BALANCE CONTROL MECHANISMS IN INDIVIDUALS WITH MULTIPLE SCLEROSIS IN VIRTUAL REALITY ENVIRONMENT

A METHODOLOGICAL RESEARCH.

TABLE OF CONTENTS

INTRODUCTION

- Multiple sclerosis (MS) is a disease that is being spread in people rapidly
- Over 2.5 million people are affected by Multiple Sclerosis (MS)
- It is a disease on motor neurons in the human brain.
- People affected with Multiple Sclerosis (MS) go through a lot of debilitating symptoms.
- The major symptoms of Multiple Sclerosis are difficulty in walking and, maintaining balance

COMMON ISSUES

- Maintaining balance and Gait are common issues caused in motors by the Multiple Sclerosis (MS)
- Poor balance control is also well known to be a significant risk factor for both falling and inhibiting a rational fear of falling

MULTIPLE SCLEROSIS AND VIRTUAL REALITY (VR)

- Virtual reality in context is basically a full-fledged developed technique in order to deal with Multiple Sclerosis (MS)
- Various evidences have proven that Virtual Reality helps people to improve their balance while thinking as well as walking.
- Virtual reality (VR) has its potential benefits because it is absolutely user friendly because people enjoy using it and it also adds to compliance.
- However, Virtual Reality like any other technique to deal with a disorder or a disease too has its limitations.

- It is because it as yet has not developed various and diverse platforms or mechanisms to deal with Multiple Sclerosis.
- It might take the field of Virtual Reality to develop various different routes through which people could exercise their balance controls.

JUSTIFICATION OF THE STUDY

- The study and the research aims to understand how and in what ways does Virtual Reality help people deal with Multiple Sclerosis
- It would want to analyze and justify the biomechanical reasons and implications of movement analysis in Multiple Sclerosis
- The research abstract indicates that people who have used the VR have proved its implications rightfully than the conditional settings.
- The proposed study aims to fill this research gap by assessing the role of VR in balance control in persons with MS.

OBJECTIVES

- The proposal of this dissertation aims to identify key factors related to Virtual Reality that would help people with Multiple Sclerosis
- It aims to determine the balance response of people with respect to Multiple Sclerosis
- It will consider comparisons and variations in the conditional settings of Virtual Reality.

METHODOLOGY

- Research methodology that shall be used in this research will be an empirical approach
- Primary data collection method shall be utilized
- This shall be done in order to gather all the requires data from the patients.

REFERENCES

- (HARVARD) Burdea, G.C. and Coiffet, P., 2003. Virtual reality technology. John Wiley & Sons.
- Anthes, C., García-Hernández, R.J., Wiedemann, M. and Kranzlmüller, D., 2016, March. State of the art of virtual reality technology. In 2016 IEEE aerospace conference (pp. 1-19). IEEE.
- Maggio, M.G., Russo, M., Cuzzola, M.F., Destro, M., La Rosa, G., Molonia, F., Bramanti, P., Lombardo, G., De Luca, R. and Calabrò, R.S., 2019. Virtual reality in multiple sclerosis rehabilitation: A review on cognitive and motor outcomes. Journal of Clinical Neuroscience, 65, pp.106-111.
- Casuso-Holgado, M.J., Martín-Valero, R., Carazo, A.F., Medrano-Sanchez, E.M., Cortés-Vega, M.D. and Montero-Bancalero, F.J., 2018. Effectiveness of virtual reality training for balance and gait rehabilitation in people with multiple sclerosis: a systematic review and meta-analysis. Clinical rehabilitation, 32(9), pp.1220-1234.