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**Scientific Abstract**

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**Development And Preliminary Validation Of Stroke Physical Activity Questionnaire**

**Thunyakamon Phusuttatam, Jittima Saengsuwan, Pajeemas Kittipanyangam** Faculty of medicine Khon Kaen university, Thailand

Development and preliminary validation of stroke physical activity questionnaire

Thunyakamon Phusuttatam, Jittima Saengsuwan, Pajeemas Kittipanyangam

Department of Rehabilitation Medicine, Faculty of Medicine, KhonKaen University, Khon Kaen, Thailand

**Background** No questionnaire was specifically designed to assess physical activity in stroke patients. The aim of this study was to develop and to determine preliminary validity of stroke physical activity questionnaire (SPAQ).

**Methods** This cross-sectional study was done in 92 chronic stroke patients who were ambulatory. The study was divided into two main phases: phase I was to develop SPAQ and determined content validity index (CVI); phase II was to determine concurrent validity of SPAQ compared to International Physical Activity Questionnaire-Short Form (IPAQ-SF). The convergent validity was determined using SPAQ versus six-minute walk test (6-MWT), timed up and go test (TUG), motricity index, National Institute of Health Stroke Scale (NIHSS), Modified Rankin Scale (MRS). Discriminant validity was determined using the data from SPAQ versus Montreal Cognitive Assessment (MoCA).

**Results** SPAQ has 11 items within 3 main components which were low (7 items), moderate (3 items) and vigorous (2 items) physical activity. The SPAQ had CVI of 0.93 and the concurrent validity of SPAQ vs IPAQ-SF using Spearman's correlation coefficient was moderate ( $r_s = 0.53$ ,  $p$  value  $< 0.001$ ). Regarding convergent validity, the SPAQ had low to moderate correlation with 6-MWT, MI, NIHSS, FAC, TUG and MRS ( $p$  value  $< 0.05$ ). Regarding discriminant validity, the SPAQ did not show relationship with MoCA  $r_s = 0.061$  ( $p$  value  $= 0.68$ ) as expected from theory.

**Conclusion** SPAQ can practically assess physical activity in chronic stroke patients and has comparable psychometric property to other standard physical activity questionnaires. Further study to validate SPAQ with accelerometer is warranted.