Rehabilitation Process for Parkinson Disease Patient using Exergames

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Abstract

The increasing rate of PD patient requires more creative approach to assist in the rehabilitation process. Support group such as Malaysian Parkinson Disease Association or MPDA normally carry out activities such as dancing and Tai Chi have limited space to cater to all PD patient at once. Rehabilitation process involves cost including cost for transportation and registration fees for patient to go to rehab center. On the other hand, rehabilitation processes are boring and that makes the patient unable to carry out the rehabilitation process consistently. Although exergames have been in the market for three decades now, it still lacks on focus on users with special needs. Most exergames are developed for healthy people. There are a few exergames developed for PD patient but the tools involved for them to play or indirectly rehab them is not suitable since it requires them to hold an item. PD patient have tremors and this will make it difficult for them to enjoy the game. It is crucial for developer to design games with the objectives for particular rehabilitation needs and capabilities as well as the target population. Certain exergames developed for PD patient are too challenging and this fails to motivate PD
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patient. Up to this point, limited research has been conducted for hand eye coordination. The purpose of this research is to identify and propose a framework that enables development of application for patient with Parkinson disease to carry out rehab based on their stages.

References


Index Terms

Computer Science

Biomedical

Keywords

Kinect, exergames, Parkinson, framework