

## Relationship between the Level of Spasticity and Activities of Daily Living during the First Year in Post Stroke Hemiplegic Patients

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Stroke is the world's second leading cause of death and third leading cause of both death and disability. Spasticity is one of the most common post stroke complications that affect activities of daily living (ADL). This study aimed to determine the relationship between level of spasticity and ADL during the first year in post stroke hemiplegic patients. A descriptive cross-sectional study was conducted with 45 post stroke hemiplegic patients from the University Hospital KDU Werahera and the Rheumatology and Rehabilitation Hospital Ragama. The Modified Ashworth Scale (MAS) and Barthel Index (BI) were used to assess spasticity and ADL respectively. Spasticity was assessed in elbow flexors, wrist flexors, finger flexors, knee extensors and ankle extensors. Most of the participants showed "1+" in both elbow flexors (n=21,47%) and wrist flexors (n=16,35.6%) while "0" in finger flexors (n=20,44%). Most of the participants reported "1" in both knee extensors (n=17,38%) and ankle extensors (n=18,40%). According to BI, an equal number of participants were reported as a majority within the ranges of 21-60 and 61-90 (n=19,42.2%), which denotes severe dependency and moderate dependency, respectively. Wrist flexor spasticity and knee extensor spasticity were significantly negatively correlated ( $r=-0.25$ ,  $r=-0.40$ ,  $n=45$ ) with ADL. Elbow flexor spasticity, finger flexor spasticity and ankle extensor spasticity were not significantly associated with ADL. In conclusion, ADL decreases with increasing spasticity of wrist flexors and knee extensors. Therefore, early interventions are recommended to improve independence in ADL by reducing spasticity.

**Keywords:** *stroke, spasticity, ADL*