ABSTRACT

Development of Immersive Virtual Reality for Managing People with Chronic Low Back Pain – Study Protocol

Anfal Astek , Second year PhD student , School of Healthcare Science , Cardiff University
Supervisors: Dr. Valerie Sparkes and Dr. Liba Shereen

Background: Low back pain (LBP) is one of the leading causes of disability worldwide with almost 23% of sufferers developing chronic symptoms (CLBP). Updated national CLBP management guidelines promote self-management and staying physically active. Current self-management interventions are associated with a lack of adherence and low motivation. Virtual reality (VR) is a stimulus which provides the users a computer-generated environment using a combination of interaction devices and sensory display systems and allow them to interact with motivational tasks. Full immersion in VR environment was suggested to result in distraction associated with reduction in acute pain. However, understanding its mechanism to working with chronic pain conditions is unknown.

Purpose: To map the present 'state of play' and evidence base for future development of immersive VR for managing people with CLBP.

Methods: A mixed-method sequential study design will be utilised in three parts in accordance with the Medical Research Council framework. Part 1 will be an online survey with VR special interest group consisting of healthcare practitioners, researchers and immersive VR technology developers about their experiences of using immersive VR in healthcare. Part 2 will involve telephone interviews with a subset the above individuals to explore in-depth experiences, views and attitudes towards using immersive VR for chronic pain management including immersive VR components (e.g. dosage, content, frequency). Part 3 will involve focus group with physiotherapists and occupational therapists who manage patient with CLBP to establish their views on content, dosage and practicalities (including safety guidelines) of an immersive VR for the management of CLBP.