**Reading Research Literature**

**The following questions pertain to:**

Velayutham, S. G., Chandra, S. R., Bharath, S., & Shankar, R. G. (2017). Quantitative balance and gait measurement in patients with frontotemporal dementia and Alzheimer diseases: A pilot study. *Indian Journal of Psychological Medicine, 39*(2), 176-182. doi:10.4103/0253-7176.203132

1. **What is the purpose of this research?**

The research intends to determine the impacts of Frontotemporal dementia (FTD) and Alzheimers disease (AD) on gait movement and quantitative balance of geriatric patients leading to falls. The research hypothesizes that that elderly patients with AD or FTD or both have higher chances of falls as the conditions impair their quantitative balance and walking pattern.

1. **What is the research question (or questions)? This may be implicit or explicit.**

* What are the effects of AD in the patients gait measurement and quantitative balance?
* What are the effects of FTD in the patients gait measurement and quantitative balance?

1. **Give a complete description of the research design of this study.**

The research was a correlational setting where twenty-four elderly patients of ages between 50-70 years were recruited for the case control and observational study. The participants were categorized into three groups including two study groups with eight participants each of probable FTD and AD respectively and a control group of eight healthy volunteers. The research was conducted in a controlled community setting intended to assist in the planning of falls prevention strategies among the elderly AD and FTD patients by determining the impacts of the two disorders on the posture balance and movement of the patients. The research data were collected through the use of Biodex Balance Master and Gait trainer for balance and gait respectively. The data were analyzed through comparison with data drawn from the control group.

1. **What is the population (sample) for this study?**

The sample population for the research included male elderly subject of ages between 50 to 70m years classified into three groups of 8 participants diagnosed with FTD, 8 with AD, and the last 8 of healthy volunteers as the control group.

1. **Was the sample approach adequate for the research design that was selected and explain why.**

Yes, since the sample selection of participants between 50-70 years facilitates narrow grouping. Also, elimination of people with other secondary diagnosis such as vision problem and other orthopedic issues that would have sabotaged the research was appropriate in ensuring effectiveness of the research outcome. However, a larger sample would have been more persuasive.

1. **Describe the data collection procedure.**

The research data were collected through the use of Biodex Masters Incorp and Biodex Gait Trainer to measure the subjects’ balance and movement. The equipment was strategically placed on a platform where the three groups of participants were subjected to the balance test and the results compared to the control group.

1. **How were the data analyzed after collection?**

The data was analyzed by comparing the three groups and outlining areas of gait and balance issues that were dissimilar for every group. Also, single as well as dual task comparison was used to identify areas where disruption caused most effects on gait and balance.

1. **Discuss the limitations found in the study.**

One of the limitations in the research included the use of small sample size. The use of a larger sample facilitates authenticity by providing substantial evidence. Also, the use of male participants only was a misrepresentation of the whole group at risk of falls.

1. **Discuss the authors' conclusions. Do you feel these conclusions are based on the data that they collected?**

The researcher concludes that gait and balance is influenced by aging, AD, and FTD with the two conditions hastening the impact. Also, some of the significant effects that tends to out in the research include FTD patients influenced by forward tip while AD patients experienced backward tip during the balance and gait test.

1. **How does this advance knowledge in the field?**

The information acquired from the experiment assists in implementation of falls reduction measures among the geriatric patients with AD and FTD by taking precautions of balance and gait.

**The following questions pertain to:**

Pals, R. S., Hansen, U. M., Johansen, C. B., Hansen, C. S., Jørgensen, M. E., Fleischer, J., & Willaing, I. (2015). Making sense of a new technology in clinical practice: a qualitative study of patient and physician perspectives. *BMC Health Services Research*, *15*(1), 1-10. doi:10.1186/s12913-015-1071-1

1. **What is the purpose of this research?**

The research intends to evaluate the importance of modern technology in enhancing practitioners practice and improving the outcome of patients. The study assesses the expediency of handheld equipment that monitors and records patients’ heart rate during different activities. The equipment is useful in detecting cardiovascular autonomic neuropathy among patients with diabetes.

1. **What is the research question (or questions)? This may be implicit or explicit.**

Is application of modern technology effective in improving patients’ outcome and practitioners practice?

1. **Give a complete description of the research design of this study.**

The research is a correlational design that used qualitative data obtained through observations and interview with patients who had undergone the CAN test. The study drew data from CAN test, medical observations, and open ended interviews for the patients and physicians.

1. **What is the population (sample) for this study?**

A population sample of 19 patients between the ages 36 to 79 years were used for the study. The participants included 6 female and 16 males with 16 of the patients diagnosed with DM2 and the other 3 with DM1. The considerable disease range for the study was between 2 to 43 years. Also, 9 practitioners were selected for the study, 3 male and 6 female.

1. **Was the sample approach adequate for the research design that was selected and explain why.**

Yes, the sample included appropriate age range and gender balance, which was appropriate for the qualitative research.

1. **Describe the data collection procedure.**

The data collection process included patients’ recruitment and CAN test. Other data collection [procedure involved routine consultation and observation as well as interviews with both patients and physicians.

1. **How were the data analyzed?**

Analytical approach was used to analyze the collected data, where the data from interviews and observations were subjected to systematic evaluation. The perspectives of the physicians and patients on the CAN device facilitated content analysis.

1. **Discuss the limitations found in the study?**

Some of the limitations in the research include medical complications that could not allow some patients to undergo the CAN test. Also, the lack of awareness on the implications of CAN test creating hesitance in compliance.

1. **Discuss the authors' conclusions. Do you feel these conclusions are based on the data that they collected?**

The researcher concluded that technology provides essential riles in improvement of patients safety and outcome as well as the efficiency of the physicians. Also, the importance of comprehensive understanding of the modern equipment such as the CAN device as well as effective communication between the patients and physicians is important for effective use of technology in health care.

1. **How does this advance knowledge in the field.**

The research outlined the significance of technology in improvement of healthcare delivery as well as considerations of patients and physicians perspectives prior to device intervention.