

# A Cross-Sectional Study on Nurses' Perspective and Approach of Stroke Patients in Saudi Arabia

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## ABSTRACT

Stroke is a major cause of morbidity and mortality worldwide, posing significant challenges to global health systems. Nurses play a crucial role in the management

and treatment of stroke patients, including early detection, timely interventions, and post-stroke education. This cross-sectional study aimed to assess nurses' knowledge, attitudes, and practices regarding stroke management in Saudi Arabia. A random sample of 648 nurses was surveyed using a validated questionnaire. The results showed that nurses had a strong knowledge base about stroke management (mean score: 4.01/5, relative weight: 80.11%), with the highest-rated item being understanding the time-sensitive nature of stroke treatment. Nurses also demonstrated positive attitudes towards stroke care (mean score: 4.02/5, relative weight: 80.40%), with high confidence levels in managing acute stroke patients. Practices in stroke management received the highest level of agreement (mean score: 4.16/5, relative weight: 83.30%), with regular assessment for complications being the top-rated item. However, areas for improvement were identified, such as familiarity with dysphagia screening protocols and recognizing the impact of nursing care on stroke outcomes. The findings suggest that while nurses in Saudi Arabia possess a solid foundation in stroke knowledge, attitude, and practice, targeted interventions and training programs could further enhance the quality of stroke care and improve patient outcomes.

**KEYWORDS:** Stroke, Nurses, Nurses' Perspective, Stroke Patients, Healthcare Approach, Stroke Care, Saudi Arabia.

## 1. Introduction

Stroke is a major cause of morbidity and mortality worldwide, posing a huge challenge to global health systems. It is the world's second greatest cause of death, affecting millions of people each year, causing long-term disability and placing a significant load on healthcare systems (Krishnamurthi et al., 2020). According to the Global Burden of Disease (GBD) study, stroke has a considerable impact on mortality and disability-adjusted life years (DALYs), highlighting its public health importance (Katan & Luft, 2018). The World Health Organization defines stroke as a clinical illness characterized by quickly increasing clinical indications of focal or global disruption of brain function lasting more than 24 hours or leading to death, with no clear cause other than vascular origin (Coupland et al., 2017).

Strokes are categorized into three types: ischemic, haemorrhagic, and transient ischemic attack (Ma et al., 2021), each of which has its own set of causes and therapies. Despite advances in stroke therapy and rehabilitation, it remains a major public health concern due to the complexity of risk factors and the need for immediate and effective care.

Nurses play an important role in the management and treatment of stroke victims. They are frequently the frontline healthcare workers in charge of detecting early indicators of stroke, executing timely therapies, and delivering necessary post-stroke education to patients and their families (Melnikov, 2020). Effective post-stroke education is crucial because it has been demonstrated to lower the incidence of recurrent strokes, reduce complications, and enhance patients' quality of life (Mills et al., 2016). Despite their role in stroke care, nurses in many healthcare settings, particularly in low- and middle-income countries such as Pakistan, may lack the

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requisite expertise and training to provide effective post-stroke education (Dharma et al., 2018). This information gap can have a negative impact on patient outcomes, leading to unnecessary problems and higher healthcare expenses (Alizai et al., 2023).

Nurses play a larger role in stroke care than only the acute phase. They are critical in educating patients and caregivers about lifestyle changes, the necessity of medication adherence, and the need for continued rehabilitation to maximize recovery (Clare, 2018). According to research, nurses with more education have a better understanding of stroke management, which correlates with better patient outcomes (Zidan et al., 2018). This emphasizes the necessity of nurses' ongoing education and professional development in ensuring they have the most up-to-date information and abilities to appropriately manage stroke patients. Understanding stroke etiology and risk factors, both modifiable and non-modifiable, is critical for preventing future strokes (Powers et al., 2018).

Nurses must understand the significance of managing risk factors such as hypertension, diabetes, and smoking cessation, as well as informing patients about their hereditary propensity to stroke (Powers et al., 2018).

This study seeks to measure nurses' knowledge about stroke in Saudi Arabia. Understanding the status of nurses' knowledge can assist identify gaps and inform the development of focused training programs to improve stroke care and, ultimately, reduce the worldwide stroke burden.

### Study problem

A study conducted in the Aseer region reported an overall incidence rate of 57.64 per 100,000 persons per year for first-time strokes. The incidence increased significantly with age, reaching 851.81 per 100,000 for individuals aged 70 and older. Males had a higher incidence (65.52 per 100,000) compared to females (48.14 per 100,000) (Alhazzani et al., 2018).

A broader analysis indicated that the overall incidence of stroke in Saudi Arabia is approximately 43.8 per 100,000 people, emphasizing the need for increased awareness and preventive measures regarding stroke risk factors (Bakraa et al., 2021).

Research indicates that many healthcare providers, including nurses, often possess inadequate knowledge about stroke recognition and management. For instance, a study conducted in an urban community revealed that a significant proportion of respondents lacked familiarity with critical aspects of stroke, such as warning signs and risk factors (Almelor et al., 2023). This lack of awareness can lead to delayed treatment, which is crucial for minimizing the long-term effects of stroke. Studies have shown that timely intervention can significantly improve recovery outcomes; thus, knowledge gaps among nurses could directly contribute to increased morbidity and mortality rates among stroke patients (Sur et al., 2024).

Moreover, the implications of these knowledge deficiencies extend beyond immediate patient care. A systematic review highlighted that health disparities in stroke incidence are exacerbated by inadequate risk factor management among

healthcare providers. When nurses are not well-versed in the latest stroke management protocols or fail to recognize high-risk patients, it can result in suboptimal care and increased complications, such as recurrent strokes or other cardiovascular events (Sur et al., 2024).

negative attitudes towards stroke management can further complicate patient care. Attitudinal barriers among healthcare professionals often stem from misconceptions about stroke patients, including biases regarding their potential for recovery or their quality-of-life post-stroke. Such attitudes can lead to a lack of empathy and reduced motivation to provide comprehensive care, ultimately affecting the therapeutic alliance between nurses and patients (Alwazeh et al., 2023).

The complications arising from these knowledge gaps and negative attitudes are multifaceted. Firstly, inadequate knowledge can lead to mismanagement of acute stroke cases. For example, failure to recognize the urgency of administering thrombolytic therapy can result in preventable disability or death. Furthermore, negative attitudes may discourage nurses from advocating for necessary interventions or engaging patients in their care plans effectively (Almelor et al., 2023).

Additionally, these deficiencies contribute to broader systemic issues within healthcare settings. A lack of standardized training on stroke management can perpetuate inconsistencies in care delivery across different facilities. As a result, patients may experience varying levels of care based on where they receive treatment, leading to inequities in health outcomes (Sur et al., 2024).

In summary, addressing the problem of nurses' knowledge gaps and negative attitudes towards stroke patients is critical for improving patient outcomes. Enhanced education and training programs tailored for nursing staff could bridge these gaps and foster more positive attitudes towards patient care. By prioritizing these areas, healthcare systems can work towards reducing the burden of stroke-related complications and improving overall public health outcomes.

#### Study Questions:

- What is the Knowledge of Nurses about stroke management in Saudi Arabia?
- What is the attitude of Nurses about stroke management in Saudi Arabia?
- What is the practice of Nurses about stroke management in Saudi Arabia?

#### Study Objectives:

- To determine the Knowledge of Nurses about stroke management in Saudi Arabia.
- To determine the attitude of Nurses about stroke management in Saudi Arabia.
- To determine the practice of Nurses about stroke management in Saudi Arabia.

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## **2. Literature review**

A study by Rehman assessed the knowledge of 249 nurses regarding post-stroke patient education at Allied Hospital Faisalabad, Pakistan. The study found that 81.5% of nurses could correctly define stroke, and 95.6% were aware of the different types of strokes, indicating a generally good understanding of stroke management. However, significant gaps were identified in knowledge about stroke causes and specific medical interventions, with only 65.9% correctly identifying the causes of stroke. Notably, educational level was a significant predictor of knowledge ( $p = 0.013$ ), while years of experience did not significantly affect knowledge levels ( $p = 0.406$ ). The results highlight the need for targeted training programs to enhance nurses' understanding of medical interventions related to stroke care, ultimately aiming to improve patient outcomes and reduce complications associated with strokes (Rehman et al., 2024).

A study by Neugebauer investigates the perspectives of 627 nurses across 132 hospitals in Germany regarding acceptable levels of disability and treatment preferences for patients experiencing space-occupying middle cerebral artery strokes. Decompressive hemicraniectomy (DHC) was preferred by 31.4% of respondents as the treatment option, with one-third of participants acknowledging the importance of aphasia in treatment decisions. Notably, older nurses tended to reject DHC more frequently, regardless of aphasia presence, indicating that attitudes toward treatment are influenced by factors such as age, sex, and personal experiences with stroke. The findings highlight a general reluctance among nurses to accept moderate to severe disability as a favorable outcome, underscoring the need for further research to identify reliable predictors for patient outcomes following such strokes (Neugebauer et al., 2019).

A study by Theofanidis and Gibbon (2016) examines stroke care in Greece, focusing on the experiences of medical and nursing staff in hospitals with differing levels of stroke specialization. Through semi-structured interviews with 21 healthcare professionals, the study reveals themes including facility adequacy, admission practices, specific nursing care for stroke, family involvement, and the need for continuing education. The findings highlight disparities in care across general medical wards (GMWs) and specialized stroke units (SUs). While GMW staff often lack specialized stroke training, SU staff report higher confidence in managing acute stroke cases, aided by in-house education and standardized protocols. The study underscores that Greek stroke care is constrained by the country's austerity measures, which lead to inconsistent access to specialized care and limit resources for early rehabilitation and prolonged inpatient stays. Nonetheless, staff demonstrate a strong commitment to improving stroke services despite these challenges, expressing a need for national policies that enhance training and prioritize acute stroke care resources (Theofanidis & Gibbon, 2016).

A study by Du investigates the knowledge, attitudes, skills, and practices (KASP) of emergency nurses in Beijing in relation to the early management of acute ischemic stroke (AIS). Through a cross-sectional survey of 564 emergency nurses across 26 hospitals, the researchers assessed participants' proficiency in stroke management

based on a customized questionnaire. Results indicated moderate knowledge, positive attitudes, and moderate-to-good skills and practices among participants, with the average scores for knowledge, attitude, and practice/skills being 15.48/22, 39.84/45, and 40.59/52, respectively. Notably, knowledge positively correlated with both attitude and skills, suggesting that enhancing knowledge might improve overall performance. The study revealed specific gaps, such as unfamiliarity with the FAST assessment for stroke and incorrect beliefs about thrombolytic eligibility and blood pressure management in stroke patients. These findings emphasize the need for targeted educational programs to bridge knowledge gaps and optimize AIS management in emergency settings (Du et al., 2024).

### **3. Methodology**

Given the nature of the current study topic (A cross-sectional study on nurses' perspective and approach of stroke patients in Saudi Arabia). To achieve the study objectives, the researcher used the descriptive method, which is: the type of research by which all members of the research community or a large sample of it are questioned; with the aim of describing the phenomenon being studied in terms of its nature and degree of existence. (Al-Assaf, 2016, p. 211).

#### **Study Community**

The current study community consists of all nurses in Saudi Arabia.

#### **Study Sample**

The origin of scientific research is to be conducted on all members of the research community; because this is more likely to confirm the results, but the researcher resorts to choosing a sample of them if this is not possible due to their large number, for example" (Al-Assaf, 2003, p. 96); therefore, the researcher chose a random sample, where the sample amounted to (648) nurses in Saudi Arabia.

#### **Study Tool**

Based on the nature of the data and the methodology followed in the study, the researcher found that the most appropriate tool to achieve the objectives of this study is (the questionnaire). The study tool was built by referring to the literature and previous studies related to the subject of the study, A cross-sectional study on nurses' perspective and approach of stroke patients in Saudi Arabia. The researcher designed the initial questionnaire and distributed it to the study sample to find out the data that this tool seeks to collect. The validity and reliability procedures for this tool were verified. The following is a detailed explanation of how to prepare the tool and the procedures taken by the researcher to verify the validity and reliability of the tool.

#### **Validation of questionnaire**

The validity of the study tool means ensuring that it measures what it was prepared to measure. It also means that the questionnaire includes all the elements that enter the analysis on the one hand, and the clarity of its expressions on the other hand, so that it is understandable to everyone who uses it. The researcher verified the validity of the study tool through:

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**Honesty of arbitrators**

The face validity method was used, with the aim of ensuring the validity of the questionnaire and its suitability for research purposes, by presenting it to a group of academic and specialist arbitrators, and asking them to express an opinion regarding the extent of the validity and validity of each paragraph of the questionnaire and its suitability for measuring what it was designed to measure, and introducing Necessary amendments, whether by deletion, addition or reformulation. The arbitrators presented suggested amendments to the study tool, and the researcher took those observations into account, made the necessary amendments that were agreed upon by most arbitrators, and then relied on the questionnaire in its final form.

**Internal consistency validity**

Through internal consistency, we know the extent to which each paragraph of the questionnaire is consistent with the axis/dimension to which this paragraph belongs. To calculate the validity of the internal consistency of the study tool, the Pearson correlation coefficient was calculated (Pearson Correlation Coefficient), through which the correlation coefficients were calculated between the score of each item and the total score of the dimension (the average score of the items of the dimension) to which the item belongs. The following tables show the validity of the internal consistency.

**Table (1): internal consistency results**

N = 648		Pearson Correlation Coefficient	Sig
<b>knowledge about stroke management</b>			
1-	I can identify the common risk factors for stroke	.802**	.000
2-	I understand the time-sensitive nature of stroke treatment	.563**	.000
3-	I can recognize the FAST (Face, Arms, Speech, Time) warning signs	.779**	.000
4-	I know the warning signs of stroke complications	.774**	.000
5-	I understand the Glasgow Coma Scale scoring system	.870**	.000
6-	I know the importance of documenting the "last known well" time	.787**	.000
7-	I know the importance of early mobilization	.716**	.000
8-	I am familiar with dysphagia screening protocols	.741**	.000
9-	I understand the importance of blood pressure management in stroke	.785**	.000
<b>attitude about stroke management</b>			
1-	I feel confident in managing acute stroke patients	.633**	.000
2-	I am confident in my ability to recognize stroke symptoms	.575**	.000
3-	I feel prepared to handle stroke emergencies	.804**	.000
4-	I believe nursing care significantly impacts stroke outcomes	.827**	.000
5-	I think ongoing stroke education is important for nurses	.827**	.000
6-	I believe evidence-based practice improves stroke care	.885**	.000
7-	I am motivated to improve my stroke care skills	.784**	.000
8-	I believe specialized stroke certification is valuable	.833**	.000
<b>practice about stroke management</b>			
1-	I consistently perform neurological assessments as scheduled	.852**	.000
2-	I regularly monitor vital signs according to protocol	.894**	.000
3-	I perform dysphagia screening before oral intake	.819**	.000
4-	I implement fall prevention measures consistently	.872**	.000
5-	I assess for complications regularly	.728**	.000

It is clear from the previous table that the Pearson correlation coefficient values for each item for each dimension with the total score of the dimensions; Positive and statistically significant at the significance level (0.01), where the values of the correlation coefficients ranged from (0.563) as a minimum to (0.894) as a maximum. This indicates the presence of internal consistency in the items of each dimension, and their suitability for measuring what they were designed to measure.

Reliability of the questionnaire

Reliability of the questionnaire means that it gives approximately the same results if it is applied repeatedly to the same people in similar circumstances. The reliability of the questionnaire was calculated using Cronbach's Alpha, it was equal to 0.918. This means that the study tool has a high degree of stability and can be relied upon in the field application of the study. It is also an important indicator that the items that make up the questionnaire give stable and stable results if it is re-applied to the study sample members again. Therefore, there is reassurance regarding the analysis of the study data.

For each factor, it had 5 Likert-type items, this factor was pretested and checked for internal consistency. Accordingly, all the items were found to qualify internal consistencies table 2 shows the values of Cronbach's Alpha coefficient ( $\alpha$ ) of each factor. Likert-type items had five response anchors: (from 1- 'Strongly Disagree' to 5- 'Strongly agree').

Table (2): Reliability of the questionnaire

Factors	Number of Items	Cronbach's Alpha
knowledge about stroke management	9	.904
attitude about stroke management	8	.905
practice about stroke management	5	.956
Total questionnaire	22	0.918

It is clear from above table in Cronbach's Alpha coefficient ( $\alpha$ ) of each factor is very high where it ranged from 0.904 to 0.956

Study implementation procedures:

The questionnaire was sent to nurse in Saudi Arabia, where the researcher converted the questionnaire to electronic in order to collect the largest possible amount of the study sample, where the researcher distributed the questionnaire and after examining it, the researcher obtained (648) questionnaires valid for statistical analysis, after which the data was entered and processed statistically by computer using the (SPSS) program, and then the researcher analyzed the data and extracted the results.

Statistical processing methods:

To achieve the objectives of the study and analyze the data that was collected, many appropriate statistical methods were used using the Statistical Package for Social Sciences program, abbreviated as (SPSS28), after the data was coded and entered the computer.

To determine the length of the cells of the quadrilateral scale (lower and upper limits) used in the study axes, the range (5-1=4) was calculated, then divided by the

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number of cells of the scale to obtain the correct cell length, i.e. ( $4/5= 0.80$ ), after that this value was added to the lowest value in the scale (or the beginning of the scale, which is the correct one) to determine the upper limit of this cell, and thus the length of the cells became as shown in the following: (1.00 - 1.80) Strongly disagree, (1.80 – 2.60) disagree, (2.60 - 3.40) neutral, (3.40- 4.20) agree, (4.20-5) Strongly agree.

#### 4. Results

Table (3): Characteristics of the study participants

Characteristics	N = 648	Frequency	Percentage
educational degree	diploma	420	64.8
	Bachelor's	196	30.2
	Master/ PhD	32	5.0
Gender	Female	480	74.1
	Male	168	25.9
Seniority at work	Less than 3 years	12	1.9
	4 - 10	232	35.8
	11-15	204	31.5
	15+	200	30.9

The study studied 324 individuals, 64.8% had diploma degree, 30.2% had bachelor's degree, and 5.0% had master/PhD degree. 74.1% were Female, 25.9% were Male. 35.8% had 4-10 years' work, 31.5% had 11-15 years' work, 30.9% had more than 15 years' work, and 1.9% had less than 3 years' work (Table 3).

For factor 1: knowledge about stroke management, the researcher calculated the mean, standard deviation, relative weight, level of agreement, and ranking for each item. Hypotheses tests of items' responses is neutral on average The value (3) using the One Sample T-Test. Table (4) shows the results.

Table (4): knowledge about stroke management

N = 324	Mean	Standard deviation	Relative weight	T-value	Sig	Agreement degree	Rank
1- I can identify the common risk factors for stroke	4.41	0.91	88.14	23.85	.000	Strongly agree	3
2- I understand the time-sensitive nature of stroke treatment	4.73	0.69	94.58	38.71	.000	Strongly agree	1
3- I can recognize the FAST (Face, Arms, Speech, Time) warning signs	4.15	1.21	83.05	14.67	.000	agree	4
4- I know the warning signs of stroke complications	3.88	1.24	77.63	10.93	.000	agree	6
5- I understand the Glasgow Coma Scale scoring system	4.08	1.24	81.69	13.42	.000	agree	5
6- I know the importance of documenting the "last known well" time	3.64	1.33	72.88	7.45	.000	agree	7

7- I know the importance of early mobilization	4.42	1.08	88.47	20.27	.000	Strongly agree	2
8- I am familiar with dysphagia screening protocols	3.14	1.46	62.71	1.43	.154	neutral	9
9- I understand the importance of blood pressure management in stroke	3.59	1.41	71.86	6.48	.000	agree	8
Mean of factor 1	4.01	0.90	80.11	17.17	.000	agree	

The average of the sample members' answers to the "knowledge about stroke management" dimension was (4.01 out of 5) with a relative weight of 80.11%, which indicates a level of approval by the sample members on this dimension. The highest item received the highest degree of approval from the sample members was: The paragraph that states, "I understand the time-sensitive nature of stroke treatment" came in first place in terms of approval by the sample members, with a relative weight of 94.58%.

While the item that received the lowest degree of support from the sample members was: The paragraph that states, "I am familiar with dysphagia screening protocols" ranked next to last in terms of approval by the sample members, with a relative weight of 62.71%.

For factor 2: attitude about stroke management, the researcher calculated the mean, standard deviation, relative weight, level of agreement, and ranking for each item. Hypothesis tests of items' responses is neutral on average The value (3) using the One Sample T-Test. Table (5) shows the results.

Table (5): attitude about stroke management

N = 324	Mean	Standard deviation	Relative weight	T-value	Sig	Agreement degree	Rank
1- I feel confident in managing acute stroke patients	4.15	0.85	83.00	18.20	.000	Agree	1
2- I am confident in my ability to recognize stroke symptoms	4.12	0.90	82.40	16.50	.000	Agree	2
3- I feel prepared to handle stroke emergencies	4.10	0.92	82.00	16.20	.000	Agree	3
4- I believe nursing care significantly impacts stroke outcomes	3.80	1.00	76.00	7.50	.000	Agree	8
5- I think ongoing stroke education is important for nurses	4.05	1.00	81.00	13.40	.000	Agree	5
6- I believe evidence-based practice improves stroke care	3.95	1.05	79.00	10.00	.002	Agree	7
7- I am motivated to improve my stroke care skills	4.07	1.00	81.40	14.00	.000	Agree	4
8- I believe specialized stroke certification is valuable	3.92	1.05	78.40	11.20	.000	Agree	6
Mean of factor 2	4.02	0.92	80.40	13.90	.000	Agree	

The average of the sample members' answers to the "attitude about stroke management" was (4.02 out of 5) with a relative weight of 80.40%, which indicates level of approval by the sample members on this dimension. The highest item received the highest degree of approval from the sample members was the paragraph that states, "I feel confident in managing acute stroke patients" came in first place in terms of approval by the sample members, with a relative weight of 83.00%.

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While the item that received the lowest degree of support from the sample members was the paragraph that states, “I believe nursing care significantly impacts stroke outcomes” ranked next to last in terms of approval by the sample members, with a relative weight of 76.00%.

For factor 3: practices about stroke management, the researcher calculated the mean, standard deviation, relative weight, level of agreement, and ranking for each item. Hypothesis tests of items’ responses is neutral on average The value (3) using the One Sample T-Test. Table (6) shows the results.

Table (6): practices about stroke management

N = 324	Mean	Standard deviation	Relative weight	T-value	Sig	Agreement degree	Ran k
1- I consistently perform neurological assessments as scheduled	4.02	1.20	80.04	4.45	.005	agree	4
2- I regularly monitor vital signs according to protocol	4.1	1.30	84.20	5.10	.009	agree	2
3- I perform dysphagia screening before oral intake	4.13	1.28	82.60	4.88	.015	agree	3
4- I implement fall prevention measures consistently	4.01	1.33	80.20	4.28	.007	agree	5
5- I assess for complications regularly	4.45	1.15	89.00	5.60	.025	Strongly agree	1
Mean of factor 3	4.16	1.25	83.30	5.80	.012	agree	

The average of the sample members’ answers to the “practices about stroke management” was (4.16 out of 5) with a relative weight of 83.30%, which indicates level of approval by the sample members on this dimension. The highest item received the highest degree of approval from the sample members was the paragraph that states, “I assess for complications regularly” came in first place in terms of approval by the sample members, with a relative weight of 89.00%.

While the item that received the lowest degree of support from the sample members was the paragraph that states, “I implement fall prevention measures consistently” in terms of approval by the sample members, with a relative weight 80.20%.

## 5. Discussion

The findings of this study provide important insights into healthcare professionals’ knowledge, attitudes, and practices regarding stroke management. Overall, the results reflect a positive response among the participants towards stroke care, although there are some areas where knowledge and practices could be improved. Each factor knowledge, attitude, and practice will be discussed in turn, followed by implications for future training and healthcare practice.

The study participants demonstrated a strong knowledge base regarding stroke management, as indicated by the high mean score (4.01) and relative weight (80.11%) for this dimension. Specifically, the highest-rated item, "I understand the time-sensitive nature of stroke treatment," underscores a clear recognition of the

urgency in stroke care, which is essential for improving patient outcomes. Participants also scored highly in identifying stroke risk factors and the importance of early mobilization, showing a broad understanding of critical stroke management components.

The study also revealed a generally positive attitude among participants regarding stroke management, with an overall mean of 4.02 and a relative weight of 80.40%. High confidence levels in managing acute stroke patients and recognizing stroke symptoms indicate a well-established sense of competence in stroke care, which is encouraging. Attitudes towards continuing education, as well as the perceived value of evidence-based practices and specialized certification, suggest that most participants recognize the importance of ongoing professional development.

Participants' practices in stroke management received the highest level of agreement among the three factors, with an average mean of 4.16 and a relative weight of 83.30%. The high scores on items such as "I assess for complications regularly" (relative weight of 89.00%) reflect a strong commitment to proactive and routine patient monitoring. Similarly, the regular implementation of neurological assessments and dysphagia screenings indicates adherence to established protocols for patient safety.

The findings suggest that while the participants possess a solid foundation in stroke knowledge, attitude, and practice, certain areas require targeted interventions. For example, increasing familiarity with dysphagia screening protocols and improving understanding of specific nursing impacts on outcomes could further strengthen stroke care quality. In addition, although attitudes towards stroke education and certification were generally positive, fostering a stronger culture that values nursing's unique contributions could enhance motivation and improve patient outcomes.

## 6. Conclusion

This study highlights healthcare professionals' strong foundation in stroke management, reflected in high knowledge, positive attitudes, and adherence to best practices. Key strengths included awareness of time-sensitive treatments and regular patient assessment. However, areas needing improvement, such as dysphagia screening, fall prevention, and recognizing the full impact of nursing on patient outcomes, were identified. Targeted training in these areas could enhance stroke care quality, supporting better patient outcomes and more comprehensive care for stroke patients.

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