

## **Inter-rater Reliability and Validity of the Stroke Rehabilitation Assessment of Movement (STREAM) Instrument**

Chun-Hou Wang, Ching-Lin Hsieh, May-Hui Dai, Chia-Hui Chen, and Yu-Fen Lai

The Stroke Rehabilitation Assessment of Movement (STREAM) instrument is used to measure motor and mobility problems in patients who have experienced a stroke. The purposes of the study were to examine the inter-rater reliability, concurrent and convergent validity of the STREAM instrument in stroke patients. Fifty-four stroke patients participated in the study. For the purpose of inter-rater reliability, the STREAM instrument was administered by two raters on each patient within a 2-day period. Validity was assessed by comparing the patients' scores on the STREAM instrument with those obtained from the other well-established measures. Weighted kappa statistics for inter-rater agreement on scores for individual items ranged from 0.55 to 0.94. The intraclass correlation coefficient for the total score was 0.96 indicating very high inter-rater reliability. The intraclass correlation coefficients were also very high in each of the subscales. The total STREAM score was moderately to highly associated with the score of the Barthel Index and Fugl-Meyer motor assessment scale,  $\rho = 0.67$ , and  $0.95$ , respectively. The STREAM subscale scores were closely associated with scores of the other well-validated measures. Our results demonstrate that consistent and valid information can be obtained from the STREAM instrument and support its use in the value of the STREAM evaluation of motor and mobility recovery in persons who have experienced a stroke.