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VIRTUAL ESCAPES: EXPLORING THE EFFECTS OF NATURE-BASED VR ENVIRONMENTS DURING ACADEMIC BREAKS

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ABSTRACT

Mental health issues among students attending lectures pose a significant concern, potentially negatively impacting their academic performance and overall well-being. Recent years have seen an increasing interest in the potential advantages of immersive nature experiences for psychological well-being, particularly among students in educational environments. However, there is a limitation of research examining the effect of the natural environment on students during their class breaks. Therefore, the objective of this study is to evaluate the restorative effect of natural environments video on students during their class break. This study employs a questionnaire survey to assess the restorative outcome scale and involves 140 students from the public universities in Malaysia. The video intervention was tested using a nature environment setting. Data were analysed using descriptive statistics, focusing on the mean. The results showed that students reported a relatively high level of restoration. These findings suggest that natural environment video can be beneficial in addressing mental health challenges during class breaks.

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

INTRODUCTION

Mental health problems among students during lecture classes are a significant concern, as they can adversely impact academic performance and overall well-being. Several factors contribute to these issues, including academic stress, the nature of classroom interactions, and the coping strategies employed by students.

Academic stress is a major contributor to mental health challenges among students. Research indicates that the pressures associated with academic performance can lead to heightened levels of anxiety and stress. For instance, Dahdal (2023) highlights that pre-exam anxiety is a common issue, disrupting students' focus during lectures and ultimately affecting their academic outcomes. Similarly, Hasanah et al. (2023) discuss how the demands of coursework can overwhelm students, leading to mental health deterioration if not managed effectively. This academic pressure is often compounded by the expectations placed on students to perform well, which can create a cycle of stress and anxiety that is difficult to break (Putra, 2023).

The interaction between students and educators during lectures plays a crucial role in shaping students' mental health. Raji et al. (2022) highlight the importance of educators being aware of mental health issues among students, as their ability to recognise and address these problems can significantly shape students' classroom experiences. Conversely, a lack of mental health literacy among educators may result in negative attitudes toward students facing mental health difficulties, further aggravating their distress (Raji et al., 2022). On the other hand, students can build resilience in a supportive classroom environment where educators are trained to recognise and address mental health issues, thereby enhancing students' ability to cope with academic pressures (Kamarunzaman et al., 2020). Addressing these issues requires a multifaceted approach that includes enhancing mental health literacy among educators, fostering supportive classroom environments, and promoting effective coping strategies among students.

Natural environment videos may specifically serve for promoting positive emotional states, which are directly correlated with mental well-being. For example, viewing nature videos has been linked to promoting relaxation and reducing stress levels, therefore mitigating symptoms of depression and anxiety (Hoffmann et al., 2019). These videos have the power to arouse emotions of calm and optimism, strengthening resistance to stress. These responses are consistent with Fredrickson's Broaden-and-Build Theory, which proposes that positive emotions induce expansive thinking and behavior, thereby enhancing psychological resilience (Lu et al., 2024).

This innovative approach highlights that nature video has potential as a tool for mental health intervention, replicating the therapeutic effects of nature in a controlled and accessible manner. However, there is a dearth of research examining the effect of natural environment video on students during their class breaks. Consequently, the objective of this study is to evaluate the restorative effect of natural environment video on students during their class breaks. By prioritizing mental health in educational settings, institutions can help mitigate the negative impacts of mental health issues on students' academic performance and overall well-being.

METHODS

To evaluate the restorative effects of natural environment video during class breaks among students, a quantitative survey was conducted using an online questionnaire. The study took place from March to November 2024 at a public university in Malaysia. The questionnaire has four sections. However, the results of this study focused on the restorative outcome from the natural environment video after class break. The restorative outcomes scale used in this research was developed by Korpela et al. (2008)

The self-reported survey began with a briefing on the purpose of the study. Students then attended a 40-minute lecture, followed by a 10-minute natural environment video accompanied by healing music. The natural environment video, sourced from the Free HD Videos - No Copyright channel on YouTube, featured scenes such as snowy landscapes, waterfalls, flowing rivers, blue skies, blue water, flowers, clouds, mountainous landscapes, beaches, beach waves, river landscapes, sunsets, sunrises, animals, open lawns/fields, moving cloud, flying birds. After viewing the video, students completed a questionnaire to assess the restorative outcomes of the natural environment video experience during their class break. They expressed their preferences on a seven-point Likert scale ranging from 1 = Not at all to 7 = Completely. On average, students took approximately 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 restorative outcomes, measured after students' exposure to the natural environment 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 experienced by students, based on their responses to the Likert scale in the questionnaire.

RESULTS AND DISCUSSION

In total, there were 140 students who had answered the questionnaire. The mean analysis in Figure 1 indicates that most students reported experiencing restoration after watching the natural environment video during the class break. This suggests that natural environment video experiences have the potential to enhance subjective vitality, reduce stress, and promote positive emotional states.

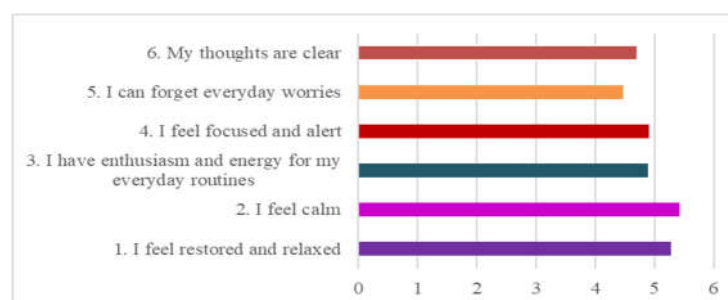


Figure 1.: Natural environment video effect after class break

Based on the results presented in Figure 1, the highest mean scores were recorded for "I feel restored and relaxed" (1) and "I feel calm" (2), with scores close to 5. This demonstrates that the natural environment video experience significantly contributed to students' relaxation and emotional calmness, suggesting that nature environments can effectively promote relaxation and reduce stress during academic breaks. These findings are consistent with previous research indicating that exposure to nature, whether real or virtual, has a positive effect on emotional well-being, particularly in reducing stress (Li et al., 2021).

Moderate mean scores were observed for "I have enthusiasm and energy for my everyday routines" (3) and "I feel focused and alert" (4). While these scores were still positive, they indicated a more modest effect on students' energy and alertness, suggesting that the natural environment experience had a less substantial impact on enhancing cognitive vitality in comparison to its effects on emotional restoration. This result aligns with studies that suggest nature-based interventions, including virtual nature, may have a stronger impact on emotional restoration than cognitive functions like focus or alertness (Franco, Shanahan & Fuller, 2017).

The lowest mean scores were recorded for "I can forget everyday worries" (5) and "My thoughts are clear" (6), highlighting that while the natural environment video provided restorative benefits, it had a lesser impact on alleviating daily worries and enhancing cognitive clarity. This suggests that while the experience effectively reduced emotional stress, it may not have fully addressed mental clutter or cognitive stressors. These results are in line with previous studies that found that while virtual nature environments can foster emotional relaxation, their effects on cognitive functions such as mental clarity or worry reduction may be less pronounced (Owens, 2023).

In conclusion, the natural environment video was particularly effective in promoting emotional restoration, specifically in terms of relaxation and calmness. However, further research is necessary to explore its impact on cognitive factors such as focus, mental clarity, and the reduction of daily worries. Given these promising results, natural environment video experiences should be considered as part of mental health interventions for students, especially in the context of academic settings, where stress management is crucial for maintaining well-being.

CONCLUSION

In conclusion, this study evaluates the restorative effect of natural environment video during the class break among students. The empirical findings of this study suggest that natural environment video experiences, particularly during academic breaks, can effectively contribute to relaxation and emotional restoration among students. Also, natural environment video bridges the gap between technology and mental health by providing students with a portable and effective means to access restorative environments during class breaks. Given the potential benefits, incorporating natural environment video as part of mental health interventions may be an effective strategy for enhancing well-being, especially in environments where access to real-world natural spaces is restricted. Furthermore, natural environment video breaks can improve cognitive functioning, enhancing attention, problem-solving

abilities, and creativity, all of which are vital for academic success. Further research is needed to compare different natural environment video immersion levels to determine optimal experiences for maximum restorative benefits and to explore nature video interventions across diverse educational settings and various student populations, the broader applications of nature video in mental health interventions and its impact on cognitive and emotional factors beyond relaxation and stress reduction.

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