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The Mediation Impact of Demographic and Clinical Characteristics on the Relationship between Trunk Control and Quality of Life among the Sub-Acute Stroke Population: A Cross-Sectional Study

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Abstract : Background: Despite trunk control's significant contribution to improving various functional activity components, the independent effect of trunk performance on quality of life is yet to be estimated in stroke survivors. Ascertaining the correlation between trunk control and self-reported quality of life while evaluating the effect of demographic and clinical characteristics on their relationship will guide concerned healthcare professionals in designing ideal rehabilitation protocols during the late sub-acute stroke stage of recovery. The aims of the present research were to (1) investigate the associations of trunk performance with self-rated quality of life and (2) evaluate if age, body mass index (BMI), and clinical characteristics mediate the relationship between trunk motor performance and perceived quality of life in the sub-acute stroke population. Methods: Trunk motor functions and quality of life among the late sub-acute stroke population aged 57.53 ± 6.42 years were evaluated through the trunk Impairment Scale (TIS) and Stroke specific quality of life (SSQOL) questionnaire, respectively. Pearson correlation coefficients and mediation analysis were performed to elucidate the relationship of trunk motor function with quality of life and determine the mediation impact of demographic and clinical characteristics on their association, respectively. Results: The current study observed significant correlations between trunk motor functions (TIS) and quality of life (SSQOL) with $r=0.68$ ($p<0.001$). Age, BMI, and type of stroke were detected as potential mediating factors in the association between trunk performance and quality of life. Conclusion: Validated associations between trunk motor functions and perceived quality of life among the late sub-acute stroke population emphasize the importance of comprehensive evaluation of trunk control. Rehabilitation specialists should focus on appropriate strategies to enhance trunk performance anticipating the potential effects of age, BMI, and type of stroke to improve health-related quality of life in stroke survivors.

Keywords : sub-acute stroke, quality of life, functional independence, trunk control
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