

P39 - EXAMINING THE APPLICATION OF PORTABLE ACTIGRAPHY TO THE MEASUREMENT OF NEUROPSYCHIATRIC SYMPTOMS OF DEMENTIA (STUDENT POSTER)

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Brief Description of Research or Project: The number of older adults with dementia is increasing and neuropsychiatric symptoms (NPS), such as agitation and aggression, are experienced by a majority of individuals with dementia. Accurate measurement of NPS is necessary for diagnosis and management of these challenging behaviors. Actigraphy, or electronic motion analysis, may provide a more accurate, objective, and reliable measurement of NPS when compared to the current methods which rely on subjective caregiver or nursing staff reports. Therefore, the goal of our project is to examine the application of actigraphy in the evaluation of NPS of agitation associated with dementia in older adults. The objectives of our project are to determine the actigraphic characteristics of 30 individuals and to evaluate whether specific patterns of motor activity are correlated with NPS of agitation as determined by nursing staff rated measures. To date, a small actigraph has been attached to the wrists of 7 participants (M age=76.14, SD=6.15) to obtain seven 24-hour measurements of activity. Preliminary analyses suggest that individuals who are high in agitation (M=16.64, SD=10.12; Cohen-Mansfield Agitation Inventory score \geq 40) display distinct actigraphic movement patterns at night compared to those who are low in agitation (M=72.85, SD=27.89); $t(3)=-3.40$, $p=0.042$. Improvements in measurement of NPS through the use of actigraphy would have important clinical implications for the early detection of NPS and monitoring change of NPS in response to treatment. Actigraphy permits a quantitative and objective measure of NPS which may provide more valid and reliable assessment of NPS when compared to current methods of measuring NPS. **Why is this research important to profile at the Research Day 2014?** This study will be one of the first to evaluate the application of actigraphy to the measurement of NPS in older adults with dementia. NPS of dementia are important as they are the leading cause of admission to LTC for individuals with dementia, are associated with an increased cost of care, decreased both patient and caregiver quality of life, a more rapid decline in cognition and function, and increased mortality. The application of actigraphy to measure NPS may facilitate a more comprehensive and detailed evaluation of NPS compared to current methods that rely on informant rating of questionnaires. Utilizing actigraphy to measure NPS may also be less burdensome for nursing staff to utilize when compared to completing informant questionnaires or behavioral charting. The data collected by actigraphy also permits a quantitative and objective measure of NPS which may provide more valid and reliable assessment of NPS. Our research will also inform future potential applications of actigraphy to the clinical care of populations with other mental illnesses or neurological conditions. To date data collection has been completed on 7

participants, with consent collected for another 8. Data collection for this study is projected to be completed by early February, 2014.