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Balance Confidence Predicts Physical Function, Participation, and Stroke Recovery after Inpatient Rehabilitation

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Introduction: Stroke affects 50,000 Canadians each year and is the leading cause of neurologic disability in Canada. There is emerging evidence that stroke survivors often have reduced balance confidence over the course of their recovery. Balance confidence is the self-efficacy or belief that one can maintain balance while performing selected specific activities that commonly challenge balance. Based on Bandura's social cognitive theory, self-efficacy is said to be a stronger predictor than skill in predicting an individual's action, task performance and behaviours. Low balance confidence is a major psychological barrier that may lead to decreased participation in daily and social activities. Little is known about balance confidence immediately after stroke and whether it predicts stroke-related outcomes.
Objective: To determine if balance confidence predicts physical function, participation and self-reported stroke recovery while controlling for variables describing the individual's health condition, body function and contextual factors.
Methods: Ninety eight individuals with a first ever stroke were tested within 1 month of discharge from rehabilitation and 3 months later. Balance confidence was measured using the Activities-specific Balance Confidence (ABC) Scale. The dependent variables of interest were captured using subscales of the Stroke Impact Scale. Control variables included; the number of comorbidities, depression, anxiety, balance ability, walking endurance, age and sex. Multiple regression analysis was used to identify important predictors.
Results: The mean balance confidence for the mostly male (71%), older adult sample (mean age 67.7 + 10) was 62 + 24 (maximum score 100). Balance confidence was a the strongest predictor of physical function, participation, and stroke recovery explaining 48.9%, 16.9%, and 27% of the variance in these independent variables respectively.
Conclusion: Balance confidence is low post discharge from stroke rehabilitation. Moreover it is an independent predictor of physical function, participation and stroke recovery. Support is provided for Bandura's premise that self-efficacy is more important than skill in predicting behaviour.
Clinical Implications: Balance confidence is a remedial condition; however, it is seldom if ever addressed in rehabilitation. The findings of this study will contribute to the knowledge in determining the need and timing for intervention for individuals with reduced balance confidence.