

Vestibular rehabilitation: use of accessible technology for the treatment of motion sickness

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INTRODUCTION

Motion sickness is triggered by a sensory conflict between the information from the vestibular, visual and proprioceptive systems. Its prevalence has increased with modern life due to the increase in the use of new media in vehicles, and use of video games, 3D movies, and virtual simulators.

OBJECTIVE

To evaluate the effectiveness of moving digital imaging technology as a vestibular rehabilitation tool in individuals with motion sickness.

METHODS

The study was approved by the ethics committee under number CAAE 17853713.0.0000.5149

The DVD was designed using Windows Movie Maker and Convert X version 4 programs, containing GIF images extracted from the Google image bank that promoted eye movements such as saccadic, optokinetic, and smooth pursuit, at three different speeds for each target movement.

The DVD was tested in a group of 9 patients, aged 21 to 54 years with complaints of motion sickness, using only the DVD as a form of treatment. This group was submitted to a pre- and post-treatment evaluation.

Participants were assessed using the Brazilian version of the Dizziness Handicap Inventory (DHI) and Visual Analogue Scale (VAS).

Measures of proportion, central tendency and dispersion were used for descriptive data analysis and comparisons between groups were performed with appropriate statistical tests, considering a significance level of 5%.

RESULTS

The convenience sample consisted of a group of 9 patients (2 males and 7 females), age ranging from 21 to 54 years (mean age 38.78 years)

There was an improvement in the VAS and DHI scores in all evaluated aspects, with a statistically significant difference in the comparison between pre- to post-treatment scores with the use of DVD.

There was also an improvement in motion sickness symptoms in all subjects.

CONCLUSION

The treatment of motion sickness through the use of DVD with digital images that generate visual stimuli proved to be effective to remedy and/or reduce symptoms and improve the impact on the participants' quality of life. It is an accessible, low-cost and easy-to-handle tool, which favors its use in clinical practice.

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