

**A 12-MONTH PATTERN AND INTER-RELATIONSHIPS OF  
MOTOR PERFORMANCE, FUNCTIONAL ACTIVITY,  
SOCIETAL PARTICIPATION AND HEALTH-RELATED  
QUALITY OF LIFE OF STROKE SURVIVORS**

BY

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## ABSTRACT

Stroke is a major cause of disability affecting human functioning and health attributes such as Motor Performance (MP), Functional Activity (FA), Societal Participation (SP) and Health-Related Quality of Life (HRQoL). Recovery from stroke may begin immediately after the incident and continues for several years. Lack of information on long-term post-admission follow-up of functioning and health attributes of stroke survivors in Nigeria is a shortcoming that may impact on rehabilitation. Therefore, pattern and inter-relationships among MP, FA, SP and HRQoL of stroke survivors during a 12-month period were studied.

This longitudinal study involved 83 consecutive patients with first-incident stroke admitted within four weeks of the incident into the University of Maiduguri Teaching Hospital. Stroke severity, MP and FA were assessed using Stroke Levity Scale (SLS), Simplified Fugyl Meyer (S-FM) scale and Functional Independence Measure (FIM) respectively at baseline. Patients were followed up monthly at their respective places of abode for assessment of MP and FA for 12 consecutive months while HRQoL and SP were assessed at 1<sup>st</sup>, 3<sup>rd</sup>, 6<sup>th</sup>, 9<sup>th</sup> and 12<sup>th</sup> months using Health-Related Quality of Life in Stroke Patients (HRQoLISP-40) questionnaire and London Handicap Scale (LHS) respectively. Data were analysed using descriptive statistics, Friedman's ANOVA and Spearman rank correlation at  $p = 0.05$ .

Fifty-five patients completed the study. Mean age was  $58.0 \pm 12.8$  years; majority (60.0%) were males; ischemic stroke sub-type (70.9%) was more common and most (60.0%) presented with left hemiplegia. The S-FM score significantly increased linearly from baseline (29.0) to 7<sup>th</sup> month (92.0) and FIM score increased from 47.0 at baseline to 88.0 at 10<sup>th</sup> month and thereafter stabilised. The median LHS score increased from baseline (57.0) through 3<sup>rd</sup> (60.0), 6<sup>th</sup> (63.0) and 9<sup>th</sup> (70.0) months likewise HRQoLISP score increased from 58.0 at baseline to 3<sup>rd</sup> (59.5), 6<sup>th</sup> (62.3), 9<sup>th</sup> (67.0) and 12<sup>th</sup> (67.0) months. Significant correlations were

obtained between S-FM and FIM scores at 1<sup>st</sup> ( $r = 0.8$ ), 3<sup>rd</sup> ( $r = 0.8$ ), 6<sup>th</sup> ( $r = 0.9$ ), 9<sup>th</sup> ( $r = 0.8$ ) and 12<sup>th</sup> ( $r = 0.9$ ) months; between S-FM and LHS scores at 1<sup>st</sup> ( $r = 0.7$ ), 6<sup>th</sup> ( $r = 0.7$ ), 9<sup>th</sup> ( $r = 0.7$ ) and 12<sup>th</sup> ( $r = 0.7$ ) months between S-FM and HRQoLISP scores at 6<sup>th</sup> ( $r = 0.7$ ), 9<sup>th</sup> ( $r = 0.7$ ) and 12<sup>th</sup> ( $r = 0.7$ ) months. Significant correlations were also observed between FIM and LHS scores at 1<sup>st</sup> ( $r = 0.9$ ), 3<sup>rd</sup> ( $r = 0.8$ ), 6<sup>th</sup> ( $r = 0.8$ ), 9<sup>th</sup> ( $r = 0.8$ ) and 12<sup>th</sup> ( $r = 0.8$ ) months; between FIM and HRQoLISP scores at 1<sup>st</sup> ( $r = 0.7$ ), 3<sup>rd</sup> ( $r = 0.7$ ), 6<sup>th</sup> ( $r = 0.7$ ), 9<sup>th</sup> ( $r = 0.7$ ) and 12<sup>th</sup> ( $r = 0.8$ ) months. The LHS and HRQoLISP scores significantly correlated at 1<sup>st</sup> ( $r = 0.8$ ), 3<sup>rd</sup> ( $r = 0.8$ ), 6<sup>th</sup> ( $r = 0.8$ ), 9<sup>th</sup> ( $r = 0.8$ ) and 12<sup>th</sup> ( $r = 0.9$ ) months.

Functioning and health attributes of the stroke survivors improved over 12 months. Linear inter-relationships as observed among their functioning and health attributes imply the need for stroke rehabilitation to be all-inclusive over extended period.

**Keywords:** Cerebrovascular accident, Functional activity, Societal participation, Health-Related Quality of Life

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## CERTIFICATION

We hereby certify that Mrs. Grace Oluwatitofunmi VINCENT-ONABAJO (nee PETERS) carried out this PhD (Neurological Physiotherapy) research work in the Department of Physiotherapy, College of Medicine, University of Ibadan, under our supervision.

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