Hypnotic Suggestions Effect on Sense of Presence in Virtual Reality. A Brief Report

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Abstract

There is a growing body of evidence that virtual reality (VR) is an effective tool in psychotherapy. Hypnosis is a very effective intervention in pain management, and it can also be applied in virtual reality. Presence is a multi-component construct, related to the efficacy of virtual reality interventions, and, for example, it is believed to be a crucial factor in the virtual reality hypnosis for pain management. The objective of this study is to investigate the impact of hypnotic suggestions on virtual reality presence. Our hypothesis is that the presence enhancing suggestions (while the subject is exposed to the virtual environment) will lead to an increase in the level of reported presence in the virtual environment. We tested this hypothesis with an independent measures experimental design, with 30 subjects in the experimental group and 30 subjects in the control group. All subjects were exposed to a virtual environment, while only those in the experimental condition received presence enhancing hypnotic suggestions. The presence was assessed with the Presence and Reality Judgement Questionnaire (Banos et al., 2000). The results of the test show that there are statistically significant differences between the two experimental groups in the case of the "Reality judgement and presence" subscale, $t(59)=2.178$, $p<0.05$, with a medium effect size Cohen's $d=0.57$. Thus the hypnotic suggestions enhanced the participant's illusion of going into the virtual world, which was measured on the subscale of „Reality judgement and presence". Limitations and implications of the study are discussed.

Keywords

virtual reality presence, virtual reality, hypnosis, hypnotic suggestions

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