

**Title:** Examining the association of symptom-control self-efficacy and somatic cognitive errors with perceptions of walking impairment in people with multiple sclerosis

**Authors:** Ashika Dhiman<sup>1</sup>, MSc , Melissa Roe<sup>2</sup>, MSc , Sean Locke<sup>1</sup>, PhD.

**Affiliations :**

1: Department of Kinesiology, Brock University, St. Catharines, Ontario, Canada

2: School of Nursing, University of British Columbia, Okanagan, British Columbia, Canada

**Background:** Multiple sclerosis (MS) is a chronic neurological disease with mobility impairment as a common and debilitating symptom. Research suggests that perceived impairment can differ from actual mobility impairment. Thus, there is a need to explore the psychological factors associated with perceptions of mobility impairment, which serve as targets for physical activity promotion in people with MS.

**Objective:** To examine whether symptom control self-efficacy and somatic cognitive errors were associated with perceived walking impairment in people with MS.

**Methods:** Participants ( $N = 105$ ) completed an online survey with validated measures of: MS symptom control self-efficacy, somatic cognitive errors, and perceived walking impairment.

**Results:** Perceived walking impairment was positively correlated with somatic cognitive errors ( $r = .336, p < .001$ ) and negatively correlated with symptom control self-efficacy ( $r = -.363, p < .001$ ). In multiple regression analyses, somatic cognitive errors ( $B = .244, p < .01$ ) was significantly associated with perceived walking impairment beyond symptom control self-efficacy ( $B = -.144, p > .05$ ) and three covariates (objective disability status, gender, and years since diagnosis).

**Conclusion:** Somatic cognitive errors accounted for a significant portion of variance in perceived walking impairment in people with MS, independent of self-efficacy. Further experimental studies are needed to understand whether somatic cognitive errors are a psychological mechanism that may be targeted to modify physical activity in those with MS.

**Corresponding Author:** Ashika Dhiman, MSc