Evaluation of Virtual Reality for the Rehabilitation of Athlete Lower Limb Musculoskeletal Injury: A Method for Obtaining Practitioner's Viewpoints through Observation and Interview

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Abstract : Based on a theoretical assessment of current literature, virtual reality (VR) could help to treat sporting injuries in a number of ways. However, it is important to obtain rehabilitation specialists' perspectives in order to design, develop and validate suitable content for a VR application focused on treatment. Subsequently, a one-day observation and interview study focused on the use of VR for the treatment of lower limb musculoskeletal conditions in athletes was conducted at St George's Park England National Football Centre with rehabilitation specialists. The current paper established the methods suitable for obtaining practitioner's viewpoints through observation and interview in this context. Particular detail was provided regarding the method of qualitatively processing interview results using the qualitative data analysis software tool NVivo, in order to produce a narrative of overarching themes. The observations and overarching themes identified could be used as a framework and success criteria of a VR application developed in future research. In conclusion, this work explained the methods deemed suitable for obtaining practitioner's viewpoints through observation and interview. This was required in order to highlight characteristics and features of a VR application designed to treat lower limb musculoskeletal injury of athletes and could be built upon to direct future work.

Keywords : athletes, lower-limb musculoskeletal injury, rehabilitation, return-to-sport, virtual reality
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