Impact of Functional Impairment, Barriers, and Depression on Physical Activity in Persons with Longstanding Multiple Sclerosis

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Background: Research suggests that physical activity (PA) may have positive effects on symptoms experienced by persons with multiple sclerosis (MS) yet challenges exist which foster sedentary lifestyles. Little is known of the effects depression and barriers have on PA after controlling for functional impairment in persons with longstanding MS. The purpose of this study was to explore the impact of these constructs on measures of PA while controlling for functional impairment in persons MS who have been diagnosed for more than 15 years.

Methods: A sample of 369 persons with MS (85% female, mean age 61.4 ± 9.3; mean disease duration 24.5 ± 6.6 years) in an ongoing longitudinal health promotion study completed the Barriers to Health Promoting Activities for Disabled Persons Scale, the CES-Depression Scale, the MS Incapacity Status Scale, the Health Promoting Lifestyle II (HPLP II) and the Human Activity Profile (HAP). Reliability coefficients for summated scales were greater than .85. The PA subscale of the HPLP II assesses how often persons report engaging in PA of varied intensity and duration. The HAP provides an adjusted activity score (AAS), which reflects current activities regardless of frequency. Descriptive statistics, Pearson correlations, and hierarchical regression were used to analyze the data.

Results: HPLP II PA and AAS scores were moderately correlated (r=.47, p<.01). Education, impairment, and depression explained 25% of the variance in HPLP II PA subscale scores. Age, impairment, and depression explained 68% of the variance in scores on the AAS. Findings support the expected theoretical relationships between functional impairment, depression, barriers, and behavior. Depression added significant unique variance to predicting PA in both measures, while barriers did not. The variation in the relationships between predictors and outcomes is consistent with the differences in the conceptualization and operationalization of PA.

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