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AWARENESS OF STAFF NURSES REGARDING ACUTE ISCHEMIC STROKE AT TERTIORY CARE HOSPITAL IN LAHORE

Syed Mesam Abbas Kazmi[*1], Hina Arshad[2], Muhammad Asim Mansha[3], Muhammad Ibraheem[4], Muhammad Jameel[5], Tabish Abbas[6], Muhammad Zeeshan[7], Javed Hussain[8], Usama Usman[9], Ali Haider[10]

*[*1,3,4,5,6,7,8,9]BSN (UHS/ Fatima Memorial Hospital)*
[2]UHS / RN / MSN / DN / SWCON
[10]BSN / UHS / RN / Fatima Memorial Hospital

[*1]mesam.kazmi9999@gmail.com, [2]hina.arshad@swcon.edu.pk, [3]muhammadasimmansha6@gmail.com, [4]mibraheem6839@gmail.com, [5]muhammadjameelihf@gmail.com, [6]tabishabbas766@gmail.com, [7]shni75416@gmail.com, [8]javed33hussain44@gmail.com, [9]ranausamausman4772@gmail.com, [10]sheikhalihaiderh@gmail.com,

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Keywords

Acute Ischemic stroke, Awareness level , Pearson correlation and training programs.

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Corresponding Author: *
Syed Mesam Abbas Kazmi

Abstract

Background: *Around the world, a major source of disability and death is stroke, with ischemic strokes accounting for the majority of cases. Early identification and treatment are critical in reducing complications. Nurses play a key role in recognizing stroke symptoms and initiating timely care. However, gaps in their knowledge can hinder effective management.*

Objective*: To assess awareness of staff nurses regarding acute ischemic stroke.*

Materials and Methods*: The study utilized a descriptive cross-sectional design over a duration of four months. The sample size of 116 nurses was calculated using Solvin's formula and selected through convenient sampling, focusing on diploma and BSN, while excluding those with MSN degrees or psychological issues. Data was collected using an adaptive questionnaire. Data analysis was calculated using SPSS version 25.0, employing various statistical methods, including the pearson correlation, with a significance level set at $p < 0.05$. Ethical considerations was highly prioritized, ensuring informed consent, confidentiality, and participant anonymity throughout the study.*

Results: *This study included 116 nurses. The awareness percentage score regarding acute ischemic stroke was moderate in level. The awarness was significantly positively correlated with level of experience (P< .05).*

Conclusion: *The over all results indicate that series of training programs are required for effective patient centered care.*

1 : INTRODUCTION

1.1 Background

A stroke happens when a blood artery that supplies the brain with oxygen and nutrients becomes blocked by a clot which results to the death of the brain part (American Stroke Association,2022). Stroke is a major global non communicable health issue ,The leading cause of disability and the second major cause of worldwide mortality with an economic burden

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exceeding up to 721 US billion dollars , nearly 0.66
% of worldwide GDP (World Stroke Organization ,2022).

Similarly, Every year 12.2 million new stroke cases occur globally and over 101 million people worldwide are currently living with stroke after being affected by different disabilities .One in out of four adults over the age of 25 years will experience a stroke in their lifetime (World Stroke Organization,2022).

Furthermore, acute ischemic stroke is one of the most prevalent .Globally, it is approximately 87% of all stroke cases and around 77 million people worldwide are currently living with ischemic stroke (World Stroke Organization, 2022).

Moreover, the estimated yearly incidence of stroke in Pakistan is around 250 cases per 100,000 people, or roughly 350,000 new cases annually, and because the prevalence is 4.8% of the Pushton community in Karachi, ultimately stroke is becoming a major health concern in Pakistan (Farooq, Venketasubramanian, & Wasay, 2021).

Hence, it should be diagnosed and treated early so that mortality is reduced and patient care is improved. Nurses play a very important role in timely assessing the symptoms of stroke. So they can help to reduce the number of deaths and serious disabilities that are caused by the stroke in hospitals and improve patient chances of recovery and prevent further complications (Havva Karadeniz1&Nurgül Merdan Yılmaz2,2021).

Meanwhile, the FAST recognition method was developed by the Stroke Association in the UK in collaboration with the Department of Health and the National Health Service (NHS). It is widely promoted by stroke organizations, including the American Stroke Association (ASA) and the Centers for Disease Control and Prevention (CDC),to identify stroke symptoms early. The FAST stands for Face: facial drooping or weakness on one side, Arms: Inability to lift both arms due to weakness, Speech: Slurred or difficult speech and Time: Act quickly and call emergency services(American Stroke Association, 2022).

Futhermore, nurses can also enhance their skills and knowledge by different online sources one of them includes, the Carolina Acute Stroke Training (CAST) program is available online for healthcare professionals, including nurses. It addresses crucial topics related to strokes, such as stroke anatomy, risk factors, diagnosis, acute treatment, and rehabilitation, making it highly valuable for nurses involved in stroke care.

1.2 Problem Statement:

Stroke is a primary contributor to both disability and death, with ischemic strokes representing 87% of cases worldwide (World Stroke Organization, 2022). In Pakistan, the incidence of stroke is increasing, with 350,000 new cases diagnosed each year (Farooq et al., 2021). Although nurses play a crucial role in the early identification and management of strokes, research indicates considerable gaps in their knowledge, reflected in an average score of 40.07 out of 100 among emergency nurses (Yeganeh et al., 2019). Enhancing nurses' knowledge is vital for lowering mortality rates, reducing disability, and preventing complications.

1.3 Significance of the study:

Nurses play a key role in the early identification and treatment of strokes, but gaps in their knowledge can lead to delays in care and less affluent outcomes. This research seeks to evaluate nurses understanding of ischemic stroke, Emphasize the importance of education to enhance patient care and encourage the early detection of strokes using the FAST method to achieve better outcomes for patients.

1.4 Study Objective:

- To assess awareness of staff nurses regarding acute ischemic stroke.

1.5 Research Question:

- What is awareness of staff nurses reagrding actue ischemic stroke?

2: LITERATURE REVIEW

One of the analysis was done to utilizing Academic Search Premier, Google Scholar, CINHAL, Pub Med and Google prior to the initiation of the study .Key words used included

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awareness of nurses regarding management of acute ischemic stroke. Articles were reviewed from 2020 to the present as they related to the population of interest. The search revealed many studies as they related to knowledge of nurses among acute ischemic stroke.

A cross-sectional study was conducted among nurses on stroke care units in Japan. The study aimed to identify nurses' knowledge and actual nursing practice situations regarding stroke care in acute stroke units. The results showed that nurses' awareness was high, but their actual practice was low, specifically regarding acute ischemic stroke (Yukari Hisaka et al., 2021).

Furthermore, a descriptive study was conducted among nurses working at Farabi Hospital, Karadeniz Technical University Health Application and Research Center in Trabzon, Turkey. The purpose of the study was to identify the evidence-based knowledge level of acute stroke care among nurses. The results showed a moderate level of knowledge scores among the nurses (Havva Karadeniz & Nurgul Merdan Yılmaz, 2021).

Similarly, a cross-sectional analytical study was conducted among nurses working in emergency departments at hospitals affiliated with Guilan University of medical sciences in Rasht, Iran. The study aimed to assess nurses' knowledge in emergency departments based on evidence-based care guidelines for the acute phase of ischemic stroke. The results showed a moderate level of nurses' knowledge regarding guidelines for the acute stage of ischemic stroke (Mohammad Reza Yegane etal, 2019).

A collected data over cross-sectional design from nurses working in stroke units. This study purposeto examine current nursing practices for stroke patients in Saudi Arabia. According to the study's results, there was a low level of practice regarding acute ischemic stroke (Lisa. A Babkair et al., 2020)

A descriptive cross-sectional study was conducted to assess the awareness level of nurses about the management of stroke patients at Rajshahi Medical College Hospital in Bangladesh. The study's results showed that the nurses had a moderate level of knowledge regarding the management of stroke(Md. Shariful Islam et al., 2021)

Similarly, a descriptive cross-sectional study was evaluated among nurses from various departments at Allied Hospital, Faisalabad, Pakistan. The study purpose to examine the level of knowledge nurses possess about patient education after stroke at a tertiary care hospital. The resultsshows that nurses had a moderate to high level of knowledge regarding patient education after stroke (Rehman et al., 2024)

3 : MATERIALAND METHODS

3.1 Study Design:

- Descriptive cross sectional study design were followed.

3.2 Study Population:

- Staff nurses at Fatima Memorial Hospital, Lahore.

3.3 Study Setting:

- Fatima Memorial Hospital, Lahore.

3.4 Duration:

- This study was conducted in period of four months.

3.5 Sample Size:

- Sample size was calculated by **Solvin's** formula. **$n= N/ 1+N (e)^2$**

$n=163/1+163(0.05)^2$ $n=163/1.4075=115.80$

n=116 Staff Nurses

e=Margin of error=0.05, **n**=Sample size, **N**=Total Population

3.6 Sampling Technique:

- A Convenient sampling technique was used to collect data.

3.7 Inclusion Criteria:

- Staff nurses (diploma holder, Post RN, BSN).
- Staff nurses who are age between 25 to 59 years.

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3.8 Exclusion criteria:

- High qualified staff nurses like MSN.
- Staff nurses who have some neurological issues.

3.9 Data Collection Tool:

An adaptable survey based on emergency nurses' knowledge, attitudes, abilities, and practices about the early treatment of patients with acute ischemic stroke in Beinging. (Yue Du, Ningning Xue, Jianshu Lian & Yongme i Deng, 2022).It consisted of 2 sections. Section 1 includes demographic data which include 5 questions ,and section 2 includes 22 items that examined awareness of staff nurses regarding acute ischemic stroke. Each questionnaire has two possible responses with scores 0 and 1.The Incorrect response has a score of 0 and the correct response has 1 score.

Table 3.1: Awareness of staff nurses regarding acute ischemic stroke.

Awareness Status	Percentage
Low awareness	<60%
Moderate awareness	60 - 75%
High awareness	>75%

The overall wareness level of staff nurses regarding acute ischemic stroke was catagories using blomm cutoff value in which <60 % shows low, similarly awareness level, 60 to 75 % shows moderate awareness level while >75 shows high awareness level of nurses.

3.10 Data Collection Method:

In order to check awareness of staff nurses regarding acute ischemic stroke,participants were approached from their departments and a question paper with
consent form in the English language was distributed .30 minutes of time was given to fill out the questionnaire. After that we collected the questionnaire .

3.11 Data Analysis:

Data was takby using Statistical Package for Social Science (SPSS) version 25.0,MS Excel,percentage(%),mean and standard deviation. A Frequency distribution and a graph was used to describe the results of the study.Pearson correlation test was used in this study. Futhermore, Less than 0.05 p value was considered as significant value.

3.12 Ethical Considerations:

Ethical considerations was significant importance throughout the data collection process .Informed consent was diligently taken from all participants, underscoring their voluntary participation and the strict privacy of their responses. Measures was implemented to safeguard the privacy and anonymity of the participants information.

4: RESULTS

This chapter consist of overall results of the study finding, Which contain score about the level of awarness as well as their correlation with the varibale using various stratigies.

Table 4.1 : Demographic characteristics of staff nurses N= (116).

1. Gender	Frequency	Percentage
male	20	17.2
female	96	82.8
2. Age group		
20-29	91	78.4
30-39	23	19.8
40 59	2	1.7

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3. Education level		
Post RN	75	64.7
BSN	41	35.3
4. Professional rank		
Junior (RN 1-2)	55	47.4
Intermediate or senior (RN 3-5)	61	52.6
5. Job Experience		
<5 years	86	74.1
5-10 years	21	18.1
>10 years	9	7.8

Table 1 shows the demographic characteristics of the participants in which majority of the participants 96 (82.8%) were females while only 20 (17.2%) were males. Most of the participants 91 (78.4%) between the age of 20-29 year and the education level of most of the participants75 (64.7%) was Post RN while only 41 (35.3%) were BSN degree holder

Figure 4.1: awareness level of staff nurses regarding acute ischemic stroke.

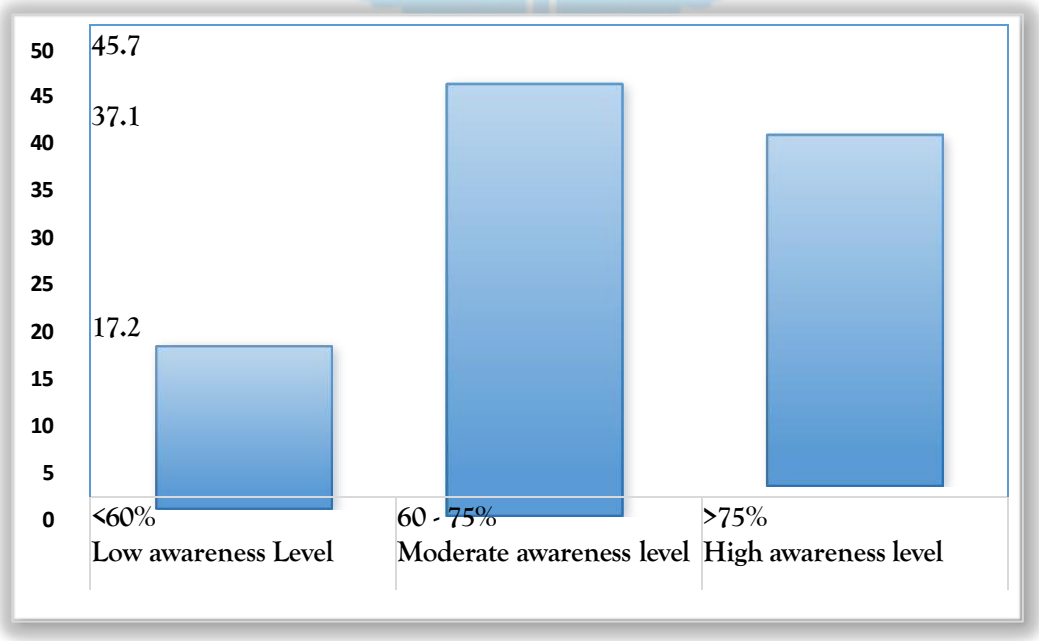


Figure 4.1 shows the awareness levelof nurses regarding acute ischemic stroke in which most of the nurses (45.7%) have moderate awarness level. While 37.1 % have high awareness level and only 17.2% nurses have low awarness level regarding acute ischemic stroke.

Table 4.2 shows that the awareness of staff nurses regarding acute ischemic stroke in which majority of the nurses 96 (82.8%) were familiar with the FAST principles of patients with Acute Ischemic Stroke. Similarly, 103(88.8%) nurses agree that impairment of consciousness as a sign of AIS. Most of the nurses 82 (70.7%) agree that high or low blood sugar causing symptoms similar to AIS.

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Table 4.3: mean score of awareness of staff nurses regarding acute ischemic stroke.

	N	Mean ±SD	Minimum	Maximum
Awareness Score	116	15.80± 2.69	1	22
Awareness score percentage	116	71.82 ±12.22	4.54	100

Table 4.3 consist of 22 items questionaire which was used to determine the awarness of staff nurses regarding acute ischemic stroke. The awairness percentage score regarding acute ischemic stroke was 71.82 ±12.22 with score range of 1-22.

Table 4.5: bivariate corelation between awarness level and levelod experience.

Awareness Level				
	N	Mean ± SD	Pearson Correlation	P- Value
Level of experience	116	1.33± 0.61	.208*	0.025

** Correlation is significant at the 0.05 level (2-tailed).

A pearson correlation analysis was performed to check the correlation between Level of experience with awareness score. A positive corelation was found between Level of experience with awareness level (p<0.05.

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5: DISCUSSION

This study highlighs the critical aspects (awareness) and early detection of acute ischemic stroke, a medical emergency that required timely recoginization for staff nurses working different departments.

This findings highlight the level of awareness among the staff nurses at Fatima Memorial Hospital, where a significant percentage of employees had a moderate level of awareness regarding the early diagnosis of acute ischemic stroke.Similar study was conducted in Turkey where results showed a moderate level of knowledge scores among the nurses (Havva Karadeniz & Nurgul Merdan Yılmaz, 2021).In contrast with study was conducted in japan where the results showed that nurses' awareness was high, but their actual practice was low, specifically regarding acute ischemic stroke (Yukari Hisaka et al., 2021).

The demographic findings of our study reveal a more then half proportion of participants were female and within the age limit of 20–29 , indicating a youthful workforce. In contrast, with the study conducted in china there older age groups were maximum represented, suggesting experienced generational diversity (Yukari Hisaka et al., 2021)..Similarity of results seen in saudi arabia (Havva Karadeniz & Nurgul Merdan Yılmaz,2021),where young nuses is high and qualified.

Intrestingly,a significant number of staff nurses aware with Fast prinicipals of acute stoke detection , while a usual number of staff nurses familiar with Intravenous thrombolytic therapy and endovascular interventional therapy which can only be carried out in patients with AIS within the treatment window. And a majority of Staff nurses recoginzied that high blood pressure should be normalized in patients with AIS in order to initiate treatment.Similar results was deteced in Turkey (Havva Karadeniz & Nurgul Merdan Yılmaz, 2021).

Futhermore, Pearson correlation has been

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applied to check bivariate corelation between awarness level and level of experience . which demonstrated a significant association between awareness level of nurses and level of experience, showing $p < 0.05$.these findings are in contrast with the study conducted in saudia Arabia where a non significant results has been seen (Lisa. A Babkair et al., 2020).

Conclusions

The study conclude that while staff nurses play key role in managing acute ischemic stroke,there are some significant gaps in their awareness.Targeted training programs regarding ischemic stroke and on going education are essential to improve their knowledge,ensure timely intervention,and enhance patient outcomes.

Study Strengths

- The study is relevance to clinical practice.
- It was Focued on early intervention.
- The study helps to addresses knowledge gaps.
- The study helps to promote stroke education.
- The studyImproves patient care quality **Limitations**
- This study have Small sample size.
- The study focused on Single center study.
- This study have Cross sectional design.
- The study contain lack of observational data.
- This study having limited scope.

Recommendations

- Equally male staff nurses should be included in studies.
- Pritorizing of generic BSN staff over the diploma.