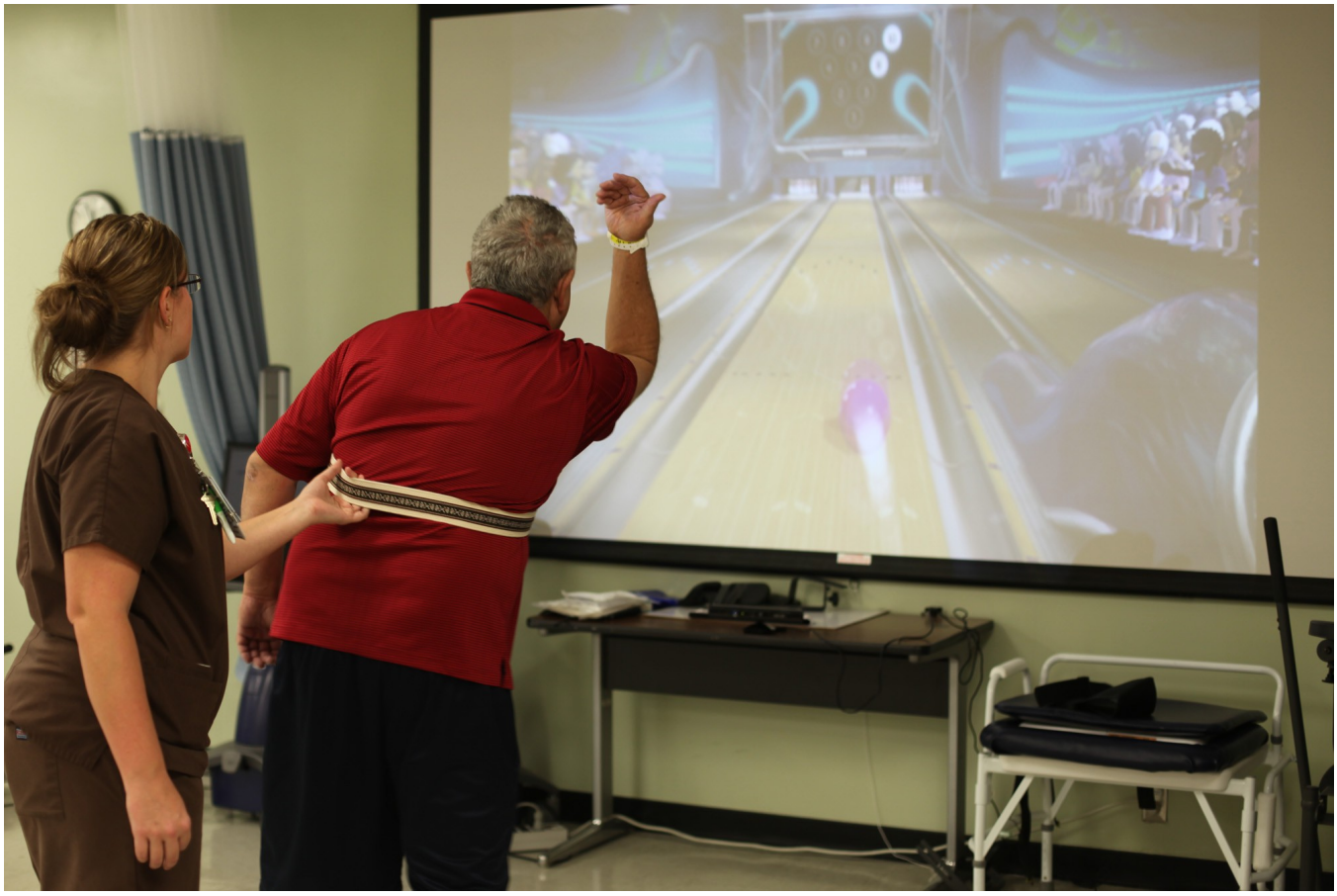


THE REALITY OF VIRTUAL REALITY IN CLINICAL PRACTICE

By Meaghan Adams PT, PhD

KEY POINTS

1. Despite many therapists having tried virtual reality or active videogames (VR/AVGs) as part of a patient/client treatment plan, rates of ongoing use in clinical practice are very low.

2. Use cases of VR/AVGs include patient/client diagnoses and functional goals that are highly relevant to neuro physio practice.

Background and objective

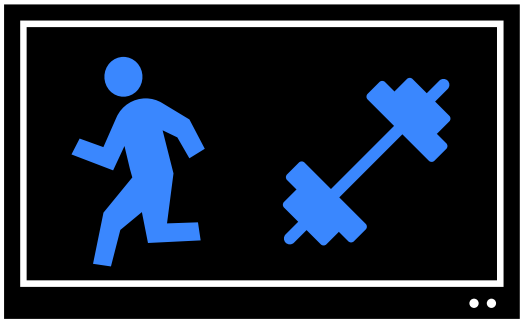
This is a really interesting study that surveyed occupational therapists (OTs) and physiotherapists (PTs) in Canada about their use of virtual reality and/or active videogames (VR/AVGs) in clinical practice. They aimed to identify usage patterns, barriers and facilitators to adopting these technologies in clinical practice, understand the factors that predict intention to use these technologies, and determine therapists' learning needs related to VR/AVGs. It was done in 2017, so a few years ago, but I think the authors identify practice patterns that are still relevant in 2023.

Methods

Online survey of OTs and PTs in Canada using a tool validated to assess factors influencing therapists' adoption of VR/AVGs

- 1071 respondents were recruited as a convenience sample, and was open to OTs and PTs through Colleges and Associations across Canada (562 or 53% OTs, 506 or 47% PTs)
- Data were analyzed using descriptive statistics, parametric analyses, and linear regressions, depending on the data

> *"Importantly, people wanted to learn more!"*



Results

- Almost half (46%) of the respondents had clinical experience with VR/AVGs in clinical practice. However, only 12% were currently using them at the time of the study.
- Of interest for neuro therapists, some of the most frequently reported conditions treated using VR/AVGs fall within our area of expertise: 25.8% of respondents were treating people with stroke/hemiparesis and 14.9% were treating people diagnosed with brain injury/concussion/post-concussion syndrome. Respondents also identified a range of functional goals for which they used VR/AVGs.

The highest priority functional goals were balance (39.3%), exercise/physical activity (19.8%) and mobility/gait (12.1%).

The article also lists barriers and facilitators to using VR/AVGs in practice. The authors separated responses from therapists with experience using these types of technologies from the responses from those who had never tried them.

Of the people who had tried VR/AVGs in clinical practice but didn't continue using them, the most common and significant facilitators were:

a) support (27.1% of respondents),
b) access to the technology (24.3%),
c) client motivation (18.5%)

The most common significant barriers:

a) lack of time (35.9% of respondents)
b) lack of space (14.3%)
c) lack of education related to use (13.6%)

Importantly, people wanted to learn more! Among the people who had never used VR/AVGs, 71.2% were interested in learning more, and the number was even higher (82.5%) among people who had used these types of technology in the past.

Limitations

The main limitation here is sampling bias. It's likely that online surveys are more likely to be filled out by therapists who are more comfortable with email and the internet, and a survey about virtual reality and videogaming is more likely to be clicked on by people with an inherent interest in the topic.

Clinical Implications

While most respondents in this study felt positively about VR/AVGs, and many had actually tried the technology in clinical practice, very few had continued to use it. Knowing the facilitators and barriers to use is an important place to start, and the authors helpfully report separate barriers and facilitators among therapists who have used VR/AVGs from those who have never tried them. However, the finding that many people have tried VR/AVGs in practice but so few use them on an ongoing basis is a key finding of this study, and warrants further investigation.

Two of the three conditions most frequently treated using VR/AVGs are neurological in nature, and the main functional goals addressed with these interventions are important aspects of neuro physio practice. That makes this article especially relevant to physiotherapists practicing neuro rehab.

Even though this article is now six years old and COVID-19 has changed aspects of how we use technology in clinical physio practice, the pandemic didn't create conditions that facilitated the adoption of VR/AVGs. It is likely that the landscape for VR/AVGs is very similar today as it was when this data was collected.

For any new technology to be adopted into clinical practice, it needs to fulfill a clear need or solve a tricky problem for both therapists and patients: adopting a technology simply because it's new or flashy just won't work. In the case of VR/AVGs, therapists are interested and open to learning more, but it is likely that there are some unaddressed challenges that are preventing widespread adoption. This article challenges us to ask whether VR/AVGs serve a need in clinical practice, or whether this is a case of innovation for its own sake.

STUDY REFERENCE

Levac, Danielle, Stephanie Glegg, Heather Colquhoun, Patricia Miller, and Farzad Noubary. 2017. "Virtual Reality and Active Videogame-Based Practice, Learning Needs, and Preferences: A Cross-Canada Survey of Physical Therapists and Occupational Therapists." *Games for Health Journal* 6 (4): 217–28.

MEET THE REVIEWER

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Image
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