What Virtual Reality Research in Addictions Can Tell Us about the Future of Obesity Assessment and Treatment

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Abstract

Virtual reality (VR), a system of human–computer interaction that allows researchers and clinicians to immerse people in virtual worlds, is gaining considerable traction as a research, education, and treatment tool. Virtual reality has been used successfully to treat anxiety disorders such as fear of flying and post-traumatic stress disorder, as an aid in stroke rehabilitation, and as a behavior modification aid in the treatment of attention deficit disorder. Virtual reality has also been employed in research on addictive disorders. Given the strong evidence that drug-dependent people are highly prone to use and relapse in the presence of environmental stimuli associated with drug use, VR is an ideal platform from which to study this relationship. Research using VR has shown that drug-dependent people react with strong craving to specific cues (e.g., cigarette packs, liquor bottles) as well as environments or settings (e.g., bar, party) associated with drug use. Virtual reality has also been used to enhance learning and generalization of relapse prevention skills in smokers by reinforcing these skills in lifelike environments. Obesity researchers and treatment professionals, building on the lessons learned from VR research in substance abuse, have the opportunity to adapt these methods for investigating their own research and treatment questions. Virtual reality is ideally suited to investigate the link between food cues and environmental settings with eating behaviors and self-report of hunger. In addition, VR can be used as a treatment tool for enhancing behavior modification goals to support healthy eating habits by reinforcing these goals in life–like situations.

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