Counting repetitions of upper extremity movements while playing video games compared to traditional therapy: implications for stroke rehabilitation

D Rand[1], N Givon[1], G Zeilig[2], A Nota[3], H Weingarden[2]

[1]Department of Occupational Therapy, School of Health Professions, Sackler Faculty of Medicine, Tel Aviv University, ISRAEL

[2]Department of Neurological Rehabilitation, The Chaim Sheba Medical Center at Tel-HaShomer, & Sackler Faculty of Medicine, Tel Aviv University, ISRAEL

[3]Head of Occupational Therapy services, The Chaim Sheba Medical Center at Tel-HaShomer, ISRAEL

drand@post.tau.ac.il, givonnoa@gmail.com, Gabi.Zeilig@sheba.health.gov.il, Ayalah.Nota@sheba.health.gov.il, Harold.Weingarden@sheba.health.gov.il

ABSTRACT

Clinicians are seeking novel methods to increase the number of repetitions of purposeful movements during and following stroke rehabilitation. Video-game consoles encourage active purposeful movement, however, the number of repetitions while playing video games is unknown. We aimed to compare the number of repetitions and accelerometers activity counts of movements of the weak upper extremity of individuals with chronic stroke while playing video games to participants in traditional therapy. Eight participants were included. Differences between groups in the type and number of repetitions and accelerometers activity counts were found. These preliminary findings indicate that video-games facilitate multiple repetitions of fast purposeful movements.

Full papers will be published in the Conference Proceeding s and will be available to delegates at the conference on Sept. 10.

Full papers will be released on-line in the ICDVRAT archive on March 15.