

NATURE CONNECTEDNESS AND ITS IMPACT ON UNDERGRADUATE STUDENTS' PSYCHOLOGICAL WELL-BEING: A QUALITATIVE PERSPECTIVE

Keterkaitan dengan Alam Semula Jadi dan Kesannya terhadap Kesejahteraan Psikologi Pelajar Sarjana Muda: Satu Perspektif Kualitatif

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Abstract

In an era where student mental health is increasingly at risk, exploring holistic approaches to well-being has become a critical focus in higher education. This study explores how connecting with nature connectedness can enhance psychological well-being among undergraduate students. Using a qualitative approach, the research aimed to examine how nature help students reduce stress to improve psychological well-being. Interviews with ten participants revealed that nature connectedness positively impacts emotional well-being by reducing stress, improving mood and enhancing mental clarity. Students shared that spending time in nature provided relief from academic pressures, offering a space for relaxation, reflection and renewal. These findings align with theories of psychological-being and restorativeness, demonstrating how nature support resilience. The study suggests that universities could create more green spaces and offer nature-based activities to promote student well-being, providing a restorative environment for personal growth and community connection.

Keywords: nature, psychological well-being, restorativeness, stress, mental clarity

Abstrak

Dalam era di mana kesihatan mental pelajar semakin terancam, pendekatan holistik terhadap kesejahteraan telah menjadi fokus penting dalam pendidikan tinggi. Kajian ini meneroka bagaimana keterhubungan dengan alam semula jadi dapat meningkatkan kesejahteraan psikologi dalam kalangan pelajar prasiswazah. Menggunakan pendekatan kualitatif, kajian ini bertujuan untuk meneliti bagaimana interaksi dengan alam dapat membantu pelajar mengurangkan tekanan dan seterusnya meningkatkan kesejahteraan psikologi mereka. Temu bual dengan sepuluh orang peserta menunjukkan bahawa keterhubungan dengan alam memberikan impak positif terhadap kesejahteraan emosi, termasuk pengurangan tekanan, peningkatan mood dan kejelasan mental. Pelajar berkongsi bahawa masa yang dihabiskan di alam semula jadi memberi kelegaan daripada tekanan akademik, sekali gus menawarkan ruang untuk bersantai, bermuhasabah dan memperbaharui tenaga dalaman. Dapatan ini sejajar dengan teori kesejahteraan psikologi dan teori pemulihan (restorativeness), yang menunjukkan bagaimana alam semula jadi menyokong daya ketahanan diri. Kajian mencadangkan agar pihak universiti menyediakan lebih banyak ruang hijau dan aktiviti berasaskan alam semula jadi sebagai usaha untuk memupuk kesejahteraan pelajar, dengan menyediakan persekitaran yang memulihkan bagi pertumbuhan peribadi dan hubungan komuniti.

Kata kunci: alam sekitar, kesejahteraan psikologikal, pemulihan, tekanan, kejelasan mental

1.0 INTRODUCTION

In higher education, understanding what influences the well-being of undergraduate students is essential because learning is deeply connected to personal, emotional resilience and psychological development. Psychological well-being plays a central role in students' academic success, life satisfaction and overall mental health. Increasingly, scholars have emphasized the importance of moving beyond a deficit-based approach that focuses solely on stress, anxiety and depression, toward a more holistic perspective that promotes positive psychological functioning (Ryff et al., 2006; Diener et al., 2018).

A growing body of literature suggests that a sense of connection to nature is commonly referred to as nature connectedness can play a protective and restorative role in students' psychological well-being. Nature connectedness is defined as the extent to which individuals feel emotionally and cognitively linked to the natural environment (Keniger et al., 2013; Capaldi et al., 2014). This connection has been associated with a wide range of psychological benefits, including reduced stress levels, improved mood, increased self-esteem, and enhanced life satisfaction (Kaplan & Kaplan, 1989; Hartig & Staats, 2006; Annerstedt & Währborg, 2011). Additionally not only helps protect students from academic stress but also supports their overall health. Knowing how connected students feel to nature is crucial for creating environments that enhance both their academic performance and their well-being.

Despite this growing interest, the study of student's psychological well-being is ongoing and remain a lack of research that explores how nature connectedness impacts students' well-being in specific socio-cultural and educational contexts. According to Ryff et al. (2006), psychological well-being is a multi-dimensional approach to describe positive affective perceptual of well-being into upright behaviour and attitude. This study builds on the previous suggestions that nature or green areas as a psychological aid for increasing self-esteem to decrease stress is established (Kaplan & Kaplan, 1989; Hartig & Staats, 2006; Annerstedt & Wahborg, 2011). However research has found that isolating human psychological processes from environmental concerns is highly connected to diminishing psychological quality of life (Roszak et al., 1995, 2001; Kumari & Dubey, 2023). This gap focus the need for interdisciplinary research that bridges environmental psychology and higher education. Therefore, this study seeks to examine the relationship between nature connectedness and psychological well-being among undergraduate students, with a particular focus on contextual and cultural relevance. Understanding this relationship is vital for designing more inclusive and effective well-being interventions within university environments

2.0 LITERATURE REVIEW

2.1 Nature Connectedness

Hernandez et al. (2020) define nature connectedness as the degree to which people feel that they are a part of nature and have an emotional attachment to nature. In other words, nature connectedness involves deep emotional ties to the environment, which can enhance mental well-being and promote positive feelings of belonging and self-esteem (Zelenski et al., 2023). This concept has been gradually accepted as

an important part of overall health since it helps to develop an understanding of the environment and encourages actions that will preserve it (Pritchard et al., 2020).

There are numerous benefits of nature connectedness. Studies have revealed that people with high natural connectedness have better mental health, they have lesser anxiety and depression and higher levels of life satisfaction (Liu et al., 2022). People who are connected with nature are also likely to practise environmentally friendly behaviours that help in the conservation of natural resources and support ecological systems (Silva & Goncalves, 2024). Furthermore, the importance of nature connectedness in education has been emphasised more in recent literature. For example, Schertz and Berman (2019) have suggested that the time spent in natural environments can be beneficial in improving students' cognitive abilities, creativity and academic achievements.

All of these benefits are especially relevant in the context of higher education as the academic environment often results in stress and burnout. In this way, universities can provide more favourable conditions for the mental and emotional development of students through the integration of nature into educational environments (Alves et al., 2021). The theory of biophilia (Kellert & Wilson, 1995) that posits that people have an inherent inclination towards nature also posits that the cultivation of a relationship with nature is critical in the development of humans and their well-being. These findings emphasise the importance of nature connectedness as one of the aspects that should be addressed by educational institutions in their efforts to foster students' development.

2.2 Psychological Well-being

Keyes (2002) defined psychological well-being as an individual's overall mental health and well-being on emotional, social and psychological aspects holistically understanding of mental health. To bring better understanding, psychological well-being is defined by models which includes self-acceptance, positive relation with others, autonomy, environmental mastery, purpose in life and personal growth (Ryff, 2018). This model shows that psychological well-being is not just the lack of mental disorder but the presence of positive well-being in life.

Psychological well-being at the tertiary level depends on academic demands, relationship, social interactions and financial challenges (Barbayannis, 2022). In the context of higher education, the enhancement of psychological well-being is important for the student's academic achievement and life satisfaction because it enables them to cope with the demands of university life more effectively (Diener et al., 2018). The current literature has focused heavily on the psychological distress experienced by university students, with numerous studies reporting high levels of anxiety, depression and stress which highlighting the need for more proactive strategies to promote psychological well-being (Ramón-Arbués et al., 2020).

Meanwhile, Scribner et al. (2022) found that university students often suppressed their emotions and refrained from discussing issues with friends, family or partners in an effort to prevent their stress levels from escalating. This underline a gap in students' access to supportive, open environments that encourage emotional expression and help-seeking behavior. Due to this, Abulfaraj et al. (2024) emphasized the importance of enhancing resilience and well-being among students through tailored mental health interventions. Integrating nature connectedness into these interventions can further bolster their effectiveness (Sahak et al., 2021; Sumisha & Aujla, 2024). Thus, nature interaction not only provides restorative experiences but also fosters mindfulness, belonging, and emotional regulation. The elements crucial for psychological well-being in academic settings. However, more empirical evidence is

needed to determine how such interventions can be effectively scaled and integrated into university mental health services.

2.3 Purpose of study

In the context of the recent pandemic and the resulting changes in the global environment, this research raises a crucial question of nature connectedness among undergraduate students. To elaborate further, this research seeks to identify not only the degree of connection but also the factors that define it. The measures such as quarantine rules, reduced mobility and closure of educational institutions (Wilder-Smith & Freedman, 2020). Leaving to a significant change in people's lives and emotional disturbance especially stress state. This shift, marked by a notable increase in time spent indoors, is highlighted by concerns regarding nature-deficit disorder (Kuo, 2013; Louv, 2008). By exploring how students manage stress and interact with nature into their lives, the study aims to offer directions for future research and practice for other researchers and practitioners (Pritchard et al., 2020). This can be said to be a rallying call for the promotion of the health and development of undergraduate students in the academic environment.

Van Dijk-Wesselius et al. (2018) emphasize that nature should become a place that helps to concentrate the mind, improve the emotions, develop a person and become a healthy individual, with special emphasis on the restorative effects of nature. Through this, we can quickly identify that many works have looked into the relationship between human health and nature exposure (Frumkin et al., 2017; Sandifer et al., 2015). However, it is important to point out that contact with nature might not necessarily be sufficient to enhance psychological well-being. It is for this reason that the relationship deserves a more detailed analysis, going beyond the question of exposure. Thus, this study would like to explore further the impact of nature connectedness on the psychological well-being among undergraduate students.

3.0 METHODOLOGY

3.1 Research Design

Our research purpose is to examine and describe the experience of undergraduate students towards the role of nature connectedness to improve psychological well-being. The study is exploratory in nature. Thus, a qualitative approach was chosen. Denzin and Lincoln (1998, pp. 134) have argued that "qualitative research study things in their natural settings, attempting to make sense of, or interpret phenomena in terms of the meaning people bring to them". Furthermore, this research design emphasizes understanding of nature experiences, exploring how individuals' perceptions evolve over time and how their relationship with nature can sustain personal growth and resilience (Zylstra et al., 2014). Thus, enable the researcher to gain a holistic understanding of the phenomenon from the participants' perspective.

3.2 Participants and Procedure

This study engaged a diverse group of 10 undergraduate students from a public university, representing a variety of academic levels, backgrounds and fields of study. The participants, aged between 19 and 25 years, included both male and female students, ensuring a balanced perspective across demographic categories. Such diversity provided an information-rich sample (Creswell, 2013). The variation in the demographics of the participants offers a wide range of information and

understanding of the nature connectedness and psychological well-being of the undergraduate students.

Participants were recruited through snowball sampling as the primary method for participant recruitment. The non-probability sampling technique to identify and recruit participants through referrals from initial contacts (Creswell & Poth, 2018). Eligible participants were undergraduate students from a form the same department, currently residing in university-managed accommodations or on campus. They were required to provide informed consent, be available for an interview and be able to communicate in the interview language. All participants were recruited voluntarily and informed of their right to withdraw from the study at any time. Thereafter, a face-to-face in depth interview with all participants. The interviews took place in March - May 2024. A semi structured interview guide that consisted of four questions on demographic and five questions was designed to explore how nature connectedness impact the psychological well-being. Participants were asked about:

- a) How often do you engage in activities that involve spending time in natural environments?
- b) In your opinion, how does spending time in nature affect your mood and overall well-being?
- c) Do you believe that being connected to nature is important for maintaining good mental health?
- d) Have you ever experienced a stressful situation that was alleviated by spending time in nature?
- e) Have you ever consciously tried to increase your connection to nature?

The list of questions below were designed to draw more information from personal experiences. Average duration of each interview was 30 - 40 minutes, and after attempt consent from the participants, an audio recorder was used to record the discussion and conversation (Patton, 1990). Moreover, recording the discussion allowed the author to transcribe each interview completely to facilitate the content analysis process. Handwritten notes were also taken during the interview sessions and after completion of each interview the discussion were transcribed.

4.0 DATA ANALYSIS

This study used a general inductive approach for our analysis, by first reviewing the data through reading transcripts, allowing common themes in the source material to become evident (Miles et al., 2014). Next, thematic analysis to analyze the data provides a highly flexible approach that can be modified for the needs of many studies, providing a rich and detailed, yet complex account of data (Braun & Clarke, 2006).

The analysis process was conducted concurrently with data collection to ensure the identification of meaningful themes and to maintain trustworthiness throughout each phase. The six phases of thematic analysis included: (i) familiarizing with the data, (ii) generating initial codes, (iii) searching for themes, (iv) reviewing themes, (v) defining and naming themes, and (vi) producing the final report (Braun & Clarke, 2006). By following this systematic approach, the researcher was able to derive findings to support main points and convincing explanation.

Each recorded interview was transcribed and translated and data were coded and categories were identified for further analysis. Later, major themes were extracted out of the categorized data. It is important to mention at this point that the analysis of data revealed mostly similar responses from participants regarding the

impact of nature connectedness on psychological well-being among undergraduate students. To enhance trustworthiness, we applied several qualitative validation strategies. Credibility was strengthened through prolonged engagement with participants and triangulation of data sources (Lincoln & Guba, 1985). Member checking was also conducted by returning transcripts and key interpretations to participants for verification. We included thick descriptions to support transferability and maintained an audit trail to ensure dependability and confirmability.

5.0 RESULTS

The research aim of the present paper was to study the influence of nature to enhance the psychological well-being among undergraduate students. Inductive thematic analysis shown that in the table 1 below:

Table 1: Themes and Subthemes of the Results

Themes	Subthemes
1. Emotional Well-Being	Stress Reduction Mood Enhancement
2. Sense of Belonging	Connection to Place Community Bonding
3. Mental Clarity	Reflection and Contemplation Focus and Concentration

5.1 Emotional Well-being

Nature plays a crucial role in enhancing emotional well-being by addressing both stress reduction and mood enhancement. Spending time in natural settings helps individuals manage stress effectively, as the peaceful environment offers a break from daily pressures. This leads to improved mood and relaxation, demonstrating that nature serves as a natural remedy for emotional challenges. By providing a calming effect and a boost in mood, nature significantly contributes to maintaining emotional health and a positive outlook.

1. Stress Reduction

The subtheme of stress reduction within the broader theme of emotional well-being has been prominently echoed by the participants' experiences, highlighting the therapeutic role of nature in alleviating mental strain and stress. Each participant's account offers a unique perspective on how engagement with natural environments can lead to significant reductions in stress levels, providing personal insights into the psychological benefits of such interactions. Participant 1 experience at the open-space badminton court encapsulates the calming influence of nature. She emphasises that being surrounded by nature allows her to concentrate on her emotions and personal challenges, as she states, "spending time in nature really affected my emotion, because like I mentioned when I am alone at the open for activities I can focus on myself about my feelings about my problem. Because if I keep staying in my room, sometimes I feel drowning and uncomfortable." This quote underlines the therapeutic effect of open spaces in nature, which seem to offer not just physical but also emotional breathing room, aiding in her introspection and emotional regulation.

Participant 2 narrative about hiking and visiting a waterfall illustrates how physically challenging activities in nature can metaphorically mirror overcoming personal hurdles. His reflection, "when we reached the peak of the hill, it was really



helped me to reduce my stressful situation as I could see the wideness of the sky and get the fresh air. Not to mention the waterfalls also brought me to get the fresh sensation of the water when I swim and it is undeniable that the burden that happened to play around in my head was reducing and I am happy for it." This highlights the profound sense of relief and achievement felt upon reaching the peak, with the expansive view and fresh air contributing to a significant reduction in stress. Meanwhile, participant 4 appreciates the open air and the simple act of walking as a break from the confined spaces of student accommodations. She points out, "I often decided to take walks around the campus or in nearby parks at campus area. This simple act of being outside provided me a refreshing change from the confines of my mahallah room. This break from the intense study sessions not only reduced my stress levels but also helped me return to my work with a renewed sense of focus and energy" indicating how small acts of engaging with nature can provide substantial mental health benefits, helping to refresh and refocus the mind.

Participant 8 describes the university campus as an oasis that temporarily erases academic pressures, saying, "the environment of the campus especially Gombak campus have is so great because there are so many big trees and beautiful plants around. For me that being in nature causes the academic pressure to disappear for a while for me. As we also have a lake at the back of the campus, plus the flowing natural river that crossing the campus" This emphasises how immersive natural environments can act as buffers against academic stress, offering students a literal and figurative escape from their pressures.

Lastly, Participant 10 talks about the restorative power of spending just an hour near a lake, explaining that this brief period of introspection helped him reorganise his thoughts and tackle his issues more effectively. He explains, "I was sitting at the bench near the lake around just one hour just to think back or my current situation and especially on the problems that I face at that time that once make me could not sleep at night and even could not do one thing. So from the "muhasabah" with myself and alhamdulillah Allah helped me get a better ideas and re arranged my problem one by one and I also jotted down using my phone to like reschedule like that of my problem and tasks to finish. Alhamdulillah just an hour outside can transform my entire day" This exemplifies the immediate and profound impact that even brief interactions with nature can have on alleviating stress and enhancing psychological resilience.

These personal stories collectively reinforce the critical role of nature in reducing stress and improving emotional well-being among undergraduate students, highlighting nature's capacity to offer both a physical and psychological sanctuary from the stresses of everyday life.

2. Mood Enhancement

The subtheme of mood enhancement under the broader category of emotional well-being captures how interactions with natural environments significantly uplift the mood of participants. This improvement in mood, an essential factor in mental health, is vividly described by participants who credit nature with enhancing their emotional states and overall sense of joy.

Participant 3 articulates the rejuvenating effect of nature, mentioning how disconnecting from daily stressors and breathing fresher air enhances mood, "when spending time with nature, my mood and well-being automatically improves. I think it's because I disconnect from my busy daily activities which we know is bad for overall well-being in many ways and I also breathe better because more lots of air and oxygen I am receiving which can improve my mood" This statement highlights the natural restorative properties of being outdoors, suggesting that the physical act of breathing in a natural setting can elevate one's emotional state. Echoing this

sentiment, Participant 6 shares the calming effect of walking amidst trees, especially after rain, which provides a soothing environment that balances mood, "since I do not have much physical classes anymore so I take around one hour to go for brisk walk, we do have so many trees and even big trees that make the environment feel calm and cool. The feeling when doing brisk walking especially after the rain especially, it is so soothing and calm and help balancing my mood too and I think these what we call activities right, are very effective for me since I got so many benefits from them. I am happy whenever I done this you know because feel healthier." This experience showed that the consistent mood-enhancing benefits of regular, simple activities like walking in a serene, natural setting.

Participant 9 finds deep joy and creativity in nature, whether through hiking, picnicking, or drawing outdoors: "I feel genuine joy and love when do hiking and explore nature with friends and sometimes alone. I also enjoy picnicking and drawing outdoors, which gives me a peaceful and creative way to appreciate nature's beauty." This reflects the multifaceted emotional benefits of engaging with nature, which can stimulate joy and creativity, enhancing overall well-being. Meanwhile, participant 10 discusses the profound, almost spiritual connection with nature, suggesting it helps reset one's emotional state, "maybe because as we know we humans were made by nature thus going back to our nature maybe help us to reset ourselves. And while we are admiring and enjoying nature at the same time we are being mindful with our surroundings, stimulating our five senses." This observation indicates that nature not only improves mood swiftly but also engages the senses, contributing to a holistic sense of well-being.

Lastly, Participant 7 highlights the soothing qualities of natural elements like fresh air and natural light, "The fresh air, natural light and open spaces help clear my mind and reduce feelings of anxiety and stress. I find that being in nature enhances my mood, boosts my energy levels and helps me maintain a more positive outlook on life." This emphasises how natural settings can be a sanctuary for mental fatigue and positivity. Offering a peaceful respite from daily stresses. Hence, these narratives emphasise the intrinsic value of natural environments in enhancing mood, illustrating how even simple engagements with nature can offer significant emotional benefits and contribute to an improved quality of life.

3. Sense of Belonging

The sense of belonging is significantly strengthened through connections to both place and community. Engaging with cherished locations fosters a deeper attachment and identity, creating a stronger personal connection to one's environment. Additionally, community bonding is enhanced through shared experiences and collective activities. These interactions help build a sense of belonging and connection within the community, highlighting the importance of both physical spaces and social relationships in fostering a cohesive and supportive environment.

4. Connection to Place

The theme of sense of belonging, particularly through the subtheme of connection to place, reveals how natural settings on campus significantly enhance students' feelings of attachment and rootedness. Participants express a profound connection to the green spaces and natural areas around them, highlighting these environments as central to their sense of home and belonging within the university community.

Participant 1 emphasises the importance of green spaces for feeling at home on campus, stating that "All in all, IUM is a home for me which for me personally think

that IIUM really done a great job for the natural environment in campus you know. Also, the river that we have in the campus sometimes really nice view and calming by just listening to the water flow, especially after the rain." This sentiment illustrates how natural features like rivers and greenery are not just aesthetically pleasing but are vital in forging a personal and emotional connection to the campus. Echoing this sentiment, Participant 5 discusses how engaging with these natural spaces through brisk walking makes the campus feel more like home, "Doing brisk walking in the evening gave me a good feeling of a healthy lifestyle and like I feel really connected to the nature. I think these activities effectively helped me get close to nature like a house or home and even indirectly make me feel more encouraged to go again and again to explore natural environments." This reflection shows how regular interaction with nature not only enhances physical well-being but also strengthens emotional bonds with the campus environment.

Additionally, participant 2 articulates how the lush campus environment enriches his daily experiences, enhancing his overall connection to the university, "I like all the trees and plants that IIUM taking care of. Since I am more on walking person as I don't have my own vehicles like motorcycle or a car. For me, it is very good la and also it gives a good vibe for me when I am walking around the campus as there are so many green views around me and the natural spots on campus make me feel deeply connected to the university." This description highlights how natural beauty and accessibility contribute to a deeper engagement with the university life beyond academics.

Similarly, Participant 7 describes incorporating nature into daily routines as a way to enhance his sense of belonging, "I make a point to integrate nature into my daily routine, such as taking regular walks in university and maintaining a small garden at mahallah, in strengthening my bond with nature in the campus. Regular connected with the natural world good for well-being and mindfulness even just being in campus." This narrative focusing the role of active engagement with natural settings in fostering a meaningful connection to the campus.

Furthermore, Participant 5 expresses pride in the university's natural beauty, linking it to a broader community identity, "I noticed that our campus's natural beauty makes me somehow proud to be part of the university community because many of my other friends who not get a chance to study in IIUM, they envy of me and this university is giving a natural vibe which the environment around the campus have mountains and hills and many trees and forest and so on la." This pride in the campus aesthetics not only enhances personal satisfaction but also fosters a communal identity rooted in the appreciation of the university's natural environment. These reflections collectively demonstrate how natural environments on campus are essential in cultivating a sense of place and, suggesting that these green spaces do more than beautify the university. The greenery space serve as fundamental elements for creating a welcoming and connected community atmosphere.

5. Community Bonding

The theme of community bonding, within the broader context of sense of belonging, captures how nature connectedness enhances community interactions and strengthens interpersonal relationships among undergraduate students. Participants shared how shared experiences in natural settings have not only benefited their individual well-being but also fostered a stronger sense of community.

Participant 1 highlights the communal aspect of picnics in natural settings, describing how these gatherings involve sharing food and personal stories beside a scenic lake, "The picnic is like having a potluck where everyone brings their own food and gathers the food during the session. The picnic also beside the lake and talking

about our future, problems, and sometimes arising issues among us regarding our academic matters. Having these picnics with friends in natural environment with trees, rivers and other things have really brought us closer together since we are in small group keep sharing about ourselves." This description shows how such relaxed, informal settings encourage openness and deepen connections among peers, enhancing their bond through shared experiences and mutual support.

Moreover, participant 2 reflects on the value of group hikes for building relationships, pointing out the collective enthusiasm and the shared joy of outdoor adventures, "So, what I did was I asked my friends to go for hiking last week and surprisingly they were also excited to go together and alhamdulillah we did our for hiking at hill near to IIUM. Hiking alone is boring and that is why I did in group with my friends and found out the trip was so enjoyable. Also, I noticed that when I going for group hiking, it helps me build closer relationships with my friends since we feel like nature is one of our places to release stress." This observation highlights the role of shared physical challenges and the enjoyment derived from such activities in forging stronger interpersonal connections.

Additionally, participant 8 discusses the bonding experiences related to frequent visits to natural spots like rivers and hiking trails, emphasising the development of lasting friendships, "I like to go to river actually and alhamdulillah I have friends which close to me that love going for natural places. So most of the time I went to the rivers or doing hiking activities with them. This kind of nature activity has helped forge lasting friendships between me and my friends. Also, one of my friends has her own car that she uses in campus, and yes we most of the time spend time together at natural places." Such regular interactions in nature serve not only as leisure activities but also as important moments that strengthen social bonds. Meanwhile, participant 9 also speaks to the social cohesion enhanced by communal nature outings, noting the ease with which friends join in such activities, "I can say that I have good friends which they are also my classmates that always together and accompany me explore that nature like for example when during weekend and I asked them to go to healing at certain river or forest, they are always give a green light to accompany me, so I have good friends to be with me to look for the nature." This shows how shared interests in outdoor activities contribute to a supportive and collaborative student network.

Finally, Participant 10 discusses how a shared love for the outdoors helps to form a unified community, emphasising the shared values and collective identity that emerge from these interactions, "I think somehow there might be others who had the same worldview as me and maybe if it's not wrong then I can also enjoying others' to be part of my routine strolling around IIUM and became friends. Here I could see that we bond over our love for the outdoors, which brings us together as a community because somehow, we do have this kind of similarities towards nature appreciation and create the memories together as group." This statement captures how common interests in nature can lead to broader social connections and a strong community ethos. These narratives collectively demonstrate how nature connectedness facilitates community bonding among students, underscoring the importance of natural environments in creating meaningful, supportive, and cohesive social networks on campus.

6. Mental Clarity

Nature provides a valuable space for mental clarity by facilitating both reflection and contemplation and improving focus and concentration. The serene environment of nature aids in deep thinking and self-reflection, allowing individuals to gain better insights into their thoughts and feelings. Additionally, nature reduces distractions,

helping enhance focus and concentration. This combination of reflective space and reduced interruptions supports improved mental performance and a clearer understanding of personal concerns, contributing to overall mental well-being.

7. Reflection and Contemplation

The subtheme of reflection and contemplation within the broader theme of mental clarity captures how natural environments facilitate introspection and deeper understanding, crucial for personal and academic development. Participants vividly describe how the peacefulness of nature provides a sanctuary for thoughtful reflection and problem-solving. Participant 1 emphasises the therapeutic solitude offered by nature, which aids in untangling complex thoughts and emotions, "I am listening to the bird chirping and sometimes I am like having daydreaming just like when I have so many things in my mind, then when I spend my time alone at the wide-open space under the sky, it feels like at least I can focus to myself on what are things that made me miserable at that time. It is like to untangle my mind." This experience illustrates how the simplicity and expansiveness of natural settings can help clarify thoughts and foster a more focused state of mind, allowing for effective personal reflection.

Participant 4 shares a similar experience, noting how the serene backdrop of nature offers a break from life's complexities, facilitating peaceful contemplation, "I think I would not actually see how it affects me, but I can feel that being surrounded by nature brings some soothing feelings and calmness to me because for me right, sitting and walking a while in nature could bring some peacefulness and a great short escape from my problem personal or any academic and yes it does help me whenever I feel miserable with life and other stuff. I can say that sometimes I could solve my problems while walking through the wooded parts of campus." This narrative highlights nature's role in providing a calm environment conducive to processing and resolving personal and academic challenges.

Moreover, participant 10 discusses the specific setting and timing that enhances his reflective practices, "I went to IUM lake beside the Mahallah Maryam in the very early morning around 7 am like that to get some fresh air with quiet surrounding and do some muhasabah or maybe introspection of my life, my issues and problems." This indicates how the tranquillity of early mornings by the lake supports his mental clarity, helping him to think deeply about life's larger questions and personal challenges.

Adding to this, participant 1 remarks on the calming influence of nature on emotional and mental states, which is instrumental for self-exploration, "I think by having a good connection with nature, we may feel much calmer by listening to the alam or nature right and from nature, it provides a backdrop for my personal reflection." This comment shows the belief that nature not only soothes but also significantly enhances the capacity for self-reflection and personal growth. Participant 7 describes how the peacefulness of nature allows for the reassessment of life's priorities and goals, "The peacefulness of nature also allows me to clear my head and find new perspectives about life which I always asking myself and reminding myself about the purpose of life." This reflection highlights how nature's calm can lead to profound insights and a reevaluation of one's life direction and purpose. These insights from the participants demonstrate how natural environments are not just passive backdrops but active facilitators of mental clarity, providing the necessary space for reflection, contemplation, and meaningful introspection. This enhances both their personal well-being and academic performance by allowing them to address and process complex life and academic issues in a serene setting.

8. Focus and Concentration

The subtheme of Focus and Concentration within the broader theme of Mental Clarity encapsulates how natural environments enhance cognitive functioning among undergraduate students. Participants reflect on how interactions with nature significantly boost their focus and concentration, crucial for their productivity and academic success.

Participant 7 discusses the refreshing effect of nature on his academic focus, noting, "After spending time in nature, I return to my study and is like a refreshed and I feel more focused, this break in nature not only alleviated my immediate stress but also improved my study mood and focus during the exam period." This experience illustrates how nature acts as a cognitive reset, providing the mental clarity needed to enhance concentration and improve performance on academic tasks.

Echoing this, Participant 8 describes how escaping to natural settings helps manage stress and improves his capacity to concentrate on assignments, "I felt like I escape for a while from the busyness that I am counter at that time. Surprisingly when we're back to hostel, I am so much less stressful which I can manage my assignments and concentrate better in my study. I sat for a while and cleared my mind, and I make some to do lists. Hmm that was so nice la." This narrative highlights the immediate benefits of brief nature breaks, which not only soothe stress but also significantly increase attentiveness and productivity upon returning to academic work. Participant 1 shares a similar benefit from morning walks, which enhance attentiveness in academic settings, "Surprisingly right, I realised when I took a morning walk before class especially, I am like more attentive in the classes or lectures after the morning walk in the park, well of course I took shower before class as well. It gave me a good starting for that day. It feels great you know." This comment suggests that starting the day with an interaction with nature can set a positive tone for the day, enhancing focus and participation in academic activities.

Furthermore, Participant 9 relates the physical activity involved in interacting with nature to a reset in cognitive focus, "The feelings when I was there was very helping me to at least reduce my stress. These outdoor activities helped me reset my attention and at that time I feel so satisfied my body was full of sweat which I felt my body physical is healing and once I reached the peak of the hill, the view was mesmerising and impressing." This reflection emphasises the holistic benefits of nature on both physical and mental health, noting how the physical exertion and the rewarding views help rejuvenate mental focus and reduce stress. Collectively, these reflections highlight the significant role that natural environments play in enhancing focus and concentration. By providing restorative breaks from academic pressures, natural settings help refresh the mind, boost cognitive functioning, and thereby improve academic performance and overall psychological well-being among undergraduate students.

6.0 DISCUSSION

This research aimed to explore the impact of nature connectedness on psychological well-being (PWB) among undergraduate students. The study revealed that nature significantly contributes to stress relief, mood enhancement and mental clarity. Additionally, students reported a stronger sense of community and belonging when they engaged in nature-based activities with peers, thus fostering positive interpersonal relationships with others.

The findings showed that the emotional well-being of undergraduate students is significantly influenced by their connection to nature, particularly in terms of stress

reduction and mood enhancement. Research indicates that a strong sense of nature connectedness correlates with improved psychological well-being, suggesting that nature exposure can serve as a vital intervention for mental health challenges faced by students. For instance, a study found that exposure to nature significantly alleviated emotional disturbances, with restorativeness acting as a mediator between nature connectedness and stress reduction (Ahmad et al., 2024). Moreover, virtual nature contact during the COVID-19 pandemic also demonstrated a decrease in psychological stress, highlighting the effectiveness of nature exposure even when physical access is limited (Lau et al., 2023).

During academic journey, mood is important component to ensure students stay focus and health. Zelenski and Desrochers (2021) highlighted that exposure to nature positively affects emotional well-being among undergraduate students, highlighting stress reduction and mood enhancement. Moreover, students who reported higher levels of nature connectedness experienced greater happiness and positive emotions (Lau et al., 2023). Thus, promoting to engaging with natural environments fosters psychological benefits, including improved concentration, increased self-esteem, and diminished feelings of life stress, promoting overall mental health.

The findings on the sense of belonging related to nature connectedness and psychological well-being among undergraduate students reveal significant insights into how environmental and social factors contribute to mental health. The research findings showed that students develop emotional bonds with natural environments, which enhance their sense of community and belonging (Bow & Buys, 2003). In other words, the physical spaces students inhabit can significantly affect their psychological development and sense of identity, reinforcing the importance of nurturing these connections (Pretty, 2010).

While, doing recreational activities such as jogging, brisk walking or hiking, promotes community bonding. Integrate nature and social support, such as ecotherapy, demonstrate that community bonding in natural settings can aid recovery from mental distress (Adams & Jordan, 2016). Findings shown that the green area surrounding in the university create supportive environments that emphasize both social and environmental factors can enhance students' sense of belonging (Murdock-Perriera et al., 2019). Moreover, doing activities togetherness with other friends generate a strong sense of community. This could fostered through shared experiences in natural settings, contributes to healthier identities and improved mental health outcomes (Adams & Jordan, 2016).

Next, mental clarity related to nature connectedness and psychological well-being among undergraduate students reveal significant benefits. These aspects are crucial for enhancing students' overall mental health and academic performance due to they are more focus and concentrate to their life. The sense of nature connectedness allowing students to engage in mindful practices that enhance their psychological well-being (Zelenski & Desrochers, 2021). As previous studies discovered that Connectedness to Nature Scale correlate with increased mindfulness and participation in outdoor activities, which promote reflective thinking (Wolsko & Lindberg, 2013). Resulting to improve particularly eudemonic well-being, which emphasizes personal growth and purpose.

While, nature environment improves more focus and concentration due to frequent engaging which will leads to improved cognitive functioning, which is essential for academic success among undergraduate students by just walking, jogging or other recreational activities (Schertz & Berman, 2019; Shrestha et al., 2021). Additionally, the interplay between nature connectedness and mindfulness suggests that students who are more connected to nature exhibit better concentration levels,

as mindfulness practices often involve focusing attention and reducing distractions (Sumisha & Aujla, 2024).

Finally, nature connectedness and community bonding are widely recognized for their positive effects on well-being and belonging. However, these benefits are not uniformly experienced by all students. There are factors like individual differences, personality traits, prior exposure to nature and access to natural environments play a significant role. Additionally, research highlights the complexity of the relationship between nature connectedness and well-being, suggesting that its impact varies based on personal and environmental contexts.

7.0 IMPLICATIONS AND RECOMMENDATION

The current research focuses on the effect of nature-connectedness on psychological well-being in undergraduate learners. Nature-connectedness was shown to positively influence students' emotional well-being by fostering stress reduction, mood enhancement and a sense of mental clarity. Often, participants stressed on how time spent in nature reduces academic concerns, by providing a context of rest, reflection and psychological replenishment. Stress and mood are two aspects of emotional health that show that nature is a healing environment where participants can practise mindfulness and refresh mentally. However, disconnection from nature contributes to psychological distress, while reconnection enhances overall well-being (Roszak, 2001).

Additionally, connections to the natural environment and community relationships play a significant role in fostering social bonds among students. Activities like hiking, picnicking, and praying together in natural settings not only strengthened friendships but also nurtured a sense of belonging and appreciation for both place and people. Through these interactions, students enhanced their sense of self and connection to their surroundings. This social and communal engagement aligns with Ryff's model of psychological well-being, which emphasizes the importance of positive relationships with others in building emotional capital.

Universities could partner with ecotherapy programs to offer guided nature-based therapy, providing professional care for students facing stress and anxiety. Such non-medication methods, who could probably benefit from something that operates outside the regular methods of therapy that embraces the mind, body, soul and spirit. Future research could examine the link between nature-connectedness and spirituality across cultures and demographics, helping universities tailor services to diverse student needs. Comparing the long-term effects of nature engagement and religious activities could also inform sustainable mental health strategies. These initiatives would foster resilience, personal growth, and psychological well-being, enriching the student experience and supporting academic success.

Future studies could extend to exploring lived experiences within the context of spirituality in nature connectedness and its impact on psychological well-being. This exploration could focus on identifying accessible resources that help individuals cope with challenges. The research could be the significant role of natural environmental elements in fostering holistic well-being to enhance students' quality of life and mental health support strategies.

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10.0 REFERENCES

- Abulfaraj, G. G., Upsher, R., Zavos, H. M. S., & Dommett, E. J. (2024). The Impact of Resilience Interventions on University Students' Mental Health and Well-Being: A Systematic Review. *Education Sciences* 14, no. 5: 510. <https://doi.org/10.3390/educsci14050510>
- Adams, M., & Jordan, M. (2016). Growing together: Nature connectedness, belonging and social identity in a mental health ecotherapy programme. *Ecotherapy: Theory, research and practice*, 122-135.
- Ahmad, N., Abd Rahman, S. F., Mahmood, S. R. S., Rashid, K. K. B. A., Haron, S. B. C., & Roslan, S. (2024). Nature Connectedness: An Investigation into Alleviating Emotional Disturbances among University Students. *International Journal of Research and Innovation in Social Science*, 8(3), 559-575. <https://dx.doi.org/10.47772/IJRIS.2024.803041>
- Alves, S., Betrabet Gulwadi, G., & Nilsson, P. (2022). An Exploration of How Biophilic, Attributes on Campuses Might Support Student Connectedness to Nature, Others, and Self. *Frontiers in psychology*, 12, 793175. <https://doi.org/10.3389/fpsyg.2021.793175>
- Annerstedt, M., & Währborg, P. (2011). Nature-assisted therapy: systematic review of controlled and observational studies. *Scandinavian journal of public health*, 39(4), 371–388. <https://doi.org/10.1177/1403494810396400>
- Barbayannis, G., Bandari, M., Zheng, X., Baquerizo, H., Pecor, K. W., & Ming, X. (2022). Academic Stress and Mental Well-Being in College Students: Correlations, Affected Groups, and COVID-19. *Frontiers in Psychology*, 13, 886344. <https://doi.org/10.3389/fpsyg.2022.886344>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. <https://doi.org/10.1191/1478088706qp063oa>
- Bow, V., & Buys, E. (2003). Sense of community and place attachment: The natural environment plays a vital role in developing a sense of community. In L. Buys, J. Lyddon, & R. Bradley (Eds.), *Social Change in the 21st Century 2003 Conference Refereed Proceedings* (pp. 1-18). Centre for Social Change Research, School of Humanities and Human Services, Queensland University of Technology.
- Capaldi, C. A., Dopko, R. L., & Zelenski, J. M. (2014). The relationship between nature connectedness and happiness. <https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2014.00976/full>
- Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications. https://www.ucg.ac.me/skladiste/blog_609332/objava_105202/fajlovi/Creswell.pdf
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). SAGE Publications. <https://doi.org/10.4135/9781071802845>

- Ramón-Arбуés, E., Gea-Caballero, V., Granada-López, J. M., Juárez-Vela, R., Pellicer-García, B., & Antón-Solanas, I. (2020). The Prevalence of Depression, Anxiety and Stress and Their Associated Factors in College Students. *International journal of environmental research and public health*, 17(19), 7001. <https://doi.org/10.3390/ijerph17197001>
- Roszak, T., Gomes, M. E., & Kanner, A. D. (1995). *Ecopsychology: Restoring the earth, healing the mind*. San Francisco: Sierra Club Books.
- Roszak, T. (2001). *The voice of the earth: An exploration of ecopsychology*. Newburyport, MA: Red Wheel/Weiser.
- Ryff, C. D. (2018). Eudaimonic Well-being. *Diversity in Harmony*. Chapter 20. 375-395. <https://doi.org/10.1002/9781119362081.ch20>
- Ryff, C. D., Dienberg Love, G., Urry, H. L., Muller, D., Rosenkranz, M. A., Friedman, E. M., Davidson, R. J., & Singer, B. (2006). Psychological well-being and ill-being: do they have distinct or mirrored biological correlates?. *Psychotherapy and psychosomatics*, 75(2), 85–95. <https://doi.org/10.1159/000090892>
- Sahak, S. N. M., Roslan, S., Ahmad, N., Zaremohzzabieh, z., Mohamad, Z., & Ma'rof, A.M.(2024). Spirituality and nature connectedness as mediators between exposure to nature and psychological well-being of school students. *Environment and Social Psychology* (2024) Volume 9 Issue 5. <http://dx.doi.org/10.54517/esp.v9i5.2346>
- Sandifer, P. A., Sutton-Grier, A. E., & Ward, B. P. (2015). Exploring connections among nature, biodiversity, ecosystem services, and human health and well-being: Opportunities to enhance health and biodiversity conservation. *Ecosystem Services*, 12, 1-15. <https://doi.org/10.1016/j.ecoser.2014.12.007>
- Schertz, K. E., & Berman, M. G. (2019). Understanding Nature and Its Cognitive Benefits. *Current Directions in Psychological Science*, 28(5), 496-502. <https://doi.org/10.1177/0963721419854100>
- Shrestha, T., Di Blasi, Z., & Cassarino, M. (2021). Natural or urban campus walks and vitality in university students: exploratory qualitative findings from a pilot randomised controlled study. *International Journal of Environmental Research and Public Health*, 18(4), 2003. <https://doi.org/10.3390/ijerph18042003>.
- Sumisha, M., & Aujla, G. K. (2024). Nature Relatedness, Mindfulness And Well-Being Among University Students: Understanding The Connections. *Educational Administration Theory and Practices*, 30(4), 9086–9093. <https://doi.org/10.53555/kuey.v30i4.3030>
- Scribner, M., Sasso, P., & Puchner, L. (2022). Stress Management and Coping Strategies in Undergraduate Students at a Midwestern State University. *New York Journal of Student Affairs*. Vol. 20. <https://files.eric.ed.gov/fulltext/EJ1367221.pdf>
- Silva, A., & Gonçalves, M. (2024). Nature Relatedness Scale: psychometric properties of the Portuguese version. *Environmental Education Research*, 1–17. <https://doi.org/10.1080/13504622.2024.2315574>
- Wilder-Smith, A., & Freedman, D. O. (2020). Isolation, quarantine, social distancing and community containment: pivotal role for old-style public health measures in the novel coronavirus (2019-nCoV) outbreak. *Journal of travel medicine*, 27(2), taaa020. <https://doi.org/10.1093/jtm/taaa020>
- van Dijk-Wesselius, J. E., Maas, J., Hovinga, D., van Vugt, M., & van den Berg, A. E. (2018). The impact of greening schoolyards on the appreciation, and physical, cognitive and social-emotional well-being of schoolchildren: A prospective intervention study. *Landscape and Urban Planning*, 180, 15–26. <https://doi.org/10.1016/j.landurbplan.2018.08.003>

- Wolsko, C., & Lindberg, K. (2013). Experiencing connection with nature: The matrix of psychological well-being, mindfulness, and outdoor recreation. *Ecopsychology*, 5(2), 80-91. <https://doi.org/10.1089/eco.2013.0008>
- Zelenski, J. M., & Desrochers, J. E. (2021). Can positive and self-transcendent emotions promote pro-environmental behavior?. *Current Opinion in Psychology*, 42, 31-35. <https://doi.org/10.1016/j.copsyc.2021.02.011>
- Zelenski, J., Warber, S., Robinson, J. M., Logan, A. C., & Prescott, S. L. (2023). Nature Connection: Providing a Pathway from Personal to Planetary Health. *Challenges*, 14(1), 16. <https://doi.org/10.3390/challe14010016>
- Zylstra, M. J., Esler, K. J., Knight, A. T., & Le Grange, L. L. (2014). Connectedness as a core conservation concern: An interdisciplinary review of theory and a call for practice. *Environmental Conservation*, 41(2), 1-11. <https://doi.org/10.1017/S0376892914000145>