

Using Low Cost Virtual Reality Systems in Physical Rehabilitation –A Clinician's Perspective

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Description:

Virtual reality (VR) is a nascent technology that has great potential for application in diverse fields of medicine. Despite the promise inherent in VR, clinical use of the techniques is not widespread. Part of the reason for this is the high cost of the original VR technologies. Another reason is technophobia among clinicians. However, with the development of commercially available off the shelf VR systems, it is possible today to have sophisticated VR systems at reasonable prices. These systems are simple in concept and easy to use, thus making them attractive to both clinicians and potential clients. In this workshop the five-year experience of Beit Rivka Geriatric Rehabilitation Hospital will be used to illustrate the use of low cost VR systems in rehabilitation. Specifically we illustrated the use of the Playstation II with the Eye Toy and Nintendo's Wii Fit as well as freeware used with available web cam PC games. There will be videotaped demonstrations of treatments and hands on practice.

Objectives:

Upon completion of the workshop, the participants will be able to:

- Fully comprehend the application of basic concepts of virtual reality to the treatment of diverse neuromuscular diseases and balance disorders.
- Present updated methods to assess senso-motor, balance problems and attention disorders in the context of physiotherapy and rehabilitation.
- Understand how to use simple off the shelf equipment for effective VR treatment

Intended audience: Physical and occupational therapists and psychiatrists



Riki Brown is a certified physiotherapist, with MSc.PT degree from the Tel Aviv University. She is the Deputy Head of the Physiotherapy Service in the geriatric Rehabilitation Center "Beit Rivka" in Petach Tikva, Israel. She participated in the development and execution of projects for the prevention of falls as well as innovative posturographic methods and balance tests. Collaborated in a number of research projects on this subject. She teaches and is the project leader in the field of posturography, strength training and virtual reality, both in Israel and abroad. Published articles on the subjects of posturography and falls prevention, strength training in geriatric rehabilitation, Virtual Reality in rehabilitation, and physical

activity programs for severely disabled population.



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He has participated in the development and execution of projects for the prevention of falls as well as innovative posturographic methods and balance tests. Collaborated in a number of research projects on this subject. He teaches and is the project leader in the field of posturography, sEMG, strength training and virtual reality, both in Israel and abroad. Presented projects in the field of falls prevention, posturography, virtual reality, strength training and physical activity in healthy and impaired elderly population. in

National Conferences and International Congresses. Has published articles on the subjects of neurological rehabilitation, posturography and falls prevention, strength training in geriatric rehabilitation, Virtual Reality in rehabilitation, and physical activity programs for severely disabled population.