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2015-09-03
http://hdl.handle.net/10539/18435

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The characteristics of individuals which influence vestibular therapy outcomes: A retrospective record review

A dissertation submitted to

The Department of Speech Pathology and Audiology

School of Human and Community Development

Faculty of Humanities

University of the Witwatersrand

In fulfilment of the requirements of the degree

Master of Arts in Audiology

by

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February, 2015

Abstract

Purpose: In primary care settings, dizziness is reportedly one of the most common complaints seen by physicians (Desmond, 2004). Dizziness, although originating from many causes, often occurs from peripheral vestibular pathology (Kroenke, Hoffman & Eistandter, 2000). Vestibular rehabilitation therapy (VRT) is used to treat peripheral vestibular disorders. As with all therapy, patient characteristics often affect therapy outcomes. Research has been conducted into some of these characteristics and how they affect VRT, however patients often possess more than one of these characteristics. Little research has been conducted on multiple characteristics and how these characteristics influence each other. The current study aimed to address this shortcoming and aimed to identify therapy outcome indicators when looking at the patient holistically.

Data source: The research included the records from patients who underwent videonystagmography (VNG) testing and were referred for VRT at a balance and dizzy clinic in Johannesburg, South Africa between 2010 and 2013.

Design: A retrospective quantitative research design was used in this study.

Method: Once ethical clearance was obtained, the necessary information was extracted from the patients' files who provided informed consent and who met the inclusion criteria. The relevant information was tabulated and was analysed and interpreted using the relevant literature.

Data Analysis: To consider relationships of the variables in isolation, Chi-square tests and Spearman's correlation were used. A stepwise modelling method was applied. Decision tree models were used to investigate the effect of patient characteristics in combination.

Results: When looking at the characteristics individually, the presence of fluctuating dysfunction and balance confidence were found to influence vestibular therapy outcomes.

When looking at characteristics that would influence therapy outcomes in combination; the presence of fluctuating dysfunction, a low Activities-specific Balance Confidence Scale (ABC) score, right sided lateralisation of peripheral vestibular pathology and gender, specifically females, influenced vestibular therapy outcomes in a negative manner. A better ABC score, age above 50 years, no central signs and anxiety were also found to have positive bearing on vestibular therapy outcomes when found in combination.

Discussion, conclusion and implications: Fewer than hypothesised patient characteristics were found to be of influence when considering them in isolation. Looking at a patient from a holistic point of view was a specific highlight and further emphasised the need for researching patient characteristics in combinations. Examination of the influences to therapy outcomes in combination allows for the patient to be treated as a whole, ultimately leading to better patient care. The clinician should work within a multidisciplinary team, and understand that patient perception is often the largest influencer of all. The current study highlighted implications for the clinicians of today and the future, emphasising indicators which could potentially influence the therapy process. It also provided the clinician with information on the aspects which should be specifically addressed in order to prevent them from possibly influencing therapy outcomes. This study also identified the need for further research into combination of patient characteristics that would influence vestibular therapy outcomes. Future research should consider broadening the scope, looking at the private and public healthcare systems in South Africa and what therapy influencers may be at play in each dynamic. The characteristics that were identified were transferable, however additional characteristics may become relevant in difference environments. A longer time period with an objective as well as a subjective measurement should be considered. Lastly, the current study provides information in development of policy for public and private healthcare systems, providing realistic therapy time periods and resources for patients, as not all patients perform the same way in therapy.

Keywords: Peripheral vestibular pathology; Dizziness; Vestibular rehabilitation therapy; Patient characteristics