

# THE IMPORTANCE OF BOTH: COMPETING FACTORS THAT IMPACT ATTENTION LEVEL RESTORATION AND MENTAL HEALTH

**SAEDI, HOSSEIN**

North Carolina State University, hsaedi@ncsu.edu

**RICE, ARTHUR**

North Carolina State University, art\_rice@ncsu.edu

## 1 ABSTRACT

*Attention Restoration Theory (ART) puts forward that being in nature has a restorative impact on direct attention level (Kaplan, 2001). Some researchers have tried to measure the perceptual implications of the four characteristics suggested by ART of a restorative environment (Korpela et al., 2010), and others have attempted to measure the cognitive consequences of immersion in a natural environment (Ohly et al., 2016). What has been examined far less is the interrelationship of perception and cognition and how they indicate the restorative impact. This research aimed to measure both perceptual and cognitive impacts of an immersive visual interaction with natural green elements. One hundred and eighty-two participants were randomly assigned to physically walk through, via VR goggles, one of two versions of a building's lobby modeled as a 3D virtual reality (VR) environment. One version was with, and the other was without natural green elements consisting of three types of indoor plants. To measure the two environments' perceptual impact, participants filled out a Perceived Restorative Scale (PRS) questionnaire (Hartig et al., 1997) after experiencing the environment. To assess possible improvement in attention level through cognitive processes, participants completed, before and after experiencing the environment, a Sustained Attention to Response Task (SART) (Jung et al., 2017). The results of this research seem to indicate that measuring one influencing factor may not be sufficient to evaluate the impact of an environment on attention level and may lead to misleading conclusions.*

### 1.1 Keywords:

Attention Restoration, restorative environments, virtual reality (VR), direct attention, natural green elements/ vegetation, residential high-rise lobby

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