

UNIVERSITI TEKNOLOGI MARA

**DETERMINANTS OF PHYSICAL
ACTIVITY LEVEL AMONG
COMMUNITY-DWELLING
STROKE SURVIVORS IN
KELANTAN**

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ABSTRACT

Introduction: The present study aimed to identify the factors associated with post-stroke physical activity (PA) levels among community-dwelling stroke survivors in Kelantan. **Methodology:** A cross-sectional study was conducted in the outpatient rehabilitation department of Hospital Universiti Sains Malaysia (HUSM) among 100 participants. The utilized outcome measures are mRS, BM DASS-21, MMSE, 6MWT, 10MWT, standing balance assessment, SPPB, M-SPAQ and WHOQoL-BREF Malay in measuring stroke severity, neuropsychiatric symptoms, cognitive performance, physical endurance, gait speed, postural control, physical function, post-stroke physical activity level and health-related quality of life, respectively. **Results:** Post-stroke physical activity level are relatively low with 42% percent of the stroke survivors categorized under LPA with overall METs of 3.3; presence of comorbidities ($p= 0.003$), physical function ($p< 0.001$), age ($p< 0.001$), distance coverage ($p< 0.001$) and gait speed ($p< 0.001$) are observed to be significantly differed across LPA, MPA and VPA groups; also, age ($p= 0.001$), distance coverage ($p= 0.001$) and gait speed ($p= 0.003$) significantly predicts post-stroke PA; and post-stroke PA level were observed to be significantly associated with physical health ($r^s= 0.50$, $p< 0.001$), psychological health ($r^s= 0.41$, $p< 0.001$), social relationship ($r^s= 0.27$, $p= 0.007$) and environmental ($r^s= 0.40$, $p< 0.001$) domain of HRQoL. **Conclusion:** The study concluded that low PA levels were observed among the community-dwelling stroke survivors in Kelantan and that rehabilitation measures should be employed to enhance PA as early as possible to prevent subsequent strokes. Future researchers are warranted to include several factors barriers to PA, motivational and apathy level into the analysis; and encouraged towards the utilization of objective measurement of the PA and predictors. The present study could serve as a guideline in future stroke rehabilitation through establishment of a module emphasizing specifically on endurance and gait speed improvement via PA targeted intervention.

Keywords: physical activity, community-dwelling, stroke survivors, post-stroke, rehabilitation

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CHAPTER 1

INTRODUCTION

1.1. Background of Study

Stroke is a rapidly developing clinical signs of focal (or global) disturbance of cerebral function, lasting more than 24 hours or leading to death, with no apparent cause other than that of vascular origin (World Health Organization, 2005). According to Lanas and Seron (2021), stroke accounts for 14% of all global deaths. This means that it is the second largest cause of mortality and disability around the globe. In Malaysia, stroke has the incidence rate of 5.16% which causes approximately 19,928 deaths as reported in 2019. The overall prevalence is 443,995 with 512,726 disability-adjusted life years (DALYs). Reports indicate 53.3% increase in stroke cases among men and 50.4% among women in the 35-39 age group (Tan & Venketasubramanian, 2022). A previous retrospective cohort study that utilizes secondary data from National Stroke Registry (NSR) of Malaysia had found that among 5,777 stroke survivors, majority of them suffers ischemic stroke (IS) (80.5%) and survived 56.3 months longer (95% CI: 52.2, 60.3) when compared to those with intracerebral (ICH) (17.9%) and subarachnoid (SAH) (1.7%) hemorrhagic stroke (Wahab et al., 2024). The findings are in-line with (Girgenti et al., 2024) that suggest ischemic stroke survivors might show significant long-term rehabilitation trajectories compared to those with intracerebral and subarachnoid hemorrhagic stroke.

Saunders et al (2020) discovered that most stroke survivors present with low physical fitness which makes it difficult for them to carry out activity of daily living (ADL) and worsened disabilities which burden both themselves and their families. Stroke survivors are limited in their ADL, social roles, employment, mobility and economic self-sufficiency; and stroke survivors often show lower participation levels compared to healthy or pre-stroke individuals (Shrivastav et al., 2022).

Approximately two-thirds of stroke patients who are admitted to the hospital are discharged directly home which cause them to lose the continuity of care from the inpatient healthcare providers that they were used to receive in primary care (de Mooij et al., 2021). It is well known that continuity of care brings better quality of care. The