Jones, 2018). While these positive effects can be experienced by exercise alone irrespective of the environment, engaging in physical activity in a natural setting has been suggested to be more salutogenic than if done so in an indoor environment (Twohig-Bennett and Jones, 2018). Natural environments are also a motivator for sustained participation in physical exercise due to its appealing aesthetics (Okudan et al., 2025; Calogiuri and Elliot, 2017; Pretty et al., 2005). This can be explained through biophilia hypothesis, which proposes that humans possess an innate emotional affiliation with nature, making natural settings inherently attractive and motivating (Wilson, 1984). When applied to the context of outdoor adventure however, whereby elements of uncertainty and risk are implied, these natural environments may not be so appealing (Houge Mackenzie and Brymer, 2020; Ulrich, 1993). This may be due to the presence of factors such as adverse weather and terrain – conditions intentionally utilised to create a challenge for participants, which forms a core component of outdoor adventure – however, these environmental demands may negatively influence an individual's experience and potentially deter them from future participation (Down et al., 2025; Puhakka, 2024; Tyne et al., 2024).

Nature's impact on psychological indicators is often interpreted through Stress Reduction Theory (Ulrich et al., 1991) and Attention Restoration Theory (Kaplan and Kaplan, 1989). These theories explain the physiological calming and cognitive restoration effects of natural environments. Their relevance is especially significant for students, as they indicate that increased nature exposure can improve concentration and cognitive task performance, helping them to cope with the academic demands of university life. Further studies have also shown that long-term engagement and an emotional connection with nature is a strong predictor of sustained psychological well-being in young adults (Madera et al., 2025; Holt et al., 2019). The ethos of outdoor adventure endorses experiences in which participants can feel "at one with the environment" (Brymer and Feletti, 2020); this fosters a deep emotional engagement with nature and consequently strengthens one's sense of nature connectedness. In turn, individuals with higher levels of nature connectedness are more inclined to seek out nature-based experiences and, as a result, are more likely to experience the related benefits that facilitate psychological restoration (Capaldi, Dopko and Zelenski, 2014). In contrast however, Puhakka (2024) found that their outdoor adventure programme did not have a significant impact on young adults' nature connectedness score. This may be attributed to participant self-selection bias which resulted in a 'ceiling effect', or, because the programme incorporated high-adrenaline activities that required participants to test their skills and "face their fears", the challenge element of outdoor adventure may have actually distracted from the environmental appreciation needed to deepen their nature connectedness. Despite this, participants claimed that the programme "relieved their stress and anxiety" and inspired them to participate in further adventurous nature-based activities, indicating a meaningful step toward behaviours that could enhance their health and well-being.

According to Priest and Gass (2005), outdoor adventure is primarily rooted in interpersonal relationships. Previous research reinforces this perspective, supporting that outdoor adventure is positively linked to social well-being measures such as social connectedness and a sense of belonging, both of which help alleviate stress, anxiety and loneliness (Down et al., 2025; Richmond and Sibthorp, 2019). For university students, feeling a sense of belonging is linked to further positive psychological outcomes that can enhance academic performance, such as improved attention and greater cognitive engagement (Kelly et al., 2024). From a nature connectedness perspective, adventurous experiences that generate feelings of unity with the natural world can simultaneously enhance feelings of unity with

others, encouraging inclusion and cohesion beyond the environment alone to include fellow participants (Madera et al., 2025). This highlights a potential dual pathway through which outdoor adventure supports social well-being: directly, through shared group activities (Ewert and Sibthorp, 2014) and indirectly, through strengthened nature connectedness (Pomfret, Frost and Frost, 2025). While this is supported by emerging evidence, individual differences and cultural background may still influence whether outdoor adventure environments are experienced as socially positive or intimidating (Davidson et al., 2025; Puhakka, 2021). Hines et al. (2019) summarised that the social and group interactions which are associated with outdoor adventure are a motivator for students to participate in organised adventure programmes at their universities. For some participants however, especially those with lower nature connectedness or limited outdoor experience, challenging outdoor adventure environments may evoke anxiety or withdrawal rather than social engagement (Reed and Smith, 2023; Jostad et al., 2015). This suggests that the social benefits of nature on one's health and well-being are mediated by personal characteristics and past experiences, rather than an inherent feature of outdoor adventure. Allan and McKenna (2019) argue that regardless of this, sharing a challenging adventure in these unfamiliar settings still promotes social connection, as individuals can gain new perspectives from these experiences, including regard for others' well-being.

In consideration of this evidence, it is agreed that outdoor adventure has a meaningful impact on one's physical, psychological, and social well-being, even when its immediate effects are not seemingly positive. While some experiences may initially involve discomfort or anxiety, these responses do not negate their value. Instead, such challenges contribute to longer-term holistic personal development and well-being. For university students in particular, the restorative psychological effects of nature exposure are especially significant for supporting academic engagement, and reinforces evidence of a reciprocal relationship between well-being and academic performance (El Ansari and Stock, 2010).

Needs and Barriers

In the UK, there is growing concern for the health and well-being of university students (Hughes, Priestley and Spanner, 2025). The proportion of UK home students that disclosed a mental health condition rose from under 1% in 2010/11 to 5.8% in 2022/23 (House of Commons Library [HC], 2025). Academic pressures, financial issues and social isolation

have contributed to this significant increase (HC, 2025; Office for Students [OfS], 2023). Certain demographics are at heightened risk, with female, low socio-economic background and LGBTQ+ students more likely to report experiencing difficulties (HC, 2025; Sanders and Ellingwood, 2025). British Universities and Colleges Sport (BUCS, 2025) further highlight inequalities in physical activity participation, identifying that women and those from deprived backgrounds are less likely to engage in university clubs and, consequently, are less likely to experience the associated well-being benefits. Notably, their data indicated a positive correlation between increased physical activity levels and feelings of social inclusion. This distinctive increase in poor mental health rates may reflect the reduced public stigma around mental health, leading to a greater willingness to disclose conditions. Or, it may be due to a shift within the student population, with an increased proportion of the higher-risk demographics now attending university compared to previous years (HESA, 2025). Regardless, these statistics remain concerning and demand proactive intervention strategies. Sanders and Ellingwood (2025) reported that poor mental health is the leading cause of university dropouts (31%), followed by financial problems (6.6%). Beyond academic impact, wider consequences of poor student health and well-being include severe risks such as self-harm and suicide (HC, 2025).

Applying this broader evidence to students studying near the PDNP, a localised perspective can be developed by focusing on the four largest higher education providers in the region: University of Manchester (UoM), Manchester Metropolitan University (MMU), University of Sheffield (UoS), and Sheffield Hallam University (SHU). Reviewing recent student union surveys, university strategy documents and Freedom of Information requests indicates that many local students are experiencing challenges consistent with those identified at a national level. MMU (2025) reported that the number of students using the university's mental health services had doubled between 2013/14 and 2019/20. This again may be attributed to greater public awareness or reduced stigma, however, statistics from succeeding years shown in Table 1 reveal that MMU's mental health prevalence not only exceeds the national average, but also increases with each academic year, indicating a potential continued rise in need for support services for subsequent years to come.

Table 1: The percentage of enrolled students who self-declared a mental health condition during enrolment or through disability and well-being services (data obtained via Freedom of Information requests to participating universities, December 2025).

	Academic Year 2021/22	Academic Year 2022/23	Academic Year 2023/24
UoM	7.25 %	7.95 %	8.70 %
MMU	6.90 %	7.00 %	7.30 %
UoS	3.27 %	5.66 %	4.74 %
SHU	6.74 %	5.42 %	6.46 %

Following the national trend, Manchester universities report a steady increase in self-reported student mental health conditions with each successive academic year. UoS' irregular increase in 2022/23 may be inferred as a result of the lasting effects of the COVID-19 pandemic (HC, 2025); this was the first complete academic year without legal restrictions enforced in the UK, potentially reflecting a challenging phase of readjustment for students. In contrast, SHU's statistics fluctuate and ultimately decrease; one reason for this may be explained through recent National Student Survey (NSS) results. Since 2023, the NSS has asked students "how well communicated was information about your university's mental well-being support services?"; in 2025, SHU was ranked 329 out of 438 nationwide institutions, placing them in the lowest performing quartile (OfS, 2025). This may suggest that the actual prevalence of conditions at SHU could be higher than their internal data suggests, as poor communication acts as a barrier for students to disclose through official channels (Gjesfjeld and Kahn, 2024; OfS, 2019). What it also suggests is that students who do have mental health conditions may not be receiving the support they need. The highest performing local university in the 2025 NSS survey for this criterion was UoS, ranking in the top 30% nationally. This positive result suggests UoS' strong institutional awareness and support services for mental well-being, which may facilitate engagement in new well-being-oriented programmes.

Given its proven benefits, outdoor adventure offers a vital intervention strategy for addressing local students' health and well-being needs, particularly given their geographical proximity to a world-renowned National Park. In a recent case study of outdoor engagement in the Peak District, participants highlighted that the PDNP's unique natural landscape supports a versatile range of outdoor pursuits across a broad range of abilities (Pomfret,

Frost and Frost, 2025). However, despite these perceived advantages, local students still encounter numerous barriers that prevent them from utilising this natural resource.

Financial constraints constitute a significant, multifaceted barrier to outdoor adventure; specifically, the appropriate equipment which is required for safe participation is often perceived as expensive (Hines et al., 2019). Access and transport to the PDNP to engage in outdoor adventure also incurs additional costs. Hallam Students' Union (2025)'s survey indicates that a substantial proportion of SHU's student population are living at or below the UK poverty line as a result of the cost-of-living crisis, with 84% reportedly impacted by clothing affordability and 64% impacted by travel costs to campus. With such basic aspects of student life negatively affected by the current climate, participation in outdoor adventure becomes inaccessible to many students rather than a realistic option for all. There are also logistical challenges to accessing outdoor adventure for local students, with the PDNP Authority (PDNPA, 2024) reporting that 81% of visitors arrive by private car, creating a disadvantage for those reliant on public transport. The current public transport offerings frequently require multiple interchanges; a case example that PDNPA (2024) presented from a Greater Manchester postcode illustrated this challenge, noting that a journey to Bakewell required over five hours of travel for less than 2.5 hours at the destination. This logistical inefficiency is incompatible with students' study and work commitments. Participation in outdoor adventure also requires a foundational level of skill and experience in order for individuals to engage confidently and safely. If students do not already possess these skills, they are typically developed through social learning, most commonly via instruction from others or through involvement in organised groups or clubs (Scottish Government, 2021). Within a university context, these clubs and societies typically involve membership fees and additional costs, which has already been identified as a significant barrier to participation. In the absence of this adequate social support and guidance in outdoor environments, students may be deterred from participation due to limited knowledge and reduced confidence, particularly concerning their ability to respond effectively to adverse situations such as injury or getting lost (Davidson et al., 2025; Scottish Government, 2021).

This needs analysis demonstrates that local students are in growing need of effective health and well-being interventions. While outdoor adventure presents a credible means of supporting student well-being, its potential is significantly constrained by financial, logistical,

and skills-based barriers that disproportionately affect students from higher-risk groups. Targeted, institutionally-supported approaches are therefore required to reduce these access barriers and engage those students who stand to benefit most.

Recommendations

One strategy to mitigate financial barriers could involve reframing and integrating outdoor adventure into university well-being services, akin to green social prescribing models, rather than as a traditional club or society. This shift clearly defines the purpose of outdoor adventure and may expand its reach to students who are specifically seeking health and well-being benefits. This pathway would eliminate costs for students associated with clubs as university well-being services are predominantly free to access (National Health Service, 2023). UoM already offers social prescribing as part of their well-being services, and researchers at UoS and SHU have recently contributed to the evidence base for green social prescribing, promoting it as a cost-effective well-being tool (Department for Environment, Food and Rural Affairs [Defra], 2024). This reflects an existing level of institutional awareness within these universities for this proposed strategy. However, this approach is not without financial implications; Defra (2024) recommends that for such initiatives to be effective, adequate investment is required to provide essential practical resources for both organisations and participants, including equipment and transport. Universities may be able to apply for funding to support this approach; in October 2025, the University of Cumbria secured £2.5 million to research and develop practical and sustainable solutions for mental health challenges, with a key focus on how green and blue spaces can support health and well-being. This funding acknowledges natural environments as a worthy and integral infrastructure that contributes to health and well-being, providing a rationale for comparable investment in student well-being initiatives.

For equipment and appropriate clothing needs, universities could implement an equipment library scheme that allows students to borrow essential items such as walking boots, waterproof clothing, and other pieces of personal protective equipment for outdoor adventure. Similar initiatives are widely adopted by local outdoor centres and are considered to be practical and inclusive. These schemes can be cost-effectively established through partnerships with outdoor retailers and charitable donations to encourage equipment sharing and reuse. This approach also promotes sustainability and fosters environmentally

responsible attitudes. Alternatively, the Alpkot Foundation offers grants for equipment for those that would otherwise find participation in outdoor adventure inaccessible. The university could apply for this funding as an organisation, or, raise awareness of the grants to students and encourage them to apply individually.

To address transport-related barriers, universities could implement a minibus scheme to facilitate student access to the PDNP. UoS already operates an electric minibus for students after late-night events; this existing resource could be effectively repurposed to support access to outdoor adventure, and its use would not conflict with current scheduling demands. For institutions without an existing minibus, this investment could have value beyond this specific proposal, supporting a wider range of stakeholders and initiatives as exemplified by UoS. This approach balances the challenges of public transport to the PDNP as previously highlighted, and the need for individual private vehicles. To additionally alleviate time-related barriers, this scheme can prioritise accessing areas of the PDNP that are geographically closer to the respective cities. For instance, the Snake Pass and Bleaklow areas are within 45 minutes Manchester-based universities, while the Burbage Valley is approximately 15 minutes from Sheffield. These locations are typically less congested than tourist-dense destinations such as Bakewell or Edale; facilitating use of more diverse areas of the PDNP and in turn spreads the human impact on the environment. Some activity options available in these areas include: hillwalking, rock climbing and bouldering, ghyll scrambling, mountain biking and wild camping. This demonstrates the breadth of outdoor adventure available across the PDNP from just these two locations alone, further supporting earlier findings discussed by Pomfret, Frost and Frost (2025).

While the proposed minibus scheme offers logistical advantages, it presents notable environmental implications when compared to existing public transport links. While UoS currently operates an electric minibus, for others who are unable to afford these sustainable options it is likely to be a diesel-operated vehicle that would support the scheme, which are known to have negative effects on the environment (Resitoglu, Altinisik and Keskin, 2015). To mitigate this, a 'minimum occupancy threshold' could be implemented, to ensure the service remains viable while preventing the unnecessary environmental cost of operating near-empty vehicles. Alternatively, to optimise use of the existing public transport network, it is recommended that the Hope Valley railway line be utilised, as it does not require

interchanges to access the PDNP from either city. Consistent with the objectives of the minibus scheme, universities could strategically promote accessible routes and outdoor activities originating from stations in close proximity to the respective cities, such as Chinley (30 minutes from Manchester Piccadilly) and Hathersage (20 minutes from Sheffield). Furthermore, establishing partnerships with transport providers to facilitate a subsidised fare for local students could encourage them to use the train network for outdoor adventure, by lowering this additional financial barrier.

To aid skill and experience development, several charitable outdoor providers within the PDNP offer sponsored programmes for organised groups. For example, YHA and Lindley Educational Trust offer funded opportunities aimed at young adults and university-specific groups respectively. Instructional staff from these providers can support participants in developing the skills and understanding required to engage effectively and responsibly with outdoor environments, whilst also inspiring sustained future participation. However, demand for such funded opportunities is competitive and often involves time-intensive application processes. Alternatively, businesses or grant-giving bodies that independently support these charities could be approached directly to fund places for local students, offering opportunities for students and positive publicity for the sponsoring organisations. Although these programmes are often highly regarded, they typically demand full-day or residential participation; a time commitment frequently identified as a constraint for students.

To empower students to instead develop skills and experience more independently, the provision of digital resources may offer a practical solution. For example, an online library of Ordnance Survey map route cards could support self-led engagement by detailing inspiration for walking routes, mountain biking, accessing climbing crags, and more. Including clear information on route length, terrain, access considerations, and approximate travel times from university hubs would further reduce perceived barriers to participation and support informed decision-making. Additionally, resources and tutorials on navigation and emergency procedures could be incorporated to support safe and confident participation in self-led activities. Even where participants have limited experience, participating in outdoor adventure can still yield meaningful benefits; Pomfret, Frost and Frost (2025) suggest that activities at the “softer end of adventure” in the PDNP enables the benefits related to increased resilience and subjective well-being to be accessed by a wider range of

individuals, including those who lack the skills, confidence, or financial resources required to engage in organised or higher-risk adventure. Puhakka (2024) supports this further stating that shorter adventure excursions can still facilitate personal growth and engagement with nature and encourages longer-term participation and well-being.

These recommendations aim to overcome barriers for local university students so that they can experience the well-being benefits of engaging with outdoor adventure in the PDNP. National and local statistics highlight that the demographics of students who are most likely to suffer with poor well-being are also more likely to experience the barriers to participation outlined. This is not necessarily a new or recent trend; early mountaineering and exploration clubs were dominated by wealthy, white, male graduates (Hansen, 1995). Participation back then also required significant leisure time and financial resources for equipment and travel, effectively excluding populations comparable to modern day students. Exploring recommendations aimed at removing these barriers has the potential to contribute to a broader systemic shift in participation within outdoor adventure, by raising awareness of the contemporary constraints and enabling more accessible and sustainable engagement.

However, there are important ethical issues to consider in relation to these recommendations. As emphasised by the Institute for Outdoor Learning (IOL, 2023), institutions must provide explicit clarity regarding their responsibilities when implementing well-being-focused interventions. In seeking to remain practical and cost-effective, several recommendations adopt a collaborative model that is university-facilitated yet self-led; however, this approach may obscure responsibility for risk assessment and management, thereby creating ambiguity around liability. Despite delegating a degree of responsibility to participants, institutions ultimately retain a common law duty of care for student welfare (HC, 2025). Furthermore, integrating outdoor adventure within university well-being services may lead some students to incorrectly interpret participation as a form of therapy, potentially resulting in unmet expectations or psychological harm. IOL (2023) stress that ethical practice requires clearly defined intended outcomes of a well-being intervention and the extent of its therapeutic intent, in order to avoid misrepresentation.

Conclusion

In summary, outdoor adventure can function as a multifaceted tool for enhancing health and well-being. Engagement with the unique landscape of the PDNP can enable local university students to access salutogenic benefits spanning physical activity, psychological restoration and strengthened social connectedness. However, the analysis has shown that access to these benefits is currently constrained by financial, logistical and time-related barriers. To address this, local universities must consider outdoor adventure an institutional well-being strategy. The recommendations presented provide a practical framework for this transition. Successfully implementing these strategies requires a collaborative approach between universities, local transport providers, outdoor charities and more to ensure that participation is safe and sustainable. Ultimately, by removing these barriers, universities can aid and empower a diverse student population to utilise the outdoors as a lifelong tool for health and well-being.

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