(P22) PHYSICAL ACTIVITY PREDICTS PROGRESSION OF MOBILITY IMPAIRMENTS IN
MULTIPLE SCLEROSIS

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Background: Previous researchers have identified demographic (eg, sex) and clinical (eg, age of onset, disease type, occurrence of a relapse) variables as predictors of the progression of mobility impairments in people with multiple sclerosis (MS). To date, researchers have not examined physical activity as a behavioral predictor of mobility impairments using valid outcome measures and a longitudinal research design. Objectives: This study examined physical activity as a predictor of the progression of mobility impairments in people with MS using valid measures of both physical activity and mobility and a prospective research design. Methods: The sample included 272 individuals with a definite diagnosis of relapsing-remitting MS. On two occasions separated by 6 months, the participants completed the Godin Leisure-Time Exercise Questionnaire (GLTEQ), International Physical Activity Questionnaire (IPAQ), Patient Determined Disease Steps (PDDS) scale, and Multiple Sclerosis Walking Scale–12 (MSWS-12). The data were modeled using panel analysis in Mplus. Results: The panel analysis indicated imperfect stability (ie, change in the rank ordering of participants) of physical activity (stability coefficient = 0.67) and mobility impairment (stability coefficient = 0.94) across time. The panel analysis further identified direct effects between baseline physical activity and mobility impairment (path coefficient = −0.35) and 6-month change in physical activity and mobility impairment (path coefficient = −0.17). The second path coefficient indicated that a 1-SD reduction in physical activity was associated with a 0.17-SD worsening in mobility impairment. Conclusions: The findings provide preliminary support for a reduction in physical activity as a behavioral predictor of the progression of mobility impairment in people with MS. One future research direction involves targeting an increase in physical activity as a behavioral approach for combating mobility impairment in MS.

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