

Relationship between Severity of Stroke and Nursing Care for Patients with Functional Disabilities

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Abstract

Background: Stroke is one of the main causes of morbidity and mortality worldwide. Stroke is a devastating disease that affects quality of life, causes severe physical disability. **Aim of the Study:** to investigate the relationship between severity of stroke and nursing care for patients with functional disabilities. **Research Design:** A descriptive exploratory research design was used. **Subjects and Setting:** The study was conducted in the intermediate stroke unit at Minia University Hospital. A convenient sample from sixty post-stroke patients was included. **Tools:** One tool and two scales were used to collect data; study tool includes socio-demographic data, specific medical data and patient's point of view about nursing care, first scale, National Institutes of Health Stroke Scale to assess stroke severity and second, Barthel Index of daily living activities. **Results:** participants age majority 35% aged between 50 and <60 years. Male participants constitutes 55%, cardiac disorders was the most prevalent comorbidity 38% of participants, No significant changes were found NIHSS motor and sensory levels, with some deteriorations in cognitive levels. Also, Barthel Index scores revealed significant improvements in bathing independence 58.3% and mobility to 41.7%. Although total functional independence remained low, dependency levels shifted. A significant negative correlation was observed between hospital nursing care and functional disability ($r = -0.594$, $p=0.001$). **Conclusion:** nursing care had a limited impact on stroke severity but contributed to improvements in specific activities of daily living. **Recommendations:** Enhance specialized training programs for nurses in stroke care, focusing on evidence-based rehabilitation techniques.

Key Words: *Functional Disabilities, Nursing Care, Severity of Stroke.*

Introduction:

A cerebrovascular accident, often referred to as a “stroke,” is categorized as either ischemic or hemorrhagic (Caplan et al., 2023). Both types result in disrupted blood flow to a specific brain region, leading to oxygen deprivation, neuronal damage, and subsequent neurological deficits. Among younger patients, the potential causes also include clotting disorders and various vascular abnormalities (Shahid et al., 2023).

Prompt and targeted treatment based on the underlying stroke etiology, combined with effective rehabilitation programs and long-term lifestyle adjustments, greatly enhances the chances of a meaningful recovery (Hey et al., 2023). Stroke is a leading cause of morbidity and mortality globally,

with over 12.2 million new cases annually, as reported by the World Stroke Organization. Alarmingly, one in four individuals over 25 years old is expected to experience a stroke during their lifetime (Feigin et al., 2022). Furthermore, strokes contribute to 5% of the global disability-adjusted life years (DALYs) lost (Aref et al., 2023)

The onset of a stroke is often sudden, with early symptoms frequently overlooked. Some patients may initially experience transient limb weakness before more prominent symptoms arise. As the condition advances, individuals with ischemic stroke might display symptoms such as one-sided limb weakness or numbness, facial drooping, slurred speech, blurred vision, difficulty

understanding language, impaired consciousness, or trouble walking (Andersson et al., 2024).

Stroke severity directly impacts hospital stays, healthcare costs, and resource utilization. The interplay between stroke severity, nursing care, and length of stay is complex. High-quality nursing care, including timely interventions and thorough monitoring, can reduce complications, facilitate recovery, and shorten hospital stays. Conversely, inadequate care may prolong hospitalization due to preventable complications (Lin et al., 2022).

Functional impairments caused by stroke, including hemiparesis, cognitive deficits, and dysphagia, can significantly diminish patients' quality of life and ability to perform daily activities, necessitating comprehensive nursing interventions (Poomalai et al., 2023). Nurses are instrumental in assessing and managing these challenges. Their responsibilities extend beyond physical support to include emotional care and patient education. Key nursing strategies involve promoting mobility through physical therapy, aiding communication with speech therapy, and implementing dietary adjustments to address swallowing difficulties (Tanlaka et al., 2023).

Stroke management encompasses general medical care, pharmacological treatments, surgical interventions, and even complementary therapies such as traditional Chinese medicine. Regardless of the approach, effective nursing care remains a cornerstone for enhancing adherence to treatment plans, fostering patient cooperation, and improving therapeutic outcomes (Zhou et al., 2023).

Nursing care is an integral component of stroke management, playing a vital role in the recovery and well-being of patients. Several studies have emphasized the direct impact of nursing care on stroke patient outcomes. (Lip et al., 2022) Their role often continues after discharge, as they support recovery and monitor progress to prevent readmission. However, gaps in care frequently occur during transitions from hospital to rehabilitation or home, highlighting the need for continuity in nursing practices to enhance outcomes and reduce risks of complications (Babkair et al., 2023).

Significance of the Study

Stroke, sometimes called a "brain assault," is a severe and often fatal condition. In Egypt, stroke incidence stands at **240 per 100,000 people**, equating to around **250,000 new cases annually**, with 10% of patients succumbing within the first

month and many survivors facing varying degrees of disability (Elhassanien et al., 2023).

Nursing care is fundamental to stroke management and directly influences recovery outcomes. Studies consistently demonstrate the impact of nursing care on stroke patients, particularly in terms of improving functional recovery and reducing hospital stays. By focusing on the dynamic interplay between these factors, the findings could provide valuable insights for healthcare providers and policymakers to optimize resource allocation, enhance nursing practices, and improve care quality for stroke patients in Egypt.

Aim of the Study

The aim of the current study is to investigate the relationship between severity of stroke and nursing care for patients with functional disabilities.

Research Question:

1. What is the relationship between severity of stroke and nursing care provided for patients with functional disabilities?

Subjects and Methods:

Research Design:

This study employed an **exploratory descriptive design**, which allows for detailed documentation and understanding of phenomena within their natural context (Samanth, 2024). This approach was chosen to systematically explore the relationship between stroke severity, nursing care, functional disabilities, and hospital length of stay.

Setting

The research was conducted in the **intermediate stroke unit** of Minia University Hospital, Minia Governorate, Egypt. The unit, situated on the second floor of the new building, is divided into critical and intermediate sections, with the study focusing on the 10-bed intermediate section.

Subjects

A convenient sample of sixty post-stroke patients. The sample size was calculated based on the Isaac and Michael Formula which is computed as $(N=n \times 30/100)$. (Isaac & Michael, 1995) in which: N =sample size, n =total number of 200 adult patients with stroke admitted to stroke unit, Minia University Hospital during the period from (1 January 2024 to 30 April 2024) $N=200 \times 30/100=60$ patient.

Inclusion Criteria:

- Adult patients of both genders.
- Diagnosed stroke patients admitted 48–72 hours post-onset.
- Patients willing to participate in the study.

Exclusion Criteria:

- Patients within the acute phase of stroke (<72 hours).
- Unconscious or receptive aphasic patients.
- Patients with rheumatoid arthritis.

Data Collection Tools

Tools of Data Collection:

One tool and two scales were used to collect data of the current study:

Tool 1: Stroke patient assessment tool, which includes three parts:

First part: Socio-Demographic characteristics sheet includes seven items as age, gender, place of residence, education, occupation, marital status, and living condition.

Second part: specific medical data including: any previous stroke, chronic diseases as hypertension, diabetes mellitus, and cardiac disorders.

Third part: Patients' point of view regarding nursing care provided to them.

Study Scales

First Scale: National institute of health stroke scale (NIHSS): the current study was adopted this scale from (**Brott et al., 1989**). The scale assesses severity of stroke. And consists of 15 items used to assess severity of impairment in level of consciousness (LOC), ability to respond to questions and obey simple commands, papillary response, deviation of gaze, extent of hemianopsia, facial palsy, resistance to gravity in the weaker limbs (upper and lower), plantar reflexes, limb ataxia, sensory loss, visual neglect, dysarthria and aphasia severity).

Second Scale: The Barthel Index of Activities of Daily Living (ADLs). It was developed by (**Mahoney & Barthel, 1965**). It composed from 10 items: (feeding, bathing, grooming, dressing, bowels, bladder care, toilet use, transfers (bed to chair and back), mobility (on level surfaces) and stairs climbing). 5-point grading are used in scoring system, with a maximal score of 100 indicating that a patient is fully independent in physical functioning, and a lowest score of 0 representing a totally dependent bed-ridden state.

Pilot Study

A pilot study was conducted with six patients (10% of the sample) to test the feasibility and clarity of the tools. No modifications were needed, and these participants were included in the main study.

Ethical Considerations

Approval was obtained from the hospital's ethics committee, as well as the Faculty of Nursing, Minia University. Informed oral consent was secured from participants, ensuring confidentiality and the right to withdraw at any time.

Study procedure

The current study was carried out in three phases and Data collected from 1 January 2024 to 30 April 2024.

I- Preparatory phase

A review of current, local and international literature in various aspects of the current study using books, articles, periodicals, and magazines were done. The study settings were assessed for the number of patients admitted to stroke department unit in Minia university hospital. Once permission was, be granted to precede with the proposed the current study from the hospital authorities. The researcher-collected data from adult participants admitted to the intermediate stroke care unit, after they met the inclusion criteria of the study was being approached.

- Voluntary participation, confidentiality and anonymity were been assured. Each potential patient was signing an informed consent.
- The researcher was prepared study tool , study scales was selected after applying validity and reliability for each one.

II-The Implementation Phase

- The total study sample (60 post-stroke patients were observed two times, the first observation was done after 48-72 hours of stoke onset and the second one done before discharge from hospital.
- Data collection started over three days per week in the morning and evening shifts in intermediate stroke unit.
- The investigator during the implementation phase, held the first observation by meeting with patients after 48:72 hours of admission to stroke. Where the second observation was done before, patients discharge after they received their routine hospital care including

medical and nursing care to help their recovery.

- The investigator collected first and second parts from the studied sample from patient's files in their unit.
- The third part from the study tool was collected from the studied sample once before patients discharge.
- The investigator was assessed patients' severity of stroke (NIHSS) (first scale) twice, first observation was done after 48-72 hours of stroke onset and the second one done before discharge from hospital.
- Also, the investigator assessed Activities of Daily Living (Barthel Index) (Second Scale) twice, first observation was done after 48-72 hours of stroke onset and the second one done before discharge from hospital.
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- Also, the investigator assessed Activities of Daily Living (Barthel Index) (Second Scale) twice, first observation was done after 48-72 hours of stroke onset and the second one done before discharge from hospital.

III- Evaluation Phase

Patients was evaluated through following,

Data Analysis

Data were analyzed using SPSS v20. Descriptive statistics (mean, standard deviation, frequency, percentage) summarized findings. Pearson's correlation tested relationships between stroke severity, nursing care, and outcomes. Significance was set at $p < 0.05$, with $p < 0.001$ considered highly significant.

Results

Table (1): Percentage distribution of studied sample regarding their Socio-Demographic characteristics (n. =60)

Socio-Demographic Data	Sample (n. =60)	
	No.	%
Age		
40 - < 50 years	9	15
50 - <60 years	21	35
60 - <70 years	12	20
≥ 70 year	18	30
Mean ± SD	63.5 ± 13.1	
Gender		
Male	33	55
Female	27	45
Marital status:-		
- Single	9	15
- Married	33	55
- Divorced	5	8.3
- Widow	13	21.7
Educational Qualification		
- Illiterate	17	28.3
- Read & write	13	21.7
- Elementary school	7	11.7
- Secondary school	12	20
- High education (University level)	11	18.3
Occupation		
- Employed (working).	24	40

- Unemployed (not working).	36	60
Residence		
- Urban	33	55
- Rural	27	45
Living condition		
Alone	19	31.7
With family	41	68.3

Table (1) shows that mean age of the studied sample were 63.5 ± 13.1 years, with highest 35% aged between 50 and <60 years. Males constituted 55% among them, Married participants constitute 55%, and 28.3% among them were illiterate. Highest of the study sample 36% were unemployed, where urban residents accounted 55% from studied sample and 68.3% of them living with family.

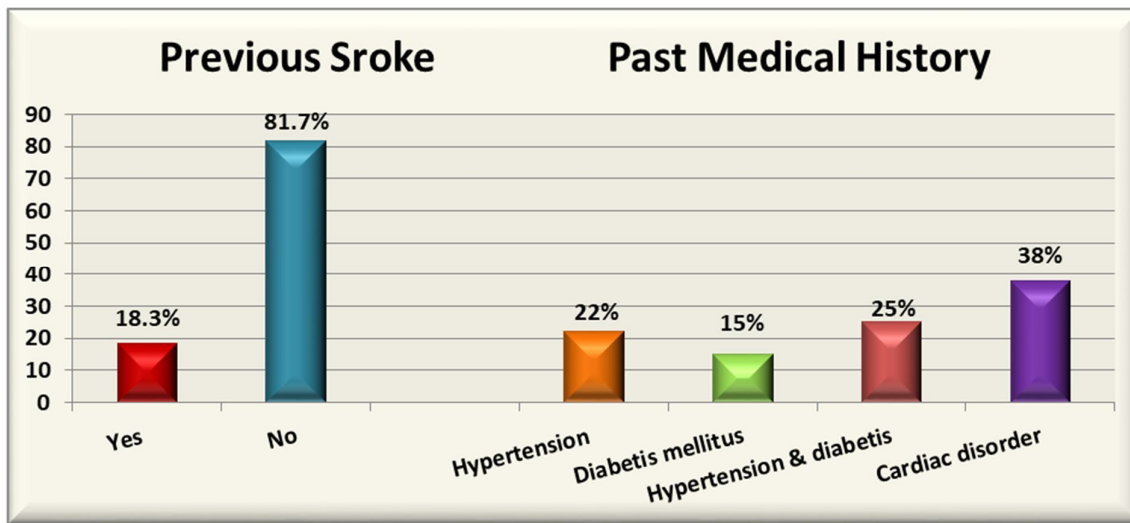


Figure (1): Percentage Distribution of Studied Sample Regarding their Past Medical History (n=60)

Figure (1) shows that majority of the participants has no history of previous stroke that counted 81.7% of them. And cardiac disorder was the most prevalent comorbidity, affecting more than one third of participants that counted 38% of them, and quarter of them having both diabetes and hypertension.

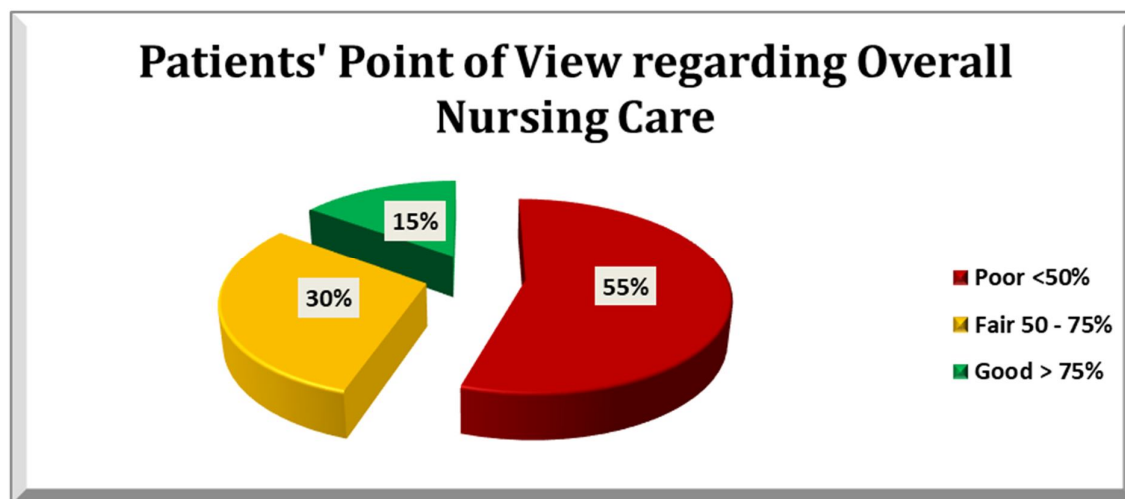


Figure (2): Percentage Distribution of Studied Sample Regarding Patient point of view regarding overall nursing care during their Hospitalization (n=60)

Figure (2) illustrates that 55% of patients reported poor satisfaction with nursing care provided to them, while 30% rated it fair, and 15% rated it good.

Table (2): Percentage distribution of studied sample regarding their consciousness levels assessed by (NIHSS) (n. =60) in first and second observations

Consciousness levels	Study (n=60)				McNemar (P value)
	First Observation		Second Observation		
	No.	%	No	%	
Level of consciousness:					
- Alert	15	25	12	20	1.19 (0.248)
- Drowsy	24	40	23	38.3	
- Stupor	21	35	25	41.7	
Orientation to 2 questions:					
- Know age and current month	5	8.3	10	16.7	3.74 (0.067)
- Answers one question correctly	55	91.7	47	78.3	
- Cannot answer either question correctly	0	0	3	5	
Response to 2 commands:					
- Follows 2 commands correctly	4	6.7	4	6.7	3.04 (0.078)
- Follows one command	56	93.3	48	80	
- Cannot follow either command	0	0	8	13.3	
Best Gaze:					
- Normal eye movements	4	6.7	5	8.3	1.38 (0.172)
- Partial gaze paresis to one side	45	75	50	83.4	
- Forced gaze palsy to one side	11	18.3	5	8.3	
Visual fields:					
- No visual loss	55	91.7	55	91.7
- Partial homonymous hemianopia	5	8.3	5	8.3	
- Complete homonymous hemianopia	0	0	0	0	
- Bilateral visual loss	0	0	0	0	

Statistical significant difference ($P \leq 0.05$) ** highly Statistical significant difference ($P \leq 0.01$)

NB. First observation was done after 48 to 72 hour of admission, while second observation was done before discharge.

Table (2) shows that at first observation highest percentage among studied sample regards loss of consciousness was drowsy constituted 40% , and most 91.7%, 93.3%, 91,7% among them were answerers one question correctly, follow one command , Partial gaze paresis to one side, while majority follows one command, and had and no visual loss respectively. While majority 75% among them were had Partial gaze paresis to one side, on the other hand at second observation more than third 38.3% among the studied sample was drowsy, and majority 78.3% among them answers one question correctly, but the rest conscious levels among same group indicated that most of them 80%, 83.4% and 91.7% had and no visual loss, so there is no significant difference between first and second observation among the studied sample.

Table (3): Percentage distribution of studied sample regarding their motor levels assessed by (NIHSS) (n. =60) in the first and second observations

Motor levels	Study (n=60)				
	First Observation		Second Observation		
	No.	%	No	%	
Facial motor function					
- No facial weakness	5	8.3	5	8.3	1.91 (0.058)
- Minor unilateral facial weakness	25	41.7	20	33.3	
- Partial unilateral facial weakness	26	43.3	24	40	

Motor levels	Study (n=60)				
	First Observation		Second Observation		
	No.	%	No	%	
- Complete paralysis of one or both sides	4	6.7	11	18.3	
Upper extremity motor function: Right:					
- Normal movement	1	1.7	6	10	1.40 (0.497)
- Drift of upper extremity	17	28.3	19	31.7	
- Some effort against gravity	29	48.3	26	43.3	
- No effort against gravity but moves	13	21.7	9	15	
Upper extremity motor function: Left:					
- Normal movement	5	8.3	6	10	1.84 (0.497)
- Drift of upper extremity	27	45	24	40	
- Some effort against gravity	28	46.7	30	50	
Lower extremity motor function: Right:					
- Normal movement	2	3.3	1	1.7	1.29 (0.196)
- Drift of upper extremity	34	56.7	39	65	
- Some effort against gravity	12	20	13	21.7	
- No effort against gravity but moves	2	3.3	1	1.7	
- No movement	10	16.7	6	10	
Lower extremity motor function: Left:					
- Normal movement	5	8.3	4	6.7	1.41 (0.157)
- Drift of upper extremity	27	45	27	45	
- Some effort against gravity	28	46.7	29	48.3	
Limb Ataxia (cannot be tested in presence of paresis):					
- No limb ataxia	7	11.7	5	8.3	1.92 (0.549)
- Ataxia present in 1 limb	9	15	15	25	
- Ataxia present in 2 limbs	44	73.3	40	66.7	

* Statistical significant difference ($P \leq 0.05$) ** highly Statistical significant difference ($P \leq 0.01$)

In Table (3)) at first and second observation regarding motor levels among studied sample there is highest were similar between both observations in each level respectively, so there is no significant difference between first and second observation among the studied sample.

Table (4): Percentage distribution of studied sample regarding their sensory levels assessed by (NIHSS) (n. =60) in the first and second observations

Sensory outcomes	Study (n=60)				
	First Observation		Second Observation		
	No.	%	No	%	
Sensory Function:					
- No sensory loss	8	13.3	5	8.3	1.49 (0.624)
- Mild-to-moderate sensory loss	16	26.7	15	25	
- Severe-to-total sensory loss	36	60	40	66.7	
Language:					
- Normal language	8	13.3	5	8.3	1.49 (0.624)
- Mild-to-moderate aphasia	16	26.7	15	25	
- Severe aphasia	36	60	40	66.7	

Sensory outcomes	Study (n=60)				
	First Observation		Second Observation		
	No.	%	No	%	
Articulation:					
- Normal articulation	10	16.7	14	23.3	1.99 (0.059)
- Mild-to-moderate dysarthria	24	40	28	46.7	
- Severe dysarthria	26	43.3	18	30	
Extinction or inattention (neglect):					
- No neglect or extinction	24	40	34	56.7	2.66 (0.077)
- Visual or sensory inattention or extinction	26	43.3	26	43.3	
- Profound inattention to visual and sensation	0	0	0	0	

* Statistical significant difference ($P \leq 0.05$) ** highly Statistical significant difference ($P \leq 0.01$)

Table (4) shows that there ARE statistical significant difference among studied sample regarding articulation levels and extinction or inattention, only but the other sensory levels, there are no statistically significant difference among same group

Table (5): Percentage distribution of studied sample regarding total score of national institutes of health stroke scale (NIHSS) in the first and second observations (n. =60)

Total	Study (n=60)				
	First Observation		Second Observation		
	No.	%	No	%	
- Very severe (>25)	15	25	11	18.3	1.84 (0.066)
- Severe (15 – 24)	36	60	33	55	
- Moderately severe to mild (5 – 14)	9	15	16	26.7	
- Mild impairment (1 – 4)	0	0	0	0	

* Statistical significant difference ($P \leq 0.05$) ** highly Statistical significant difference ($P \leq 0.01$)

Based on NIHSS Total Scores, table (5) shows Statistical significance is not achieved regarding total score of NIHSS in the first and second observations among studied sample following nursing care.

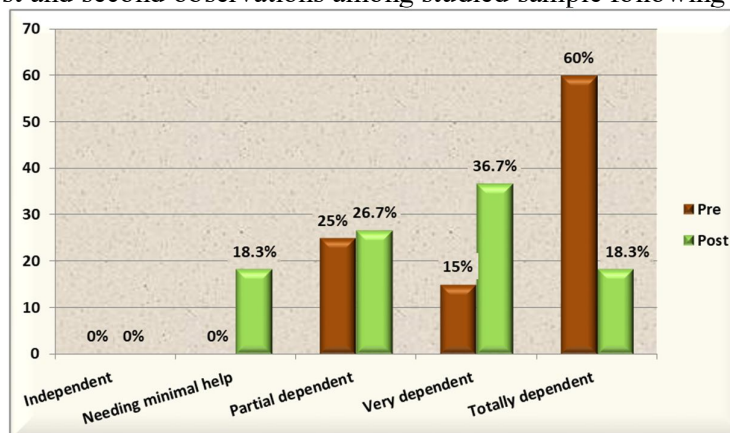


Figure (3): Percentage distribution of studied sample regarding total score of daily living activities in the first and second observation. (n. =60)

Figure (3) shows the changes in Barthel Index total scores, The percentage of participants achieving independence (scores 80–100) increased to 11.7%, with a significant improvement in mean scores from 19.9 ± 18.2 to 30.2 ± 13.2 ($p=0.011$). Those in the “Totally dependent ” category reduced from 58.3% to 50%, while partial dependence remained at 25%.

Table (9): Correlation between studied sample total score of patient’s point of view regarding hospital nursing care, severity of stroke and functional disability among studied sample (n. =60)

	Total score of patient’s point of view regarding hospital nursing care	
	r	r p
Severity of Stroke	- 0.175	0.355
Functional Disability	0.201	0.188

** Highly Statistical significant difference ($P \leq 0.01$)

Table (9): displays statistically significant negative correlation between studied sample point of view regarding hospital nursing care and the severity of stroke, while there is a none statistically significant positive correlation between studied sample point of view regarding hospital nursing care and patients’ functional disability

Discussion

Stroke is a leading cause of long-term disability worldwide, often leaving survivors with profound motor, sensory, and functional deficits that demand multifaceted interventions for recovery (Saceleanu et al., 2023). This study aim is to investigate the relationship between severity of stroke and nursing care for patients with functional disabilities, focusing on patients at Minia University Hospital in Egypt. By assessing motor, sensory, and language outcomes alongside activities of daily living (ADLs) and overall functional dependency, the findings aim to contextualize the contributions and limitations of nursing care within the broader framework of post-stroke rehabilitation. Through a comparative lens with existing literature, this research underscores the critical need for evidence-based and integrated care strategies in addressing the multifaceted challenges of stroke recovery.

The participant age with a notable portion thirty five percent aged fifty and sixty years. This aligns with the findings of Yousufuddin & Young (2019), who noted the increasing stroke risk and disability severity with age. On the other hand, Ma et al. (2024) highlighted that younger adults are being affected by stroke more frequently, driven by modifiable factors like smoking and hypertension. However, this study reflects the regional trend of stroke predominance among older adults.

A higher incidence of stroke among males than females is consistent with global trends, which show that men, particularly in middle age, have a higher stroke risk, as emphasized by Strong et al. (2021). However, Baum et al. (2021) further suggest that older women, due to hormonal factors and greater longevity, may experience worse outcomes, emphasizing the need for gender-specific nursing interventions. This gender difference in

recovery underscores the need for personalized care, as suggested by Knutsen et al. (2024).

The study shows that more than half of participants were married, which is positively associated with stroke recovery due to the supportive role of spouses in rehabilitation, as noted by Alzahrani (2021). However, widowed and single patients often experience limited recovery, primarily due to inadequate social support, reinforcing the importance of family-centered care, as emphasized by Chaknum et al. (2022). A significant proportion near one third of participants was illiterate, highlighting the need for tailored health education strategies. As Šedová et al. (2021) suggested, using visual aids and culturally sensitive materials can improve patient engagement and understanding, particularly for those with low literacy levels.

The high unemployment rate of sixty percent among the participants underscores the significant socio-economic impact of stroke, with survivors facing not only functional disabilities but also financial strain, as emphasized by Nuccio et al. (2024). Vocational rehabilitation integrated into nursing care plans is essential to enhancing recovery and improving quality of life, as shown by Heydari & Hadiloo (2023). More than half of the participants resided in urban areas, which typically offer better healthcare access. In contrast, rural residents face delays and limited rehabilitation resources, as noted by Ezeamii et al. (2024). Expanding care access through mobile units and telehealth services could address these disparities.

The study found that two-thirds of the participants lived with family, which is associated with better outcomes. Conversely, those one third living alone often struggle with depression and poorer recovery. Byrne et al. (2022) emphasize that nursing care should focus on caregiver training to reduce caregiver burden and improve patient

outcomes. More than half of the participants rated the nursing care as poor, while a minority rated it good. As **Khalife et al. (2023)** suggested, improving nurse-patient interactions and providing better training could address these concerns and improve satisfaction. Hence, the researcher suggests that the need for family support is crucial part for recovery after stroke.

Cardiac disorders were prevalent in more than one-third of the participants, and a quarter had both diabetes and hypertension. These findings are consistent with global trends and underscore the vital role of nursing in managing comorbidities to prevent recurrent strokes and optimize recovery, as emphasized by **Abdul-Samed et al. (2024)**. Minor improvements in consciousness were noted, with alert patients increasing little in second observation. However, these changes were not statistically significant. This is consistent with **Saceleanu et al. (2023)**, who suggested that nursing care alone has limited efficacy in improving consciousness, indicating a need for multidisciplinary interventions. From the researcher's perspective, the high prevalence of these conditions in Egyptians may be attributed to factors such as exposure to chronic stress, a sedentary lifestyle, smoking, and poor dietary habits. These lifestyle factors are well-documented contributors to the development of diabetes, hypertension, and cardiac disorders, which collectively elevate the risk of stroke.

Orientation showed slight improvement in second observation. While the ability to follow one command declined slightly to above two thirds. These results suggest that cognitive deficits persist, and patients require prolonged and specialized cognitive rehabilitation, which aligns with **Li et al. (2024)**. No significant changes were observed in visual field or gaze outcomes, aligning with literature that highlights persistent visual impairments after strokes, as shown by **Alwashmi et al. (2022)**. Nursing care can mitigate these impacts by teaching compensatory strategies and making environmental adjustments.

Nursing care offers crucial support for stroke patients, particularly in monitoring and preventing complications. However, its limitations in addressing severe deficits highlight the need for multidisciplinary strategies. Collaborative, evidence-based interventions, such as cognitive rehabilitation, physical therapy, and speech therapy, are essential to improving patient outcomes. Minimal improvements were observed in facial motor function, with normal facial movement slightly declining. This indicates a need for targeted

interventions such as facial exercises, as stated by **Li et al. (2024)**. Routine nursing care alone is insufficient to stimulate the neural plasticity required for recovery.

Upper and lower extremity motor functions showed levels negligible changes, reinforcing the importance of early mobilization and physiotherapy in nursing care, as noted by **Nobles et al. (2024)**. Collaborative approaches with physical therapists can improve levels. The increase in limb ataxia highlights a gap in addressing coordination deficits. Specialized therapies are necessary to manage these impairments effectively (**Khan et al., 2024**). While sensory levels showed limited improvements, suggesting that supportive nursing care is foundational. However, structured sensory retraining programs are essential for significant recovery, as emphasized by **Hayden et al. (2022)**.

The proportion of patients reporting severe aphasia increased to two-thirds in the second observation. Likely supported by consistent verbal interaction by nursing staff, this result indicates progress. However, articulation deficits point to the need for speech therapy, as routine nursing practices alone are insufficient (**Saeedi et al., 2022**). Patients with no neglect showed modest deterioration, from nearly half to slightly more than half of cases, indicating a limited recovery in addressing inattention. This suggests the need for early identification and specialized therapies like visual scanning training, as noted by **Carter & Barrett (2023)**. This study's results likely reflect gaps in integrating such therapies into routine care, highlighting the challenges of achieving recovery through nursing care alone.

A concerning slight decrease in patients categorized as having "severe" strokes was observed, from nearly two-thirds of cases to slightly above half in the second observation. An increase in "moderately severe to mild" cases, reaching a quarter of the total, indicates gaps in preventive strategies and highlights the need for proactive nursing measures to manage secondary complications, as emphasized by **Oh & Parikh (2022)**. The findings reveal that routine nursing care, while essential, has limitations in addressing the complex needs of stroke patients. The prognosis in some areas, such as sensory function and language, suggest that there is lack in nursing care which the researcher suggests the need for foundational support to nurses.

Hospital nursing care offers crucial support for stroke patients, particularly in monitoring and preventing complications. However, its limitations

in addressing severe deficits highlight the need for multidisciplinary strategies. Collaborative, evidence-based interventions, such as cognitive rehabilitation, physical therapy, and speech therapy, are essential to improving patient outcomes. Minimal motor recovery was noted. Facial motor function slightly regressed to less than half of the cases (normal function: 43.3% to 40%), while left upper extremity function reached normal in half of the cases (50%). Right lower extremity performance slightly declined, with "no movement" cases dropping from 16.7% to 10%. This study stated that consistent verbal interaction by nursing staff may have contributed to language improvements.

Research indicates that motor recovery, particularly in upper extremities, depends heavily on early, intensive rehabilitation. **Levin & Demers (2021)** found structured therapy critical during initial recovery. Similarly, **Goldman et al. (2024)** highlight that motor improvement is limited without integrated physical therapy, reflecting the gaps in this study's routine nursing care approach. Deteriorations in sensory levels were observed, with patients reporting severe-to-total sensory loss increasing slightly to less than half of cases. The results shed light on the effectiveness and limitations of nursing interventions in this setting.

Significant deteriorations were observed in language recovery, with the proportion of patients reporting severe aphasia increasing to two-thirds of patients in the second observation. Additionally, patients with mild to moderate dysarthria decreased slightly to a quarter of cases in the second observation, and articulation declined slightly. These outcomes align with **Merlino (2023)** and **Du et al. (2023)**, who emphasize targeted interventions for aphasia and sensory deficits, exploiting neuroplasticity. However, **Kuruvilla-Dugdale et al. (2020)** underscore the need for sustained speech therapy, which appears insufficient in this study. The lack of emphasis on speech interventions likely contributed to the lack of articulation progress. This study's results likely reflect gaps in integrating such therapies into routine care, highlighting the challenges of achieving motor recovery through nursing care alone.

Nursing care emerged as a critical factor, showing a significant negative correlation with both functional disability ($r = -0.201$, $p = 0.188$) and stroke severity ($r = -0.175$, $p = 0.355$). This underscores the supportive role of nursing in mitigating stroke outcomes, despite inherent limitations in addressing complex deficits

independently. These findings are consistent with **Aderinto et al. (2023)**, who identified nursing care as the cornerstone of post-stroke management, and **Salvadori et al. (2020)**, who found stroke severity significantly influences functional outcomes. From the researcher point of view these relationships underscore the critical influence of routine nursing care in alleviating functional limitations and mitigating stroke severity, though its impact on severe cases may be insufficient.

Conclusion

The findings of this study illuminate the nuanced role of routine nursing care in post-stroke recovery. While limited gains were observed in certain areas, such as language function and activities of daily living, the overall impact on motor recovery and stroke severity was limited. Little Improvements in functional dependency, as evidenced by enhanced Barthel Index scores, affirm the essential role of nursing care as a foundational pillar of post-stroke management. However, the persistent deficits in areas such as motor function, bladder and bowel continence, and articulation highlight the inherent constraints of relying solely on routine care. This study reveals a negative correlation between the study sample's point of view regarding hospital nursing care and the severity of stroke, and no correlation with patients' functional disability. The progression of stroke severity in some cases further underscores the need for more proactive and comprehensive interventions. These results highlight the need for healthcare providers to focus on tailored interventions for patients with varying stroke severity and to prioritize holistic care approaches that address both clinical and emotional needs. Further research is recommended to develop strategies for improving nursing care quality across all levels of stroke severity and functional disability.

Recommendations

Based on the findings of the study the researcher suggested that:

Recommendations for the Stroke Department and Nurses:

- Enhance specialized training programs for nurses in stroke care, focusing on evidence-based rehabilitation techniques.
- Integrate interdisciplinary care and establish structured care models that

involve collaboration between nurses, physiotherapists, occupational therapists, and neurologists to deliver comprehensive and individualized care.

- Improve monitoring tools and equip the department with advanced tools for consistent monitoring of patients' functional and neurological progress to assess the impact of care interventions accurately.
- Focus on early intervention, strategies to optimize recovery during the critical period following stroke onset, aiming to minimize long-term functional deficits.

Recommendations for Patients:

- Engage in rehabilitation including physical, occupational, and speech therapy, to enhance recovery.
- Promote adherence to a healthy lifestyle, including a balanced diet, regular physical activity, and proper management of comorbidities like hypertension and diabetes.
- Access community resources, such as counseling or peer groups, to address emotional and social needs post-stroke.

Recommendations for Further Research

- Investigate long-term outcomes to evaluate the long-term impact of routine nursing care on stroke severity and functional recovery.
- Explore innovative interventions, such as virtual reality-based therapies, robotic-assisted rehabilitation, and telehealth support for stroke patients.
- Evaluate patient-centered models through research the impact of patient-centered care models that integrate individualized goals and feedback in nursing care for post-stroke recovery.
- Identify the barriers preventing optimal outcomes in routine nursing care, including patient adherence, resource limitations, and nurse workload.

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