Sedentary Behavior and its relation to Physical and Emotional Functioning Abstract

Background: Older adults spend the majority of their time being sedentary, which is linked to a higher risk of cardiovascular disease, obesity, and other negative health outcomes, independent of physical activity levels. Most studies of sedentary behavior have focused on disease outcomes, while very few have focused on emotional functioning such as depressive symptoms. In older adults, functioning is also an important indicator of independence, mobility and mortality.

Objectives: To assess the relation between sedentary behavior and physical and emotional functioning (Quality of Life and Depression).

Methods: Baseline data from a randomized controlled trial in 7 Continuing Care Retirement Communities (CCRC) were employed. Participants were older adults who presented with no falls risk. The independent variable, sedentary behavior, was measured objectively by hip worn accelerometry. Physical functioning was measured objectively using the Short Performance Physical Battery (SPPB) and the timed 400 Meter Walk Test. Self-Report surveys included the Late Life Functioning Disability Instrument (LLFDI), the perceived quality of life measure, and the CESD depressive symptoms scale. Linear Regression models were employed for each of the five physical and emotional functioning outcomes, adjusting for age, gender, and meeting the physical activity guidelines (less than or above 30 minutes of moderate to vigorous activity).

Results: A total of 229 participants (average age of 84) were assessed; 30% were male and 70% female. Minutes spent in sedentary behavior per day was significantly negatively related to physical functioning measured by the SPPB and LLFDI. Sedentary minutes were also negatively related to quality of life and positively related to depressive symptoms.

Conclusions: Older adults, who spend more time being sedentary, may have a higher risk for depression and a lower quality of life. They also have poorer physical functioning. Further research is needed to establish findings to all older adults.