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Research Article

Prevalence and Associated Factors of Post-stroke Depression among Stroke Survivors in Sri Lanka: A Multicenter Cross-Sectional Study

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Abstract

Background: Stroke and its resulting disabilities are increasingly prevalent in low- and middle-income countries, underscoring the need to investigate post-stroke complications such as post-stroke depression (PSD). PSD is a common sequela of stroke, significantly impairing quality of life. This study aimed to determine the prevalence of PSD and identify its associated factors among stroke survivors in the Sri Lankan context.

Methods: A descriptive cross-sectional study was conducted, enrolling consecutively selected 322 stroke survivors who attended follow-up clinics three months after their stroke onset. Depression was measured using the validated Sinhala version of the Patient Health Questionnaire (PHQ-9). Associated factors were assessed through a pre-tested, interviewer-administered questionnaire and cognitive function was evaluated using the validated Sinhala version of the Mini-Mental State Examination (MMSE). Data were analysed using relevant descriptive statistics and inferential statistics.

Results: The mean age of the participants was 60.82 (SD ± 11.91) years, with 59.6% males and 40.4% females. Ischemic stroke was the predominant type, affecting 84.5 % (n=271) of patients. Moderately severe depression was detected in 25.5% (n=82) of the patients, and severe depression was detected in 8.7% (n=28). Multiple linear regression analysis revealed that lower cognitive function ($\beta = -0.27$, $p < 0.001$), older age ($\beta = 0.16$, $p = 0.005$), having hemiplegia ($\beta = -0.15$, $p = 0.004$), perceived satisfaction on family support ($\beta = 0.14$, $p = 0.008$), longer hospitalization ($\beta = 0.12$, $p = 0.008$), and stroke type ($\beta = -0.11$, $p = 0.022$) were significantly associated with the PSD. The model explained 35% of the variance in PHQ-9 scores (adjusted $R^2 = 0.35$, $p = 0.011$).

Conclusions: PSD was relatively prevalent among stroke survivors, with more than one-third experiencing moderately severe to severe depressive symptoms. Cognitive impairment emerged as the strongest independent predictor of depression, while older age, stroke-related disabilities, prolonged hospitalization, and family support were also significant contributors.

Keywords: *Post-stroke Depression, Stroke Survivors, Cognitive Impairment, Rehabilitation, Sri Lanka*

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Introduction

Stroke is the second leading cause of mortality and the third leading cause of disability worldwide, highlighting its substantial public health impact (Feigin et al., 2022). Over the past three decades, disability-adjusted life years (DALYs) attributable to stroke have shown a persistent upward trend, reaching approximately 143 million in 2019, accompanied by an estimated 6.55 million deaths globally (Roth et al., 2020). Recent evidence indicates that the prevalence of stroke and stroke-related disabilities is increasing in low- and middle-income countries (Feigin et al., 2021). In Sri Lanka, a community-based study conducted in an urban setting reported a stroke incidence of 10.4 per 1,000 individuals (Chang et al., 2015). Furthermore, the incidence of stroke is expected to increase due to the rapidly ageing population in the country.

Stroke is a complex neurological event that may result in a range of functional impairments, including paresis, motor dysfunction, sensory disturbances, language deficits, cognitive impairment, and emotional disturbances (Hachinski et al., 2006). These neurological and functional consequences can significantly affect the psychological well-being of stroke survivors (Khedr et al., 2020). Post-stroke depression (PSD), anxiety, post-traumatic stress disorder, and psychotic disorders are among the recognized psychological sequelae of stroke and can substantially reduce the quality of life of affected individuals (Zhang et al., 2020).

PSD is a common and disabling condition characterized by a persistent low mood or loss of interest and pleasure for most of the day, nearly every day, among stroke survivors (Jones & Jorge, 2019). It is recognized as one of the most frequent complications following stroke and remains underdiagnosed and undertreated in many healthcare settings (Espárrago et al., 2015). Common symptoms of PSD include persistent sadness, loss of interest in daily activities, fatigue, sleep disturbances, and reduced motivation (Towfighi et al., 2017). The reported prevalence of PSD varies considerably across studies, ranging from 20% to 60% (Hackett et al., 2014; Towfighi et al., 2017).

Despite the growing body of evidence, a significant proportion of PSD cases in Sri Lanka remain undiagnosed. Local studies conducted in tertiary care settings have reported prevalence rates comparable to, or higher than, those observed internationally. For example, the prevalence of depression among stroke survivors at three months of follow-up was reported to be 35.8% (Thambirajah et al., 2022), while 28.3% of patients experienced moderate to severe PSD during the acute phase of stroke (Isuru et al., 2021).

PSD is associated with an increased risk of mortality and poorer functional and quality-of-life outcomes (Bartoli et al., 2013; Medeiros et al., 2020). Furthermore, PSD contributes to an increased burden of disease through higher DALYs (Kyu et al., 2018). Stroke survivors with depressive symptoms are also at greater risk of experiencing recurrent strokes, highlighting the complex interrelationship between physical and psychological outcomes in this population

(Gilsanz et al., 2017).

Identifying factors associated with PSD is essential for recognizing high-risk patient groups and planning appropriate rehabilitative interventions. Previous studies have identified several sociodemographic and clinical factors associated with PSD, although findings have not always been consistent. Sociodemographic characteristics such as age and gender have been frequently investigated, with some studies reporting a higher incidence of PSD among women (Nishat et al., 2021; Shi et al., 2017; Verdelho et al., 2004).

Several clinical characteristics have also been identified as risk factors for PSD. These include stroke severity, level of disability, history of depression, cognitive impairment, and lesion location (Ayerbe et al., 2013; Cankaya et al., 2025; Hapangama et al., 2015; Kutlubaev & Hackett, 2014; Shi et al., 2024; Sun et al., 2014; Zhao et al., 2018). However, not all studies have demonstrated consistent associations between these factors and PSD. For example, some investigations have reported no significant relationship between PSD and variables such as age, gender, or lesion location (Khedr et al., 2020; Shi et al., 2017). These inconsistent findings underscore the complexity of PSD and the need for context-specific research, particularly in low- and middle-income countries.

Research investigating stroke-related risk factors for PSD remains limited within the Sri Lankan context. In particular, the relationship between cognitive functioning and depression among stroke survivors has not been comprehensively explored in the available local literature. Therefore, this study was conducted in follow-up clinics at three major tertiary care hospitals in Sri Lanka to determine the prevalence of PSD and identify factors associated with its occurrence among stroke survivors. Identifying these factors is crucial for improving the detection, management, and prevention of PSD, thereby enhancing the overall well-being and quality of life of stroke survivors.

Methods

Study design and setting

A quantitative descriptive cross-sectional study was conducted. The study was carried out at three major tertiary care hospitals in Sri Lanka: the National Hospital of Sri Lanka (NHSL), Colombo South Teaching Hospital (CSTH), and National Hospital Galle (NHG). Stroke survivors who attended follow-up clinics at NHSL, CSTH, and NHG three months after the onset of stroke were invited to participate in the study.

Sample

Patients aged 18–80 years with a first-ever vascular brain lesion (stroke) were eligible for inclusion. Patients with brain lesions other than stroke, unconscious patients, those with a previous history of stroke, known behavioural or memory disorders, major psychiatric illnesses, or chronic alcohol or narcotic abuse were excluded from the study. Information regarding psychiatric symptoms prior to the stroke was obtained through a review of clinic records and subsequently verified through direct communication with patients or their family members/caregivers.

A total of 322 stroke survivors participated in the study. Consecutive sampling was used, whereby all patients who met the eligibility criteria and consented to participate were recruited until the required sample size was achieved.

The sample size was calculated using the formula: $n = Z^2 \times P\ (1 - P) / d^2$ (Lwanga & Lemeshow, 1991). The estimated prevalence (P) of 28.3% was obtained from a Sri Lankan study that reported the prevalence of PSD among stroke survivors (Isuru et al., 2021).

Study instruments

A pre-tested interviewer-administered questionnaire developed by the investigators was used to collect data on sociodemographic characteristics, family support, participation in social activities following stroke, and clinical characteristics.

The validated Sinhala version of the Patient Health Questionnaire-9 (PHQ-9) was used to assess depression (Kroenke et al., 2001). The instrument assesses the frequency of depressive symptoms over the preceding two weeks using a four-point Likert scale: not at all (0), several days (1), more than half the days (2), and nearly every day (3). Total scores range from 0 to 27, with higher scores indicating greater severity of depressive symptoms. Depression severity was categorized as follows: No/minimal depression (0–4), Mild depression (5–9), Moderate depression (10–14), Moderately severe depression (15–19), Severe depression (20–27). Based on the validation study of the Sinhala version of the PHQ-9, a score of ≥10 was used as the cutoff value for depression (Hanwella et al., 2014).

Cognitive functioning was assessed using the validated Sinhala version of the Mini-Mental State Examination (MMSE) (De Silva & Gunatilake, 2002). The MMSE is a brief global cognitive assessment tool (Folstein et al. 1975) and has a maximum score of 30. The instrument assesses several cognitive domains, including orientation, registration, recall, attention, language, comprehension of verbal and written commands, writing ability, and visuospatial skills. According to the validated Sinhala version, a score of <17 was considered indicative of cognitive impairment.

Prior to data collection, a pre-test was conducted by the principal investigator in a tertiary care hospital to assess the clarity, acceptability, and comprehensibility of the questionnaire items and to identify the need for additional interviewer instructions. The interviewer-administered questionnaire was pre-tested among ten participants who were not included in the final study sample. Necessary modifications were made based on the findings of the pre-test.

Data collection

Data were collected three months after stroke onset by the principal investigator, a registered nurse, and three trained research assistants who were also registered nurses. Data collection was conducted at neurology and general medical follow-up clinics in NHSL, CSTH, and NHG during the period of January 2024 to December 2024.

Administrative approval was obtained from the Directors of NHSL, CSTH, and NHG. Permission was also obtained from the relevant consultants and nursing officers-in-

charge of the respective clinics and wards prior to data collection.

Written informed consent was obtained from all participants before enrollment. For patients who were unable to provide informed consent, consent was obtained from their next of kin.

Data analysis

Descriptive statistics, including frequencies, percentages, means, and standard deviations (SDs), were used to summarize the data.

Prior to inferential analyses, the assumption of normality was assessed using histograms and the Shapiro–Wilk test. The findings indicated that the data were normally distributed.

Pearson's correlation coefficient was used to assess the relationship between PHQ-9 scores and continuous variables, including age and MMSE scores. Independent-samples t-tests were used to compare mean PHQ-9 scores across dichotomous variables, such as gender and stroke type. One-way analysis of variance (ANOVA) was used to examine differences in PHQ-9 scores across variables with more than two categories, such as ethnicity and level of family support.

Hierarchical multiple regression analysis was performed to identify factors independently associated with PSD. Data were analysed using the Statistical Package for the Social Sciences (SPSS) version 25. Statistical significance was set at $p < .05$.

Ethical considerations

Ethical approval for the study was obtained from the Ethics Review Committee of the Faculty of Medicine, University of Colombo (ERC No. PGDHD/18/43), and the Ethics Review Committee of Colombo South Teaching Hospital. Written informed consent was obtained from all participants or their legally authorized representatives before data collection. Confidentiality and anonymity of participant information were maintained throughout the study.

Results

Sociodemographic and clinical characteristics of the study participants

The mean age of the participants was 60.82 (± 11.91) years, with an age range from 18-80 years. More than 50% of them (55%, n=177) were in the 61- to 80-year-old age group. Out of the study participants, 59.6% (n=192) were males, and 40.4% (n=130) were females. The majority (87.6%, n=282) were Sinhalese and married (87.6%, n=282). Approximately 34% (n=109) were educated up to the ordinary level (up to grade 11), and only 7.1% (n=23) were graduates. More than half of the participants (54.7%, n= 175) did not have a monthly income, and they were dependents of their children and family (Table 01).

Clinical characteristics of the participants

The majority of the participants had ischemic strokes (84.5%, n=272), and the rest (15.5%, n=50) had hemorrhagic strokes. The mean (SD) MMSE score was 19.46 (6.26) and 37.9% (n=122) had poor level of cognition (<17 for MMSE). A considerable number of patients were previously diagnosed with NCDs, such as hypertension, diabetes, and dyslipidemia. Hypertension was the most common NCD, and 75.8% (n=244) of the

participants had hypertension. The percentages of patients with diabetes mellitus and dyslipidemia were 58.4% (n=188) and 43.2% (n=137), respectively. Among the male patients, 47.5% (n=153) smoked, and 48.1% (n=155) consumed alcohol before stroke onset. Among the study participants, 45.3% (n=146) had hemiplegia, and 44.4% (n=143) had upper arm paresis. Approximately 43.2% (n=139) of the participants had speech and language difficulties. Dysphagia was reported among 8.4% (n=27) of the participants. The main clinical characteristics are shown in Table 2.

Prevalence of PSD

The mean (SD) PHQ-9 score was 12.29 (5.83). The prevalence of depression among participants is shown in Table 3. The severity of depression was categorized according to the accepted score interpretation ranges. A total of 25.5% (n=82) of the patients had moderately severe depression, and 8.7% (n=28) had severe depression. Altogether, 34.2% had moderately severe or severe depression.

Factors associated with PSD

Based on the Pearson correlation test results, there was a positive correlation between age and PHQ-9 scores ($r = 0.39$, $p < 0.01$), suggesting that older adults with stroke tend to experience more severe depression. The severity of depression (based on the PHQ-9 score) was significantly associated with gender ($p < 0.01$). Based on the independent sample t-test, there was a more severe level of depression in males than in females (p=0.01) (Table 4). Other socio-demographic factors such as level of education, marital status, occupation, ethnicity, or religion were not significantly associated with post-stroke depression ($p>0.05$).

According to the one-way ANOVA test, the number of days of hospitalization and level of disability were significantly associated with the severity of depression ($p < 0.01$). Those who stayed for a longer period in the hospital after stroke had more severe depressive symptoms. Furthermore, the severity of depression was significantly associated ($p < 0.01$) with the family support of the patients. The severity of depression was significantly associated with the type of stroke, having disabilities such as hemiplegia, and having hypertension ($p < 0.01$) (Table 4).

Moreover, there was a negative correlation between MMSE scores and PHQ-9 scores ($r = -0.38$, $p < 0.01$), indicating that lower cognitive function (poorer cognition) is associated with more severe depression in this population.

Multiple linear regression analysis was performed to identify independent predictors of PSD. The model explained 35% of the variance in PHQ-9 scores (Adjusted $R^2 = 0.35$, $F = 4.719$, $p = 0.011$). The results are shown in Table 5.

Discussion

This study investigated the prevalence of PSD among stroke survivors three months after stroke onset and identified factors associated with its occurrence. The findings revealed a high prevalence of PSD among stroke survivors. Furthermore, age, hemiplegia, perceived satisfaction with family support, length of hospital stay, and

Table 1: Sociodemographic characteristics of the participants (n=322)

Demographic characteristic	Category	Frequency	Percentage (%)
Age (years)	18-40	17	5.3
	41-60	128	39.8
	61-80	177	55
Gender	Male	192	59.6
	Female	130	40.4
Marital status	Married	282	87.6
	Unmarried	16	5
	Divorced	10	3.1
	Widowed	14	4.3
Income (LKR)	No income (depend on others)	38	11.8
	5000-24999	118	36.6
	25000-49999	140	43.5
	50000-74999	17	5.3
	≥75000	9	2.8
Employment	Formal job	51	15.8
	Business	41	12.7
	Laborer	38	11.8
	Retired	47	14.6
	Housewife/unemployed	145	45
Level of Education	No primary Education	37	11.5
	Primary Education	115	35.7
	Up to Ordinary Level	109	33.9
	Up to Advanced Level	38	11.8
	Degree	23	7.1
Ethnicity	Sinhala	282	87.6
	Tamil	16	5
	Muslim	10	3.1
	Other	14	4.3
Religion	Buddhist	282	87.6
	Hindu	16	5
	Islam	10	3.1
	Catholic	14	4.3

LKR Sri Lankan Rupees

Table 2: Clinical characteristics of the participants (n=322)

Clinical characteristic	Category	Frequency	Percentage (%)
Type of stroke	Ischemic	272	84.2
	Hemorrhagic	50	15.5
Side of the lesion	Left	92	28.6
	Right	230	71.4
Non-communicable diseases	Hypertension	244	75.8
	Diabetes mellitus	188	58.4
	Dyslipidemia	137	43.2
Habits	Current smoker	153	47.5
	Consume alcohol	155	48.1
Family history of psychiatric illness	Yes	39	12.1

Table 3: Prevalence and severity of PSD (n=322)

Severity of depression	Frequency	Percentage (%)
No/Minimal depression (0-4)	28	8.7
Mild depression (5-9)	64	19.9
Moderate depression (10-14)	120	37.3
Moderately severe depression (15-20)	82	25.5
Severe Depression >20	28	8.7

Table 4: Factors associated with PSD (n=322)

Factor		Mean (SD)	p value
Gender	Male	13.16 (6.1)	0.01*
	Female	11.01 (5.2)	
Type of stroke	Ischemic	12.62 (5.7)	0.04*
	Hemorrhagic	10.72 (5.9)	
Hemiplegia	Yes	13.61(5.1)	0.03*
	No	11.19 (6.1)	
Hypertension	Yes	12.73 (5.4)	0.017*
	No	10.92 (6.9)	

Table 4: Factors associated with PSD (n=322) *(Cont.)*

Level of education	No primary education	14.92 (5.3)	<0.001**
	Grade one to five	13.43 (5)	
	Ordinary Level	11.06 (5.4)	
	Advanced Level	12.37 (7)	
	Degree holders	8.09 (6.6)	
Occupation	Formal Job	8.98 (6.0)	<0.001**
	Business	12.24 (5.1)	
	Laborer	10.97 (5.1)	
	Retired	13.28 (5.7)	
	House wife/unemployed	12.29 (5.8)	
Days of Hospitalisation	≤5 days	11.68(6.0)	<0.001**
	6 – 10 days	11.62(5.5)	
	11 – 20 days	15.11(5.3)	
	≥21 days	15.57(5.9)	
Family Support	Very good	9.63(5.8)	<0.001**
	Good	13.61(5)	
	No idea	15.32(6.4)	
	Not satisfied	13.28(.0)	

** Independent sample t test*

*** One way ANOVA test*

hTable 5: Predictors of PSD (n=322)

Predictor	Unstandardized B	Standardized coefficient β	p value
MMSE total score	-0.25	-0.27	<0.001
Age	0.076	0.156	0.005
Having hemiplegia	-1.792	-0.153	0.004
Perceived satisfaction with family support	1.242	0.140	0.008
Number of days in hospital	0.901	0.121	0.008
Type of stroke	-1.808	-0.113	0.022

MMSE Mini-Mental State Examination

type of stroke were significantly associated with PSD.

In the present study, 34.2% of participants experienced moderately severe to severe PSD. Additionally, 71.5% of participants screened positive for depressive symptoms based on the PHQ-9 cutoff score. These findings are consistent with those of a recent Sri Lankan study, which reported that 74.3% of stroke survivors experienced depressive symptoms during the first six months of rehabilitation (Harini & Suraweera, 2023). Similarly, a previous Sri Lankan study reported a depression prevalence of 35.8% among stroke survivors at three months of follow-up using the Beck Depression Inventory (BDI) (Thambirajah et al., 2022). Another Sri Lankan study reported a prevalence of 28.3% for moderate to severe depression based on clinical diagnosis (Isuru et al., 2021). Although these prevalence estimates are relatively lower than those observed in the current study, variations in study design, assessment tools, diagnostic criteria, and timing of evaluation may account for these differences. Data collection for the present study was done during the COVID-19 pandemic, which may have contributed to the higher prevalence of depressive symptoms observed.

Several factors were significantly associated with PSD in the present study. Among the sociodemographic characteristics examined, age demonstrated a significant association with PSD. Gender differences were also observed, with male participants exhibiting a higher prevalence of depressive symptoms than female participants. This finding contrasts with previous studies, which reported a greater prevalence or severity of PSD among women (Isuru et al., 2021; Nishat et al., 2021; Shi et al., 2017). The reasons for this discrepancy remain unclear and may be attributable to differences in cultural context, social support systems, study populations, or methodological approaches. Further research is warranted to better understand gender-related differences in PSD among Sri Lankan stroke survivors.

No significant associations were identified between PSD and other sociodemographic variables, including educational level, marital status, household income, ethnicity, and religion. This finding differs from previous literature suggesting that higher educational attainment may act as a protective factor against depression. One possible explanation is that stroke-related disability, psychological distress, and limited access to rehabilitation services may exert a stronger influence on depressive symptoms than socioeconomic factors in this population. Consequently, the protective effects of education or income may have been attenuated.

The present study identified a significant association between stroke type and PSD, which is consistent with findings from a previous Sri Lankan study (Thambirajah et al., 2022). Previous research has also suggested that individuals with minor strokes may be at greater risk of developing PSD (Cankaya et al., 2025; Vitturi et al., 2021). However, stroke severity was not assessed in the current study, and therefore its relationship with PSD could not be

examined. Future studies should incorporate standardized measures of stroke severity to better understand this association.

A statistically significant correlation was observed between cognitive function and PSD, although cognitive impairment did not emerge as an independent predictor in the regression analysis. Participants with lower cognitive functioning tended to report more severe depressive symptoms, which is consistent with existing evidence. Previous studies have demonstrated that cognitive impairment is associated with PSD during follow-up after stroke (Williams & Demeyere, 2021). Moreover, both depressive symptoms and cognitive dysfunction have been identified as independent predictors of poorer higher-level functioning among stroke survivors (Kapoor et al., 2019). These findings highlight the close relationship between cognitive and emotional outcomes following stroke.

The association between depression and stroke-related cognitive impairment may be explained by both psychological and neurobiological mechanisms. Previous studies have identified a bidirectional relationship between depression and cognitive impairment among stroke survivors. Neurobiological mechanisms, particularly disruptions in neural networks connecting the limbic system and prefrontal cortex, have been implicated in the development of PSD (Cankaya et al., 2025). In addition, psychosocial factors such as social isolation, loneliness, loss of independence, and reduced social participation may contribute to depressive symptoms following stroke (Li et al., 2024). Furthermore, cognitive impairment may limit an individual's capacity to adapt to functional deficits and employ effective coping strategies, thereby increasing vulnerability to psychological distress and depression.

The current study also demonstrated a significant association between PSD and stroke-related disability, particularly hemiplegia. This finding is consistent with previous Sri Lankan research that reported a higher prevalence of depressive symptoms among stroke survivors with physical disabilities (Harini & Suraweera, 2023). Physical impairments may restrict independence, reduce participation in social and occupational activities, and negatively affect self-esteem, thereby increasing the risk of depression. However, the present study did not comprehensively assess functional status or activities of daily living (ADL). Previous research has highlighted the importance of functional ability and rehabilitation interventions in influencing the progression and severity of PSD (Almhdawi et al., 2021). Therefore, future studies should examine the combined effects of functional limitations, rehabilitation participation, cognitive functioning, and psychosocial factors on the development and progression of PSD.

Implications

The findings of this study highlight the substantial burden of PSD among stroke survivors and emphasize the need for integrating mental health assessment into routine stroke rehabilitation services. Early screening and timely management of depressive symptoms should be incorporated into follow-up care, particularly for individuals with risk factors such as

advanced age, hemiplegia, cognitive impairment, prolonged hospitalization, and limited family support. The significant association between perceived family support and PSD underscores the importance of family-centred rehabilitation approaches and caregiver education. Furthermore, the findings support the adoption of multidisciplinary rehabilitation strategies that address the physical, cognitive, and psychological needs of stroke survivors simultaneously. At the policy level, incorporating mental health services into stroke rehabilitation programmes may improve recovery outcomes and quality of life. Future longitudinal studies are recommended to further explore the causal pathways and long-term effects of factors associated with PSD.

Strengths and limitations

A key strength of the current study is its multicenter design, which involved three major tertiary care hospitals across Sri Lanka. This approach enhances the study's generalizability by including stroke survivors from various geographic regions within the country.

This study employed a cross-sectional design which limited its capacity to assess changes in depression over time. A longitudinal approach would have been more suitable for comprehensively evaluating post-stroke depression and its associated factors. Furthermore, the use of the convenience sampling method reduced the generalizability of the findings to the broader population.

The severity of stroke was not assessed in this study due to the unavailability of National Institutes of Health Stroke Scale (NIHSS) scores for all patients (National Institute of Neurological Disorders and Stroke, 2024). Therefore, the association of the PSD with the severity of stroke was not assessed in this study. Moreover, data related to lifestyle factors, such as alcohol consumption, smoking, and perceived family support, may also be subject to inaccuracies due to potential recall bias and social desirability bias among participants. Another limitation was the inability to fully account for participants' mental health status before the stroke. While clinic records were used to identify pre-stroke mental health conditions, some patients with undiagnosed depression before the onset of stroke may have been overlooked.

Conclusions

This study highlights the substantial burden of PSD among survivors in Sri Lanka and identifies several key sociodemographic and clinical risk factors associated with its prevalence. Cognitive impairment, older age, perception of inadequate family support, and stroke-related disabilities were prominent contributors. These findings emphasize the importance of integrating early psychological screening and tailored mental health support into stroke rehabilitation pathways.

Based on the findings of this study, it is recommended to strengthen routine screening and early identification of PSD, particularly among patients with identified risk factors. Incorporating psychological assessment into post-stroke care pathways and providing timely mental health interventions may help reduce the burden of

PSD. Furthermore, developing culturally appropriate counseling services, caregiver support programs, and capacity-building for healthcare professionals in recognizing and managing PSD would be essential steps to improve patient outcomes in the Sri Lankan context.

Effective management of PSD requires a multidisciplinary approach involving nurses. Nurses are uniquely positioned to monitor emotional well-being, provide patient education, facilitate referrals, and support both patients and caregivers throughout the recovery process. Collaborative care models have been shown to improve both psychological and functional outcomes among stroke survivors. Further, nurses' role in advocating and empowering family caregivers at the inpatient care settings and community level is particularly important in the Sri Lankan context, where family members often serve as the primary caregivers for individuals with chronic illnesses and disabilities

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Conflict of interest

The authors declared that they have no conflicts of interest.

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