Sustainability | Individual communication

IC - (20836) - THE IMPACT OF RESTORATIVE ENVIRONMENTS ON MENTAL WELLBEING: A COMPARISON BETWEEN FLAT-SCREEN AND IMMERSIVE VIRTUAL REALITY (IVR) EXPOSURE.

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Background and objectives

Exposure to virtual natural and historic environments can be beneficial for mental well-being. However, it is still unclear how different virtual exposure methods can impact well-being, and whether physiological and subjective measurements of well-being show similar results. This study aimed to address this gap and compare the benefits of exposure to restorative environments when viewed on a flat-screen monitor versus using immersive virtual reality (IVR).

Process and methods (for empirical research)

Employing a between subject's design, participants (N = 30) were exposed to three restorative environment videos (green, blue, historic), after viewing stress-inducing traffic videos. Participants were randomly assigned to view restorative environments on a flat-screen monitor or using an IVR head-mounted display (Oculus Go). After each environment exposure, mood and anxiety were subjectively measured. Physiological measurements (skin conductance and EEG) were recorded continuously throughout the experiment.

Main results (or main arguments in the case of critical reviews)

Preliminary results show state anxiety improved after exposure to green and historic environments, compared to traffic. This effect was found to be stronger with exposure to the green environment. No significant differences were found between methods of exposure (flat-screen vs IVR). Analyses of physiological measurements are underway.

Implications for research and practice/policy | Importance and originality of the contribution

The findings from this study highlight the possibilities that virtual environment exposure can provide for improving mental well-being in populations with limited mobility or who are unable to leave their homes (e.g. Covid-19 isolation). As this study involved university students, further research should use an intergenerational population to examine if similar results are found across age groups.

This research shows how virtual restorative environment exposure can impact physiological and subjective well-being and how effective different exposure methods are. Further, this study highlights the importance of viewing virtual restorative environments and the benefits that can be gained, especially for when going outdoors is not feasible.

Palavras-chave : Restorative Environments, Virtual Environments, Well-Being