Official Title of Study: -

Wii Sport Training Versus Task Oriented Training for Gait in children with Unilateral Cerebral Palsy

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PURPOSE:

This study will aimed to assess the efficacy of Wii Sport training versus Task Oriented training for gait in children with unilateral cerebral palsy.

BACKGROUND:

Cerebral palsy (CP) is the most common cause of childhood disability and is seen in 2–2.5 out of 1,000 births. The non-progressive lesion in the brain that causes CP, has devastating effects on the musculoskeletal system. These effects, like spasticity, imbalance between agonist and antagonist muscles, and decreased voluntary muscle control, can result in contractures and deformities.

Hemiplegic CP is a subtype in which one side of the body is involved. It affects about 1 in 1,300 live births. It is characterized by a clinical pattern of unilateral motor impairment. The severity of motor impairment varies widely, depending on the site and severity of brain lesion. Early brain injury impacts concomitantly on motor, gait, balance and cognitive development and function.

Virtual reality (VR) is a simulated experience that can be similar to or completely different from the real world. Applications of virtual reality can include entertainment (i.e. video games) and educational purposes (i.e. medical or military training). Other, distinct types of VR style technology include augmented reality and mixed reality.

Task-oriented training involves practicing real-life tasks (such as walking or answering a telephone), with the intention of acquiring or reacquiring a skill (defined by consistency, flexibility and efficiency).

Task oriented training is a therapeutic approach based on the system theory of motor control. This was given by Bernstein in 1967 to retain the patients with movement disorders. This approach utilizes a training

program that focuses on specific functional tasks to engage the neuromuscular and musculoskeletal system.

HYPOTHESES:

H0 there is no significance difference between Wii Sport training versus Task Oriented training for gait in children with unilateral cerebral palsy.

H1 there is a significance difference between Wii Sport training versus Task Oriented training for gait in children with unilateral cerebral palsy.

RESEARCH QUESTION:

Is there is significant effect of difference between Wii Sport training versus Task Oriented training for gait in children with unilateral cerebral palsy.

Subjects:

Sixty unilateral cerebral palsy children will recruited from outpatient clinics to participate in this current study.

The children were divided in to 3 equal groups, group 1 study G that will receive traditional PT program for 30 min plus Wii Sport Training for 30 min, and group 2 study G that will receive traditional PT program for 30 min plus Task Oriented training for 30 min. and control G3 that will receive traditional PT program for 60 min. All children conducted in this study pre and after 3 successful months.

Inclusion criteria:

1) Their children will from both sex.
2) their ages will range from seven to nine years**.**
3) they will have mild to moderate spasticity **.**

Exclusion criteria:

1) Children with visual or auditory problems.
2) Children with history of epilepsy.
3) Children with structural joints deformities of the lower limbs.
4) Children with history of surgical interference in lower limbs less than one year.
5) Children with convulsions and fixed contractures.

6) Uncooperative children.

letter to be provided to the person(s) providing the consent.

I am freely and voluntarily consent to participate in a research program under the direction of M.Sc. A thorough description of the procedure has been explained and I understand that I may withdraw my consent and discontinue participation in this research at any time without prejudice to me.

Note: Attach a copy of the Consent Form, Participant Information Sheet (if applicable).

PARTICIPANT WITHDRAWAL

a) Describe how the participants will be informed of their right to withdraw from the project.

All parents will sign a written consent form after receiving information about the study purpose, whole procedures, possible benefits, privacy and use of data to ensure full cooperation. Parents well understand that they may withdraw their consent and discontinue participation in the research at any time without prejudice to them.

b) Explain any consequences for the participant of withdrawing from the study and indicate what will be done with the participant's data if they withdraw.

All data of withdrawn participant will be excluded from analysis.