

Experimental pain reduction in two different virtual reality environments: a crossover study in healthy subjects

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ABSTRACT

The literature on unique virtual reality (VR) attributes impacting pain reduction is scarce. This study investigated the effect of two VR environments, with differing cognitive load (CL) demands, on experimental pain levels. Sixty-two students underwent psychophysical thermal pain tests, followed by exposure to tonic heat stimulation under one of three conditions: low CLVR (LCL), high CLVR (HCL), and a control. Significantly greater pain reduction occurred during VR compared to the control condition. Cognitive components predicted pain reduction during HCL only. Cognitive load involved in VR may influence the extent of pain decrease, a finding that may improve treatment protocols and promote future research.

Full papers will be published in the Conference Proceedings and will be freely available to delegates at the conference and online on September 20, 2016.