

Immersive Nature: The Effect of Nature Environments Video During Class Breaks

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ABSTRACT

The mental health challenges facing students both globally and within Malaysia are significant and multifaceted. In recent years, there has been growing interest in the potential benefits of immersive nature experiences on psychological well-being, especially among students in educational settings. However, lack of study focusses on the effect of nature environments on students during their class break. Therefore, the objective of this study is (1) to assess the level positive and negative affect among student before and after the class break, and (2) to assess the restorative effects of the nature environment video among students during their class breaks. This study employs a questionnaire survey involving 140 students from the Faculty of Built Environment, UiTM Perak Branch. The video intervention was tested using a nature environment setting. Data were analysed using descriptive statistics, focusing on the mean. The results showed high restorative effect, increase in positive mood, and negative mood decreased following the class break. However, the study had several limitations, including the lack of formal ethical approval, absence of pre-test and a small, homogenous sample from a single institution. These findings suggest that nature environment video can be beneficial in addressing mental health challenges during class breaks.

Keywords: Mental health, nature environment video, nature environment, restorative effect, student

INTRODUCTION

Mental health is a multifaceted concept involving emotional, psychological, and social well-being. It influences how individuals think, feel, and act, shaping their interactions and responses to life's challenges. The prevalence of mental health issues among university

students is an increasing concern globally and particularly in Malaysia. Globally, studies indicate that approximately 33% of students experience one or more mental disorders, including anxiety and depression, predominating during their college years due to academic pressures and life transitions (Auerbach et al., 2018).

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In Malaysia, research consistently shows a significant rise in mental health problems among university students. For instance, a study highlighted that the prevalence of anxiety and stress among undergraduates has reached rates of 66.2% for anxiety and 44.6% for stress (Wong et al., 2023). This statistic emphasizes the importance of prioritizing mental health resources and support systems in educational settings.

Student stress and anxiety during lecture classes is a significant concern that affects educational outcomes and overall well-being. Several studies have explored the prevalence and impact of anxiety in learners, particularly in the context of classroom environments. For instance, Cooper et al. (2018) indicate that differences in general anxiety levels among students can affect their experience in large classroom settings. Students with higher levels of generalized anxiety disorder (GAD) may struggle more than their peers, thereby affecting their motivation and engagement in cognitively challenging tasks. This aligns with findings by Downing et al. (2020) which show that students entering courses with varying levels of trait anxiety particularly females and lower-performing students often experience heightened anxiety concerning their academic performance.

Apart from that, several studies have investigated the implications of mental fatigue in educational settings, particularly during lectures. Research also reveals that students do not maintain continuous attention for the entire duration of a lecture, indicating that engagement often fluctuates, particularly diminishing after approximately 10-20 minutes (Bunce et al., 2010). This phenomenon is characterized by a decrease in mental agility, attention, and motivation, often leading to detrimental effects on academic outcomes.

Further, Pires et al. (2018) noted that mental fatigue leads to impairments in cognitive performance, suggesting that students under strain during lectures may struggle with tasks requiring mental engagement, such as note-taking or participating in discussions. Also, the impact of class structure and duration on mental fatigue has been explored by Kotnik et al. (2024) who found that longer theoretical classes often resulted in students reporting feelings of boredom and fatigue. This can negatively impact students' focus and absorption of course material during lectures.

The role of structured rest and relaxation interventions during mentally demanding tasks, as examined by Blasche et al. (2018) emphasizes the importance of breaks in enhancing students' psychological well-being during lectures. Their findings suggest that implementing intentional rest breaks can significantly improve student focus and reduce mental fatigue, allowing for a restorative effect that enhances the overall learning experience. This aligns with the findings of a study by Miller et al. (2013) which suggests that shorter, more engaging lecture segments interspersed with interactive breaks significantly enhance attention capacity. Thus, viewing nature video during class break may be one of the interventions of student to improve focus and reduce mental fatigue.

Nature videos may specifically function to foster positive emotional states, which have a direct correlation with mental health. For instance, watching nature videos has been associated with inducing relaxation and reducing stress levels, thereby alleviating symptoms of anxiety and depression (Hoffmann et al., 2019). These videos can evoke feelings of serenity and positivity, which can fortify resilience against stressors. Such responses align with Fredrickson's Broaden-and-Build Theory, which posits that positive emotions generate expansive thinking and behavior, leading to greater psychological resilience (Lu et al., 2024).

Despite growing evidence for the restorative benefits of nature exposure and increasing interest in virtual nature interventions for wellbeing, there remains a significant dearth of research examining the effect of natural environment videos on students during their class breaks in Malaysia. Existing Malaysian studies by Mustapa et al, (2015) provide qualitative research suggests that biophilic elements in school design may support positive emotions and attention, but this work is limited by small samples and the absence of experimental or outcome-based measures. Empirical evidence from intervention trials demonstrates that structured programmes focused on psychoeducation, skills training, and other active components can improve adolescent wellbeing while these programmes yield significant benefits, they do not involve nature exposure or video-based approaches and do not address the specific context of class break activities (Lam & Lam 2023). Collectively, these gaps highlight a notable lack of empirical research examining short, nature-based video interventions during class breaks and their effects on students' cognitive and mental wellbeing, underscoring the need for more rigorous, targeted studies in this area.

Although findings from international studies are promising, their applicability to Malaysia is limited due to differences in climate, cultural and educational contexts, nature content, and implementation conditions. These factors make it uncertain whether results from temperate, non-Malaysian settings would translate effectively to Malaysian students.

LITERATURE REVIEW

Theory in Restorative Environment

Psychological restoration through environmental exposure has become a central topic in environmental and educational psychology, particularly in response to increasing cognitive demands within academic settings (Hartig et al., 2014). Prolonged attentional engagement and academic stress commonly experienced by students highlight the need for effective, time-efficient restorative interventions during class breaks. Natural environments have consistently been associated with improvements in wellbeing, attention, and stress reduction, leading to the development of theoretical frameworks explaining these restorative effects (Kaplan & Kaplan, 1989; Ulrich, 1991).

Attention Restoration Theory (ART) posits that natural environments facilitate the recovery of directed attention by engaging involuntary attention through qualities such as fascination and being away (Kaplan & Kaplan, 1989). Directed attention, which is essential for learning and academic performance, becomes fatigued through sustained cognitive effort. Exposure to natural stimuli allows attentional resources to recover by reducing the demands placed on executive control (Kaplan, 1995).

Empirical studies support ART by demonstrating improvements in attention and cognitive functioning following interaction with natural environments (Berman et al., 2008; Kaplan & Berman, 2010). Evidence also suggests that even brief exposure to nature can produce attentional benefits, indicating the potential for micro-restorative experiences during short academic breaks (van den Berg et al., 2016). However, ART was originally conceptualized in the context of direct interaction with physical environments, raising questions regarding its applicability to mediated forms of nature exposure. Although nature videos may lack multisensory immersion, recent findings indicate that visual representations of nature can elicit partial attentional restoration, particularly when real-world exposure is constrained (Browning et al., 2020). Thus, ART provides a relevant theoretical basis for examining cognitive restoration through nature-based video interventions, albeit with acknowledged limitations.

Meanwhile, Stress Recovery Theory (SRT) complements ART by emphasizing the rapid emotional and physiological responses elicited by natural environments (Ulrich, 1991). SRT suggests that humans possess an evolved predisposition to respond positively to natural scenes, resulting in immediate reductions in stress and negative affect (Ulrich et al., 1991). Unlike ART, SRT focuses primarily on affective and psychophysiological processes rather than cognitive mechanisms.

Research grounded in SRT demonstrates that brief visual exposure to natural environments can reduce stress indicators such as anxiety and physiological arousal (Bratman et al., 2019; Ulrich et al., 1991). This theoretical perspective is particularly suited to short-duration, passive interventions, such as viewing nature videos during class breaks. Because SRT does not require prolonged engagement or active interaction with the environment, it offers a strong explanatory framework for understanding the immediate restorative effects of nature-based media in academic contexts. Nevertheless, SRT does not directly address attentional recovery, reinforcing the value of integrating cognitive and affective theories when examining restorative outcomes.

To assess subjective restoration, Korpela et al. (2008) developed the Restorative Outcome Scale (ROS), a validated self-report instrument measuring experiences such as relaxation, calmness, mental clarity, and renewed energy. The ROS aligns conceptually with both ART and SRT by capturing experiential outcomes associated with cognitive and

emotional restoration. Its brevity and demonstrated reliability make it particularly suitable for classroom-based and time-limited interventions.

Although the ROS relies on self-report and does not directly assess physiological or cognitive processes, it provides an efficient means of evaluating perceived restoration in applied research settings (Hartig et al., 2014). When used within a robust theoretical framework, the ROS offers valuable insight into participants' restorative experiences following brief nature exposure.

Natural Environments and Human Wellbeing

Exposure to natural environments has long been associated with positive outcomes for human wellbeing. In contrast to built or highly urbanized settings, natural environments are commonly described as less cognitively demanding and more supportive of psychological recovery. As modern lifestyles increasingly limit daily contact with nature, interest has grown in understanding how natural environments contribute to mental, emotional, and cognitive functioning, particularly in high-demand contexts such as education (Bailey et al., 2020; Neale et al., 2021; Pasanen et al., 2018)

From a psychological perspective, interaction with natural environments is associated with reductions in mental fatigue and stress, alongside improvements in overall wellbeing. Individuals exposed to nature often report feeling more relaxed, refreshed, and mentally restored compared to those in non-natural settings (Lau et al., 2023; Berto, 2014; Kaufman, 2015). These restorative effects are particularly relevant in situations involving sustained cognitive effort, where opportunities for recovery are limited. Emotional benefits include increased positive affect, such as calmness and vitality, and decreased negative emotional states, including anxiety and irritability (Pirchio et al., 2021; Ríos-Rodríguez et al., 2024).

Also, natural environments have been linked to enhanced mood and emotional wellbeing. A meta-analysis by Bratman et al. (2015) found that individuals who engage with nature exhibit improved mood and decreased feelings of anxiety and depression. Exposure to green spaces encourages physical activity, which is also associated with improved mood (Graham et al., 2016). Additionally, nature-based interventions have shown promise in therapeutic settings, providing a naturalistic approach to mood enhancement (Jordan & Hinds, 2016).

Besides, the restorative effects of nature extend beyond stress and mood enhancement to encompass overall mental health restoration. A study by Berman et al. (2012) demonstrated that participants who walked in nature showed improved cognitive functioning compared to those who walked in urban environments. This suggests that natural environments facilitate not only emotional but also cognitive restoration, contributing to overall mental well-being.

Cognitively, natural environments have been linked to enhanced attentional capacity and improved mental clarity. Exposure to nature is thought to support recovery from attentional fatigue by reducing demands on directed attention, thereby allowing cognitive resources to replenish (Bailey et al., 2020; , Zhang et al., 2024). This cognitive restoration is especially valuable in educational settings, where students are required to maintain prolonged focus and concentration during learning activities (Suess et al., 2024; Pasanen et al., 2018).

Direct Interaction with Nature vs. Video Exposure

Despite the demonstrated benefits of nature exposure, access to natural environments remains a challenge in many educational contexts. Schools and universities are often dominated by built infrastructures, with limited green spaces available to students during the academic day (Peters & D’Penna, 2020; Carrus et al., 2012). Additional constraints, including time pressure, scheduling demands, and environmental conditions, further restrict opportunities for direct contact with nature (Sarungi, 2024; Sunthararajah et al., 2025). These accessibility challenges underscore the need to explore alternative approaches to delivering the restorative benefits of nature within educational settings (Webber et al., 2015; Baker, 2025).

Comparisons between direct and nature-based videos exposure indicate that while physical interaction with natural environments often produces stronger restorative effects, nature-based videos can still yield meaningful benefits (Vella-Brodrick & Gilowska, 2022; Benfield et al., 2013). Nature-based videos may lack multisensory elements such as tactile sensations, smells, and spatial depth. However, they retain key visual features that contribute to restorative experiences. As a result, mediated nature is increasingly viewed not as a replacement for real nature but as a complementary approach that offers practical advantages when access to natural environments is limited (Whitburn, 2020; Masón et al., 2022).

Also, nature videos represent a low-cost, scalable intervention for enhancing student well-being. Unlike physical nature exposure, these digital resources require minimal equipment and can be easily integrated into existing routines, such as class breaks or study sessions. Their brief and flexible format allows them to reach a large number of students with minimal financial or logistical investment, making them a practical tool for improving mood, attention, and engagement in educational settings, particularly in urban or resource-constrained environments (Birrell et al., 2021; Klioumis et al. 2025; Eweida et al., 2025).

Besides, nature-based videos are particularly well suited to educational contexts due to their accessibility, scalability, and ease of integration into existing classroom

routines. From a cognitive standpoint, nature-based videos may contribute to attentional recovery by providing a temporary disengagement from cognitively demanding tasks. Viewing natural scenes requires minimal directed attention, thereby allowing cognitive resources to replenish during short breaks (Pirchio et al., 2021; , Lau et al., 2023). This is particularly relevant in educational settings, where students experience sustained attentional demands and have limited time for recovery between learning activities. Nature videos may, therefore, function as micro-restorative interventions that support mental clarity and readiness to re-engage with academic tasks (Kearney & Schuck, 2006). They can be presented during class breaks without requiring additional space, travel, or time beyond what is already allocated for rest periods (Park & Na, 2022). Furthermore, the standardized nature of video content allows for consistent exposure across participants, enhancing experimental control in research settings (Janeczko et al., 2024).

Despite the potential benefits of nature environment videos in academic settings, there remains a noticeable research gap regarding their specific effects on student stress and academic performance. While studies have explored the general impact of nature exposure on mental health, there is limited empirical evidence examining how nature environment videos influence stress levels, mood, and cognitive performance specifically among students during academic sessions. Therefore, the objectives of this study are (1) to assess the level of positive and negative affect among student before and after the class break, and (2) to assess the restorative effects of the nature environment video on students during their class breaks.

METHODOLOGY

Drawing on Attention Restoration Theory and Stress Recovery Theory, the present study examines the effects of nature environment videos viewed during class breaks on students' psychological restoration. The Restorative Outcome Scale is employed to assess subjective restoration outcomes while PANAS scale use to measure the negative and positive affect before and after viewing the nature video. By integrating these theoretical and methodological approaches, the study addresses practical constraints within educational environments and contributes to the growing literature on mediated nature as a feasible restorative intervention.

A purposive sampling technique was employed, targeting undergraduate students from the Landscape Architecture and Quantity Survey programmes under the Faculty of Built Environment, UiTM Perak Branch. The sample was stratified by academic programme to ensure representation from both disciplines. Purposive sampling was adopted to select students from the Landscape Architecture and Quantity Survey programmes, as these students possess characteristics relevant to the objectives of the study, particularly in relation to academic workload and exposure to virtual learning environments. Data

were collected using an online questionnaire distributed between March and November 2024. The study involved minimal risk as participation was voluntary, and respondents self-selected into the study, which is common in online questionnaire-based research. All participants were fully informed about the nature of the study, assured of their right to withdraw at any point without consequence, and provided written informed consent before participation

The questionnaire has two sections: (1) the level of the positive and negative affect schedule (PANAS) before and after the class break; and (2) restorative outcome from the virtual nature after class break. A self-reported survey began with a brief explanation of the study's goal. Next, the student received a 40-minute lecture. The 40-minute lecture duration was selected to simulate a conventional academic teaching session and to ensure adequate cognitive load and sustained attention. Previous educational research suggests that sustained instructional periods of this length are sufficient to elicit changes in affective and attentional states, making it appropriate for subsequent affective assessment using the PANAS questionnaire (Bradbury, 2016; Bunce et al., 2010). Next, the students were instructed to complete the PANAS questionnaire. The PANAS scale was developed by Watson et al. (1988) with a five-point Likert scale ranging from 1 = Very Slightly or Not, 2 = A Little, 3 = Moderately, 4 = Quite a Bit, and 5 = Extremely. Meanwhile, the restorative outcomes scale was developed by Korpela et al. (2008) with Likert scales ranging from 1 = Not at all until 7 = Completely.

Afterward, a 10-minute nature environment video featuring soothing music was displayed. The video was acquired from YouTube's Free HD Videos - No Copyright channel. Following the class break, students were requested to complete the PANAS and restorative outcome scale. The restorative outcomes scale used in this research was developed by Korpela et al. (2008). The Restorative Outcome Scale (ROS) is a psychological tool designed to measure the positive emotional and cognitive outcomes experienced after exposure to natural environments. It consists of items that assess feelings of restoration, relaxation, and overall psychological well-being. Previous studies have demonstrated the strong reliability of the Restorative Outcome Scale (ROS). Bacevičienė et al. (2021) reported high internal consistency across multiple samples, with Cronbach's alpha values exceeding 0.80, indicating that the scale effectively measures a common underlying restorative construct. Similarly, Subiza-Pérez et al. (2019) confirmed the reliability of both the full and short versions of the ROS in urban settings, with Cronbach's alpha values consistently above 0.75 across different samples. Collectively, these findings validate the ROS as a reliable and robust instrument for assessing perceived restorative outcomes across diverse environmental and research contexts. On average, each student took 5 to 10 minutes to complete the questionnaire.

In this study, the Statistical Package for the Social Sciences (SPSS) version 23 was used to conduct descriptive analyses of the data. Specifically, the mean scores of the PANAS level and restorative outcomes measured after students' exposure to the virtual nature video during their class break were calculated. Descriptive statistics were employed to summarise the data and provide insights into the overall restorative effects reported by the students. The analysis focused on determining the average level of restoration effect by students, based on their responses to the Likert scale in the questionnaire.

RESULTS AND DISCUSSION

In total, 140 students completed the questionnaire. The mean analysis in Figure 1 shows that most students reported an increase of positive mood after the class break in terms of strong, enthusiastic, proud, alert, active, inspired, determined, and attentive. Meanwhile, in Figure 2, the negative mood was reduced after the class break among the students in terms of afraid, upset, guilty, scared, irritable, hostile and distressed.

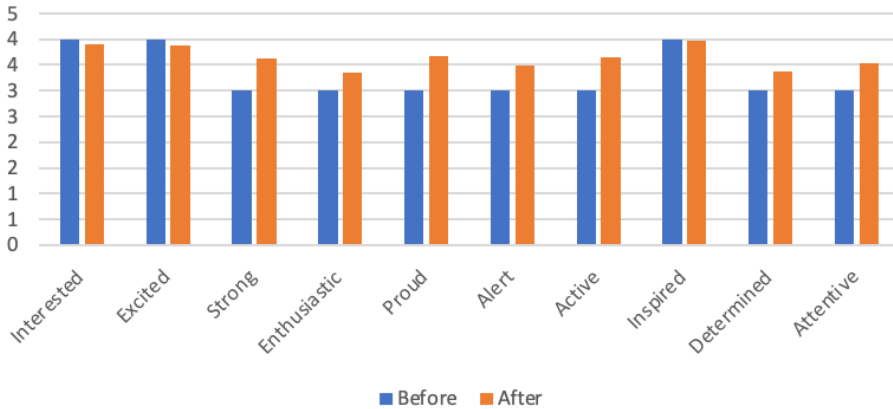


Figure 1. The positive mood before and after class break

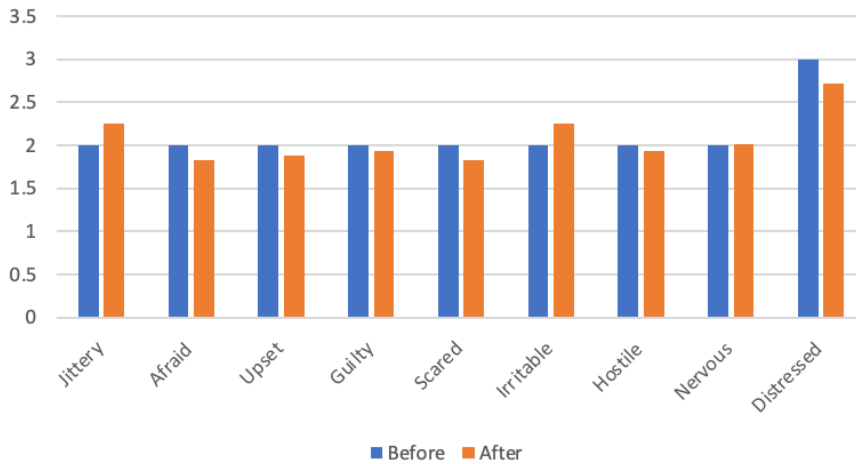


Figure 2. The negative mood before and after class break

For instance, Browning et al. (2020) found that short, immersive experiences in virtual nature settings can significantly improve mood and emotional states, demonstrating that even simulated nature can elicit feelings of vitality and positivity. This aligns with the findings of Reese et al. (2022) who reported that participants in virtual nature environments experienced substantial increases in well-being, regardless of the presence of human-made structures. Their research suggests that the restorative effects of nature can be effectively replicated in virtual settings, contributing to feelings of determination and attentiveness.

Moreover, studies have shown that the presence of natural elements can reduce negative emotions such as fear, guilt, and irritability. For example, Golding et al. (2018) highlighted that while some studies indicate that negative mood can be influenced by environmental factors, the overall trend shows that exposure to nature whether through images or immersive experiences can lead to a reduction in negative affect. This is further supported by the work of Joye and Bolderdijk (2015) which demonstrated that even mundane nature conditions could significantly improve mood compared to neutral environments, suggesting that any interaction with nature can foster emotional uplift.

Additionally, the physiological responses to nature exposure also play a crucial role in mood enhancement. Research by Suseno and Hastjarjo (2023) indicates that virtual reality environments featuring natural scenes can lead to decreased heart rates and lower cortisol levels, both of which are indicative of stress reduction. Such physiological changes are often accompanied by improvements in psychological states, reinforcing the idea that nature exposure can lead to a more positive mood and a decrease in negative feelings.

Conversely, Figure 1 showed a decrease in positive moods such as interest and excitement. Furthermore, Figure 2 demonstrated that negative mood for nervous did not change, whereas jittery and irritable were increased but still on a little bit of a scale. Even though some studies have found that virtual nature experiences can elicit restorative effects similar to real nature experiences (Litleskare et al., 2022), others suggest that nature environment video may not be as restorative as real nature (McMahan & Estes, 2015).

Although research by Reyes et al. (2012) highlights the importance of classroom emotional climate on student engagement and mood, they found that a supportive emotional environment can enhance positive feelings among students, while a negative or stressful environment can lead to increased anxiety and irritability. In the context of the current findings, it is plausible that the classroom environment or the nature of the activities leading up to the assessment of mood may have influenced the observed reductions in positive mood and increases in negative mood. The emotional climate in

educational settings can significantly affect students' emotional responses, suggesting that a lack of support or a stressful atmosphere may contribute to feelings of nervousness and irritability.

Furthermore, the work of Francis et al. (2021) sheds light on the experiences of college students with disabilities and mental health disorders, indicating that stigma and isolation can exacerbate negative emotional states. This aligns with the current findings, where the increase in jitteriness and irritability may reflect underlying stressors that are not directly addressed in the classroom setting. The emotional burden of navigating academic challenges, particularly for students facing additional barriers, can lead to fluctuations in mood, including heightened feelings of nervousness and irritability.

Additionally, a study explored the impact of emotional priming on mood, noting that negative emotional experiences can persist and affect subsequent mood assessments (Lee et al., 2010). Their findings suggest that negative mood states can be resistant to change, which may explain why feelings of nervousness did not change significantly despite other mood fluctuations. This is particularly relevant in educational contexts, where the pressure to perform can lead to sustained feelings of anxiety and nervousness among students.

Moreover, the study by Gigliotti et al. (2023) emphasizes the influence of trait energy and fatigue on mood responses during cognitive tasks. They found that individuals with higher levels of fatigue reported increased negative mood states, such as irritability. This suggests that external factors, such as fatigue from academic demands, could contribute to the observed increases in jitteriness and irritability, further complicating the emotional landscape for students.

Figure 3 indicates the Restorative Outcome Scale reveals that the statements "I feel restored and relaxed" and "I feel calm" yielded high mean scores, highlighting the positive effects of nature environment video experiences on emotional well-being. This response emphasizes the capacity of nature environments to replicate some key psychological benefits traditionally associated with exposure to natural settings. Research demonstrates that exposure to natural scenes, even in video format, can facilitate significant improvements in affective states and contribute to stress reduction.



Figure 3. Virtual nature effect after class break

For instance, Nadkarni et al. (2017) reported that inmates exposed to nature videos reported feeling significantly calmer and less irritable compared to those who did not have such exposure, indicating notable emotional benefits from the experience. This aligns with the meta-analysis by Capaldi et al. (2014) which reinforces that nature's restorative effects contribute to experience more positive affect, vitality, and life satisfaction compared to those less connected to nature, further validating the positive relationship between nature exposure and emotional health.

Benz et al. (2022) highlight the effectiveness of nature-based relaxation videos, which not only evoke profound relaxation responses but also lead to significant increases in self-reported feelings of tranquillity and restoration. This aligns with Attention Restoration Theory, which posits that natural environments facilitate recovery from mental fatigue and stress, allowing individuals to engage their attention in a restorative manner without overtaxing cognitive resources.

Furthermore, study also claims by demonstrating that virtual exposure to a coral reef reduced boredom and negative affect and increased positive affect and nature connectedness (Yeo et al., 2020). These findings suggest that the benefits associated with nature are accessible even through mediated experiences such as nature videos, reinforcing the idea that these visual stimuli can effectively foster emotional well-being across various populations.

Meanwhile, the high mean scores approaching 5 on a Likert scale for restorative outcome statements such as "I have enthusiasm and energy for my everyday routines," "I feel focused and alert," "I can forget everyday worries," and "My thoughts are clear," suggest positive effects of nature videos on emotional well-being. This evidence indicates that exposure to nature content can alleviate stress and enhance cognitive function, which is particularly important for student populations facing academic pressures.

Research by Snell et al. (2019) emphasizes that viewing nature, even though recorded videos, can lead to positive psychological impacts, stress reduction and attention restoration. Participants in their study reported enhanced focus and clarity of thought after viewing nature content, supporting the assertion that such media can provide cognitive restoration. The effects on daily energy and enthusiasm are critical in the context of student life, where mental fatigue is often prevalent due to academic demands.

Koivista et al. (2024) discovered that both subjective and physiological measures suggest that watching a short, simulated nature walk can help calm the mind and restore one's mental state after cognitive stress. Their research confirms that even brief encounters with nature-inspired videos can lead to restorative feelings, underscoring how these experiences foster an energized and focused mindset.

Additionally, a study conducted by Gao et al. (2019) establishes a significant link between environmental factors and psychophysiological restoration. Their findings align with the observations of high mean scores in the restorative outcome scale, illustrating how engagement with natural scenes can improve mental fatigue. This supports the notion that nature videos can act as a catalyst for emotional recovery, allowing individuals to regain clarity and purpose in their daily lives.

The present study find that nature videos significantly enhance calmness, relaxation, and mood align with recent evidence that virtual nature exposure can reduce anxiety, stress, and depressive symptoms in healthy adults, with moderate to large effects even in brief exposures (~10–15 min) (Chen et al. 2025). Since existing research has largely focused on clinical or laboratory settings, this leaving a gap in understanding how digitally mediated nature exposure functions in everyday academic contexts such as class breaks.

Unlike typical experimental conditions, class breaks occur amid ongoing cognitive demands and stressors inherent to student learning, suggesting that restorative interventions must operate within tight temporal and functional constraints. The current study's results indicate that brief nature videos administered during class break periods not only improve mood and relaxation but may also interrupt cumulative stress processes that diminish attentional capacity and emotional regulation throughout the academic day (Hicks et al. 2020).

The result also consistent with Attention Restoration Theory (ART) and Stress Recovery Theory (SRT) when nature stimuli can engage involuntary attention and reduce negative affect, replenishing directed attention and supporting affective recovery. In this way, digital nature exposure may serve as a practical micro-intervention that extends restorative benefits previously observed in controlled settings to the real-world timing and duration of class breaks.

Nevertheless, this study's reliance on self-reported emotional outcomes and the absence of comparative control conditions such as non-nature videos limit causal interpretation. The reliance on self-reported emotional responses may be subject to response bias, and the short-term nature of exposure limits conclusions about long-term mental health outcomes. Also, although previous research has documented the restorative and mood-enhancing effects of nature videos, the present study extends this knowledge by examining brief, task-embedded exposures during class breaks in Malaysian context where students face unique academic and environmental pressures. This context highlights the feasibility and impact of micro-interventions in real-world educational settings, providing insight into how cultural, environmental, and temporal factors interact to influence affective outcomes.

CONCLUSION

In conclusion, the result from this study highlights that even without direct exposure to natural environments, viewing nature video can improved mood and evoke feelings of relaxation, restoration, and heightened focus. This underscores the relevance of integrating nature videos into mental health and well-being programs for students, particularly in addressing issues of stress and cognitive fatigue prevalent in educational contexts. As the understanding of the intertwining relationship between nature and psychological health continues to evolve, it becomes increasingly evident that fostering access to nature-based interventions whether through video or other forms is essential for enhancing the emotional resilience and overall welfare of students. Given the mounting evidence supporting the restorative qualities of nature, further research into the mechanisms underlying these effects and the long-term benefits of sustained engagement with nature-related media is warranted. Nevertheless, a key limitation of this study was the absence of formal ethical approval, which should have been obtained prior to data collection, despite participants providing informed consent and facing minimal risk. The lack of pre-intervention measures of mental or cognitive states limits the ability to attribute changes directly to the nature video exposure. Additionally, the small and homogenous sample of undergraduate students from a single institution restricts generalizability. Future research should address these issues by securing ethics approval in advance, using experimental or pre-post designs, incorporating objective physiological measures of affect and stress, and recruiting larger, more diverse, cross-institutional samples to strengthen internal validity and broaden applicability. This limits the internal validity of the findings and restricts the ability to make strong causal inferences. Furthermore, the relatively small and homogenous sample of undergraduate students from a single institution reduces the generalizability of the results to broader populations or educational contexts. Future research should address these limitations by securing ethics approval in advance, using a

pre-post design, and including a more diverse and representative sample. As educational institutions seek to cultivate environments conducive to learning and mental health, the strategic incorporation of nature videos appears to be a valuable and accessible avenue for fostering emotional vitality and cognitive enhancement among students.

RESEARCH CONTRIBUTION

This study contributes to the growing body of research on nature-based interventions by demonstrating that even indirect exposure to natural environments specifically through nature videos can elicit psychological benefits such as relaxation, cognitive restoration, and improved focus. By emphasizing the potential of nature videos as an accessible and scalable tool for mental health support, particularly within educational settings, the study highlights a practical approach to addressing student stress and cognitive fatigue. Moreover, it underscores the importance of integrating virtual nature experiences into well-being programs and calls for further investigation into the underlying psychological mechanisms and long-term impacts of such interventions.

PRACTICAL CONTRIBUTIONS

This research offers a practical solution for enhancing student well-being by advocating for the use of nature videos as a low-cost, easily implementable intervention within educational settings. Given the limited access to real natural environments in many academic institutions, nature videos provide an accessible alternative that can be integrated into classrooms, study breaks, counselling sessions, or digital wellness platforms. By reducing stress and improving focus, this approach can contribute to better academic performance, emotional resilience, and overall mental health among students. The findings support educational policymakers, mental health professionals, and curriculum designers in incorporating evidence-based, nature-based strategies into their well-being initiatives.

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