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Acceptance by coaches of immersive virtual reality for improving sport performance

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Under certain conditions, immersive virtual reality (VR) has shown its effectiveness in improving sport performance. However, the psychological impact of VR on athletes is often overlooked, even though it can be deleterious (e.g., decreased performance, stopping the use of VR). Mascret et al. (2022) have recently highlighted a significant intention of athletes to use a VR Head Mounted Display (VR-HMD) designed to increase their sport performance. Whatever their level and before a first use, they all initially considered it as quite useful (except for recreational athletes), quite easy to use, and quite pleasant to use. Coaches are also concerned by using the VR-HMD: If athletes accept the VR-HMD but coaches do not, there is a risk that the VR-HMD will never be used despite its potential benefits. In this context and based on the Technology Acceptance Model, this study aims to identify possible blockages by measuring coaches' acceptance of VR-HMD device before the first use.

After reading a short text introducing the VR-HMD and its benefits for improving sport performance, a total of 239 coaches, from different sports and from local to international level, filled out a questionnaire assessing perceived usefulness to improve training, perceived usefulness to improve athletes' performance, perceived ease of use, perceived enjoyment, job relevance, and coaches' intention to use it. Structural equation modeling analysis, one-sample t-tests, and one-way ANOVAs were used to examine the data.

The main results show that (1) coaches' intention to use the VR-HMD is positively predicted by perceived usefulness to improve athletes' performance, perceived enjoyment, and job relevance, but not by perceived ease of use, (2) coaches significantly consider the VR-HMD useful to include in their training and to improve their athletes' performance, easy to use, pleasant to use, and relevant for their job, and (3) no significant differences appear on the previous scores according to coaches' levels, except for job relevance: international and national coaches find the VR-HMD more relevant to their job than local level coaches. All these results highlight that the VR-HMD is rather well accepted by the coaches before a first use. No contraindication appears from this point of view for the coaches to use the VR-HMD for performance optimization purposes.

Reference

Mascret, N., Montagne, G., Devrièze-Sence, A., Vu, A., & Kulpa, R. (2022). Acceptance by athletes of a virtual reality head-mounted display intended to enhance sport performance. *Psychology of Sport and Exercise*, 61, 102201.

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