GC-279 Geometry Matching Task for Improving The Cognitive Ability in Rehabilitation Process

Introduction/Abstract

According to Taylor & Francis Group, LLC (2015), in the National Library of Medicine“ Traumatic brain injury (TBI) impacts the lives of 1.5 to 2 million new individuals each year; 75,000 to 100,000 of these are classified as severe and will suffer enduring severe spasticity in addition to cognitive”. This game follows and respect basic and fundamental rules of brain and muscles recovery process and will help patients in their process of rehabilitation and by extension will improve their cognitive abilities.

Study Design

To verify the impact of the game, we are conducting a pilot study with
a Within-subject design using a subjective questionnaire. This subject questionnaire will be based on our research questions. The questionnaire will be created and collected using Google Forms.

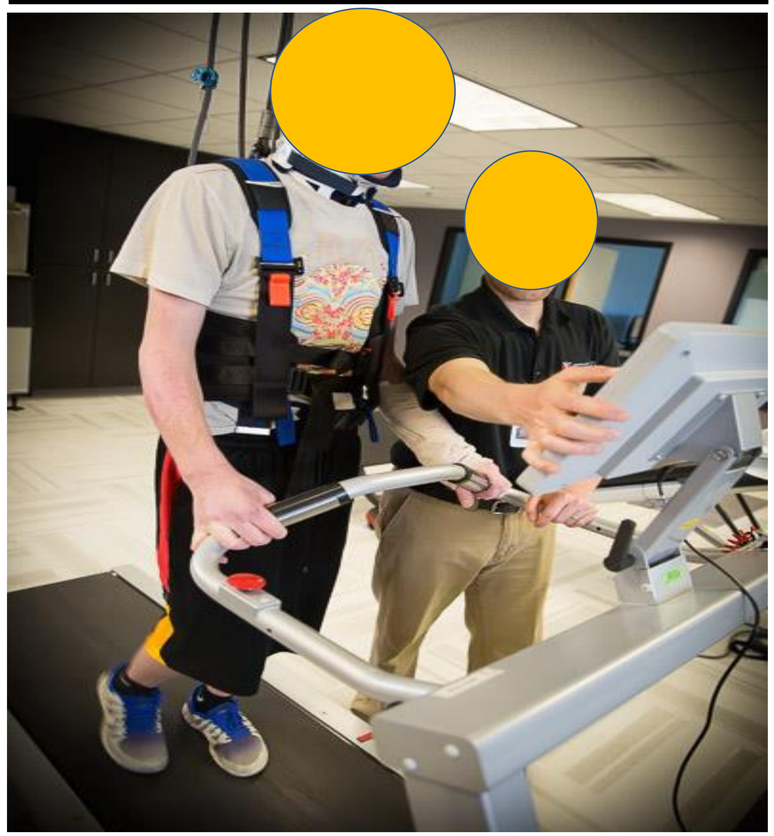
Description

This is a simple game to control, but it requires cognitive ability and control of the body in a timely manner to complete. To complete the game the user should consider
•Geometry type
• Color
•Speed
•Score
•Appropriate control of the input (keyboard in this case)
Also, the game can be ported to mobile devices such as mobile phones or tablets, and the touch or gyro sensor can be used to complete this game, and thus can provide further support in terms of rehabilitation purpose.

Materials and Methods

•Unity
•C#

Brain & Muscle Rehabilitation



The physician verifying the patient selecting the matching shapes and colors among options provided. He uses his brain to make the decision in a timely manner and his banded hand for the selection. He improves and recovers as he practices.

NOTE: THIS IMAGE ISN'T OUR RESEARCH

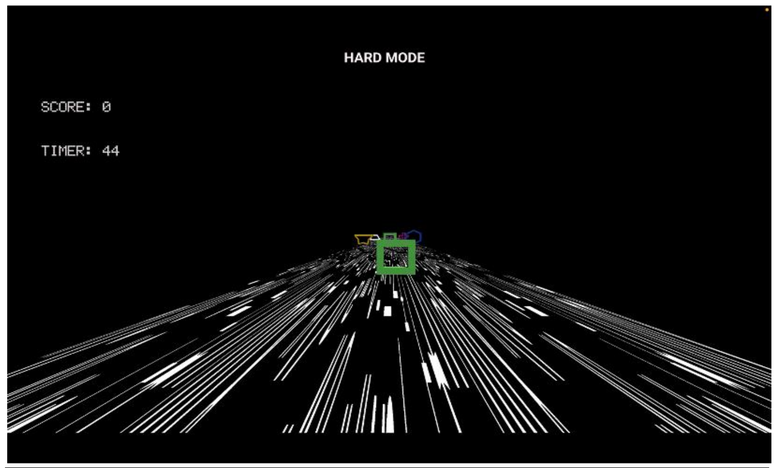
REFERENCE:
https://healthcare.utah.edu/locations/sugar-house/rehab-therapy/traumatic-brain-injury.php

Conclusions

A fast recovery requires moderates and regular practices under supervision..

Overview

Target Object I



Target Object II

Result

Support and speed up the rehabilitation process of humans,
example of brains-damaged or muscle-damaged.

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