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| RESEARCH ARTICLE

Knowledge and Emergency Response Readiness About Stroke Among At-Risk Individuals

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| ABSTRACT
Stroke remains a leading cause of mortality and disability worldwide, particularly among individuals with chronic conditions such as hypertension and diabetes. Despite existing awareness efforts, a gap persists between stroke knowledge and actual emergency response behavior, contributing to poor health outcomes. This study aimed to determine the relationship between stroke knowledge and emergency response readiness among at-risk individuals in selected barangays of San Pablo City. A descriptive-correlational cross-sectional design was employed involving 400 respondents diagnosed with hypertension and/or diabetes. Data were collected using an adapted Stroke Knowledge Test and Stroke Action Test. Descriptive and inferential statistics were utilized to assess levels of knowledge, readiness, and their relationship. Results revealed that 55.75% of respondents had moderate stroke knowledge, while 41.75% demonstrated low emergency response readiness. A very weak but statistically significant positive correlation was found between stroke knowledge and emergency response readiness ($\rho = 0.140$, $p = 0.005$). These findings suggest that knowledge alone may not sufficiently influence emergency response behavior among at-risk individuals. The study highlights the need for community-based health education and nursing interventions that not only increase stroke awareness but also strengthen practical response skills during stroke emergencies.

| KEYWORDS
at-risk individuals; community health nursing; emergency response readiness; stroke knowledge; stroke prevention

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1. Introduction

Stroke remains a major public health concern and is among the leading causes of morbidity and mortality worldwide. It is a neurological disorder resulting from brain damage caused by either ischemic or hemorrhagic injury and requires prompt management to improve survival and reduce disability (Murphy & Werring, 2020). Despite advances in stroke prevention and treatment, the global burden of stroke remains substantial. According to the World Stroke Organization (2025), approximately 12.2 million individuals experience a stroke each year, resulting in more than six million deaths worldwide (The Lancet, 2023).

Early recognition of stroke symptoms is critical for timely intervention and improved outcomes. Common warning signs include facial asymmetry, muscle weakness, speech difficulties, and visual disturbances. However, delays in seeking medical care frequently occur due to inadequate knowledge and misinterpretation of symptoms. Abu et al. (2020) reported that more than half of stroke survivors require post-hospital support from family members, highlighting the important role of caregivers and community members in responding to stroke emergencies. Furthermore, poor symptom recognition contributes to delays in treatment and is associated with poorer clinical outcomes (Bakas et al., 2022).

Although public health initiatives have increased awareness of stroke, a significant gap remains between knowledge and appropriate emergency response. Neller et al. (2024) found that only 29.7% of individuals demonstrated adequate stroke

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awareness, while Li et al. (2019) emphasized that knowledge alone does not necessarily translate into appropriate action during a stroke event.

Similarly, Sirisha et al. (2021) highlighted that decision-making ability and readiness to act are as important as knowledge in emergency situations. In the Philippines, additional barriers such as limited community awareness and restricted access to healthcare resources may further hinder timely stroke response (Collantes et al., 2022), while broader systemic challenges in developing settings continue to exacerbate these issues (Sese & Guillermo, 2023).

Despite the growing body of literature on stroke awareness, limited research has examined the relationship between stroke knowledge and emergency response readiness, particularly among individuals at increased risk of stroke. Existing studies have largely focused on assessing awareness levels, with less attention given to behavioral preparedness, self-efficacy, and factors influencing appropriate responses during stroke emergencies.

Therefore, this study aimed to determine the relationship between stroke knowledge and emergency response readiness among at-risk individuals residing in selected barangays of San Pablo City. Specifically, it sought to assess the level of stroke knowledge, evaluate emergency response readiness, and examine the relationship between these variables. The findings of this study may contribute to the development of community-based health education programs and nursing interventions that strengthen both stroke awareness and practical emergency response skills among at-risk populations.

2. Literature Review

Stroke has long been recognized as a major public health concern and remains one of the leading causes of mortality and disability worldwide. Early literature described stroke as a neurological disorder resulting from either ischemic or hemorrhagic interruption of cerebral blood flow, leading to varying degrees of neurological impairment (Murphy & Werring, 2020). In many low- and middle-income countries, including the Philippines, the burden of stroke has remained disproportionately high because of limited access to specialized stroke care and preventive services (Collantes et al., 2021). National health statistics in the Philippines consistently identify cerebrovascular diseases among the top causes of death, emphasizing the continuing need for effective stroke prevention and early intervention strategies.

As research on stroke prevention evolved, increasing attention was given to public knowledge of stroke symptoms and warning signs. Educational campaigns such as FAST (Face, Arm, Speech, Time) were introduced internationally to improve symptom recognition and encourage rapid medical consultation. Early studies reported that public awareness initiatives improved recognition of common stroke symptoms, yet substantial gaps in knowledge persisted among individuals with lower educational attainment and limited access to health information (Krzystanek et al., 2020). Subsequent research further demonstrated that while many individuals could identify at least one stroke symptom, fewer understood the urgency of seeking immediate medical care (Herpich & Rincon, 2020). More recent studies continued to confirm inadequate stroke knowledge in various populations despite ongoing awareness campaigns (Tsakpounidou et al., 2022; Gall et al., 2023).

Over time, researchers began to distinguish between stroke awareness and actual behavioral response during emergencies. Evidence accumulated showing that recognition of stroke symptoms does not automatically lead to prompt action. Several contemporary studies reported that many individuals who recognized stroke signs still delayed seeking emergency medical care or failed to activate emergency medical services during actual stroke events (Osman et al., 2024; Kim et al., 2024). This shift in research focus highlighted the importance of psychological and behavioral factors in emergency response. The Health Belief Model provided a useful framework for explaining these behaviors, proposing that individuals are more likely to act when they perceive themselves to be susceptible to stroke, recognize its seriousness, believe in the benefits of immediate treatment, and feel capable of taking appropriate action (Hu et al., 2022; Li et al., 2022).

Parallel to this development, studies increasingly examined emergency response readiness as a distinct concept in stroke care. Research demonstrated that rapid activation of emergency medical services and immediate transport to healthcare facilities significantly improve the chances of receiving time-sensitive interventions and reduce stroke-related disability. However, delays in seeking care remained common and were associated with poor symptom interpretation, uncertainty about what action to take, financial limitations, transportation problems, and restricted access to healthcare facilities (Bakke et al., 2022; Walter et al., 2022). In the Philippine setting, similar barriers were identified, including limited public awareness, inadequate healthcare infrastructure, and uneven access to specialized stroke services (Collantes et al., 2022). More recent literature continues to emphasize that structural and socioeconomic barriers remain major determinants of delayed emergency response in developing settings (Mohammed et al., 2025).

Recent studies have also focused on populations at high risk for stroke, particularly individuals with hypertension, diabetes mellitus, hyperlipidemia, obesity, smoking history, and advanced age. Epidemiological evidence consistently shows that these vascular risk factors substantially increase the likelihood of stroke occurrence (Joundi et al., 2022; Liu et al., 2024). Because at-risk individuals are more likely to experience stroke, researchers have emphasized the importance of ensuring that they possess adequate knowledge of stroke symptoms and the readiness to respond appropriately during emergencies.

Despite the growing body of literature on stroke awareness, health-seeking behavior, and emergency preparedness, a significant gap remains in understanding how stroke knowledge relates to emergency response readiness among at-risk individuals in community settings. Much of the existing research has examined knowledge and awareness independently, while fewer studies have explored whether individuals who possess stroke knowledge are also prepared to take immediate and appropriate action during an emergency. Moreover, local evidence from Philippine communities remains limited.

Given these gaps, the present study aims to assess the level of stroke symptom knowledge and emergency response readiness among at-risk individuals in selected barangays of San Pablo City and to determine the relationship between these variables. The findings may contribute to the development of targeted community-based health education and nursing interventions designed to improve stroke recognition, emergency response behavior, and overall stroke outcomes among vulnerable populations.

3. Methodology

This section describes the research design, participants, instruments, data collection procedures, data analysis, and ethical considerations employed in the study to ensure the validity, reliability, and replicability of the findings.

3.1 Research Design

This study employed a quantitative descriptive-correlational cross-sectional design. The descriptive component was used to determine the level of stroke knowledge and emergency response readiness among at-risk individuals, while the correlational component examined the relationship between these variables. The cross-sectional approach enabled the collection of data at a single point in time without manipulating any study variables, allowing the researchers to describe existing conditions and examine associations among variables.

3.2 Participants

The study involved 400 at-risk individuals diagnosed with hypertension and/or diabetes residing in selected barangays of San Pablo City. Respondents were selected through purposive sampling based on predetermined inclusion and exclusion criteria.
To be eligible for participation, respondents had to be: (1) diagnosed with hypertension and/or diabetes, (2) residents of the selected barangays in San Pablo City, (3) 18 years of age or older, and (4) willing to provide informed consent. Individuals who were unable to communicate effectively, had cognitive impairments that could affect their responses, or were unwilling to participate were excluded from the study.

The sample size was determined using an appropriate sample size computation method to ensure adequate representation of the target population. Eligible respondents were identified through barangay health records with the assistance of local health authorities.

3.3 Research Instrument

The study utilized a modified and adapted questionnaire consisting of three components. The first component was the Stroke Knowledge Test (SKT) developed by Sullivan and Dunton (2004), which assessed respondents' knowledge regarding stroke risk factors, signs and symptoms, and preventive measures. The second component was the Stroke Action Test (STAT) developed by Billings-Gagliardi and Mazor (2005), which measured emergency response readiness in recognizing and responding appropriately to stroke situations. The third component consisted of researcher-developed items designed to assess respondents' confidence levels and perceived barriers related to emergency response during stroke events.

The questionnaire was adapted to suit the local context while preserving the core constructs measured by the original validated instruments. Content validity was established through evaluation by a panel of experts composed of medical practitioners and research specialists. Reliability testing was conducted using Cronbach's alpha, yielding coefficients ranging from 0.72 to 0.82, indicating acceptable to good internal consistency.

Prior to the actual data collection, a pilot test was conducted among at-risk individuals in Barangay Santa Monica. The pilot testing assessed the clarity, appropriateness, and reliability of the questionnaire. Feedback and results obtained from the pilot study were used to refine and finalize the instrument.

3.4 Data Gathering Procedure

Prior to data collection, the researchers secured approval from the Dean of the College, the research adviser, the City Health Office, and the respective barangay officials of the selected communities. Eligible respondents were identified through barangay health records with the assistance of local health personnel.

Data collection was conducted through face-to-face administration of the structured questionnaire. Before participation, respondents were informed about the purpose, procedures, potential benefits, and voluntary nature of the study. Written informed consent was obtained from all participants before the administration of the questionnaire. Researchers provided assistance when necessary to ensure that respondents fully understood the questionnaire items. Upon completion, all questionnaires were reviewed for completeness and accuracy before being encoded for statistical analysis.

3.5 Data Analysis

The collected data were encoded, organized, and analyzed using appropriate statistical software. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize respondents' demographic characteristics, levels of stroke knowledge, confidence levels, perceived barriers, and emergency response readiness.

Inferential statistical analyses were performed to examine relationships and differences among variables. Spearman's rho correlation coefficient was used to determine the relationship between stroke knowledge and emergency response readiness. The Mann–Whitney U test and Kruskal–Wallis test were employed to determine differences in study variables across demographic groups, as the data did not meet the assumptions for parametric testing. A significance level of $p < 0.05$ was used for all statistical analyses.

3.6 Ethical Consideration

The study adhered to established ethical principles governing research involving human participants. Prior to data collection, ethical clearance and necessary permissions were obtained from the appropriate institutional and local authorities. Participation in the study was entirely voluntary, and written informed consent was obtained from all respondents before their involvement.

Participants were informed of their right to decline participation or withdraw from the study at any time without penalty or loss of benefits. Confidentiality and anonymity were maintained by excluding personal identifiers from the questionnaires and assigning codes to participants during data processing and analysis.

All collected data were securely stored in password-protected files accessible only to the researchers and were used solely for research purposes. The dignity, privacy, autonomy, and rights of all participants were respected and protected throughout the conduct of the study.

4. Results / Findings

This section presents the findings of the study on the stroke knowledge and emergency response readiness of at-risk individuals in selected barangays of San Pablo City. The results are organized according to the objectives of the study and include the respondents' demographic profile, exposure to stroke-related information, experience in handling stroke patients, levels of stroke knowledge, emergency response readiness, confidence level, perceived barriers, differences across demographic and experiential variables, and the relationships among the key study variables. The findings are presented through descriptive and inferential statistical analyses and are discussed in relation to relevant literature.

TABLE 1. ***Demographic Profile of the Respondents – Age, Educational Attainment and Sex***

AGE	FREQUENCY	PERCENTAGE

< 20	3	0.75
20 to 29	6	1.5
30 to 39	16	4
40 to 49	50	12.5
50 to 59	112	28
60 to 69	122	30.5
70 to 79	73	18.25
80 and above	18	4.5
TOTAL	400	100
EDUCATIONAL ATTAINMENT	FREQUENCY	PERCENTAGE
Elementary Undergraduate	24	6
Elementary Graduate	43	10.75
High School Undergraduate	69	17.25
High School Graduate	108	27
College Undergraduate	66	16.5
College Graduate	90	22.5
TOTAL	400	100
BIOLOGICAL SEX	FREQUENCY	PERCENTAGE
Male	141	35.25
Female	259	64.75
TOTAL	400	100

Table 1 presents the demographic characteristics of the respondents in terms of age, educational attainment, and biological sex. Most respondents belonged to the 60–69 years age group (30.5%), followed by those aged 50–59 years (28.0%). This indicates that a large proportion of the participants were older adults, a population known to be at increased risk for stroke. Previous studies have shown that stroke risk increases substantially with age because of age-related vascular changes and the higher prevalence of chronic conditions such as hypertension and diabetes (Yousufuddin & Al-Daher, 2019).

Regarding educational attainment, the largest proportion of respondents were high school graduates (27.0%), followed by college graduates (22.5%). Educational attainment is an important factor in health literacy because it influences an individual's ability to access, understand, and utilize health information. Variations in educational background may therefore affect respondents' understanding of stroke-related information and emergency response practices.

In terms of biological sex, females comprised the majority of respondents (64.75%), while males accounted for 35.25%. This finding describes the composition of the study sample and indicates that female respondents were more represented in the surveyed population.

TABLE 2. ***Respondents with and without prior exposure to stroke-related information***

PREVIOUS EXPOSURE TO STROKE-RELATED INFORMATION	**FREQUENCY**	**PERCENTAGE**
With exposure	303	75.75
Without Exposure	97	24.25
TOTAL	400	100
Source of Information	FREQUENCY	PERCENTAGE
• *Health Worker*	99	32.67
• *Internet/Social Media*	102	33.66
• *Leaflets/Brochure*	2	0.66
• *TV/Radio*	88	29.04
• *Relatives/Family*	4	1.32
• *Personal Experience*	1	0.33
• *Others: Community*	7	2.31
TOTAL	303	100.00

Table 2 shows that most respondents (75.75%) had previous exposure to stroke-related information, while 24.25% reported no prior exposure. Among those with exposure, the most common sources of information were internet and social media (33.66%), health workers (32.67%), and television or radio (29.04%).

The findings suggest that multiple communication channels contribute to the dissemination of stroke-related information among at-risk individuals. The prominence of digital media and healthcare professionals as information sources highlights their potential role in community-based health education initiatives. Ensuring that information delivered through these channels is accurate and evidence-based remains important for improving public understanding of stroke.

TABLE 3. ***Respondents who have and have not personally handled or cared for stroke patients***

EXPERIENCE HANDLING STROKE PATIENTS	FREQUENCY	PERCENTAGE
With Experience	107	26.75
Without Experience	293	73.25
TOTAL	400	100

Table 3 indicates that only 26.75% of respondents had previous experience handling or caring for a stroke patient, while the majority (73.25%) reported no such experience.

This finding suggests that most respondents have limited direct exposure to stroke emergencies. Previous literature has indicated that firsthand experience may contribute to familiarity with stroke situations and emergency decision-making. However, experience alone may not be sufficient to ensure appropriate response behavior without adequate knowledge and training. The findings emphasize the importance of strengthening stroke preparedness among at-risk individuals regardless of prior caregiving experience.

TABLE 4. ***Level of knowledge of at-risk individuals regarding stroke***

LEVEL OF KNOWLEDGE	FREQUENCY	PERCENTAGE
Good Knowledge (8.0-11.0)	43	10.75
Moderate Knowledge (4.0 – 7.0)	223	55.75
Poor Knowledge (1.0-3.0)	134	33.5
Mean	4.46	Moderate
SD	2.45	

Legend: Score 0–3 - 0%-27% = Poor Knowledge; Score 4–7 - 36%-64% = Moderate Knowledge; Score 8–11 - 73%-100% = Good Knowledge

Table 4 shows that most respondents demonstrated a moderate level of stroke knowledge (55.75%), while 33.5% had poor knowledge and only 10.75% demonstrated good knowledge. The overall mean score of 4.46 further indicates a moderate level of knowledge among the respondents.

These findings suggest that although many respondents possess a basic understanding of stroke, substantial gaps in knowledge remain. Given that stroke recognition is essential for timely treatment and improved outcomes, the presence of poor and moderate knowledge among most respondents indicates a need for continued educational efforts. Enhancing public understanding of stroke signs, symptoms, risk factors, and the importance of immediate action may contribute to improved emergency response among at-risk populations.

TABLE 5. ***Level of emergency response readiness of at-risk individuals in recognizing and responding to stroke symptoms***

STROKE RESPONSE READINESS	FREQUENCY	PERCENTAGE
High Stroke Response Readiness (6.0 - 8.0)	76	19
Moderate Stroke Response Readiness (3.0 - 5.0)	157	39.25
Poor Stroke Response Readiness (1.0 - 2.0)	167	41.75
Mean	3.2	Moderate Stroke Response Readiness
SD	1.94	

Legend: Score 0–2 - 0%-25% = Poor Response Readiness; Score 3-5 - 37.5%-62.5% = Moderate Response Readiness; Score 6-8 - 75%-100% =High Response Readiness

Table 5 reveals that 41.75% of respondents demonstrated poor emergency response readiness, while 39.25% exhibited moderate readiness and only 19.0% showed high readiness. Although the overall mean score fell within the moderate category (M = 3.20), the large proportion of respondents with poor readiness suggests important deficiencies in emergency preparedness.

These findings indicate that many at-risk individuals may face challenges in responding appropriately during stroke emergencies. The results further suggest that awareness of stroke symptoms alone may not be sufficient to ensure prompt and appropriate action. Similar findings have been reported in previous studies showing that knowledge does not always translate into effective emergency response behavior (Powers et al., 2019; Owolabi et al., 2022).

TABLE 6. ***Confidence Level of At-Risk Individuals in Performing Appropriate Actions During Stroke Emergencies***

CONFIDENCE LEVEL		MEAN	SD	INTERPRETATION
1.	I can identify stroke signs (i.e, sudden weakness, difficulty speaking)	3.11	1.12	Moderate Confidence
2.	I can decide to seek professional help immediately without hesitation.	3.76	1.05	High Confidence
3.	I can communicate effectively with healthcare providers by giving accurate details about the patient's condition and when the symptoms started.	3.82	1.02	High Confidence
4.	I can stay calm and overcome panic during a stroke emergency.	3.45	1.10	High Confidence
5.	I can guide others in the household or community to act appropriately during a stroke emergency.	3.63	1.01	High Confidence
Mean		3.56		High Confidence
SD			1.06	

Legend: Mean 4.21-5.00 = Very High Confidence; Mean 3.41-4.20 = High Confidence; Mean 2.61-3.40 = Moderate Confidence; Mean 1.81-2.60 = Low Confidence; Mean 1.00-1.80 = Very Low Confidence

Table 6 shows that respondents demonstrated an overall high level of confidence in performing appropriate actions during stroke emergencies (M = 3.56, SD = 1.06). The highest confidence scores were observed in communicating with healthcare providers and seeking immediate professional help, while confidence in identifying stroke signs was comparatively lower.

The findings suggest that respondents generally perceive themselves as capable of responding during stroke emergencies. However, the lower confidence in recognizing stroke symptoms may indicate uncertainty in identifying stroke at its onset. Since early recognition is critical for timely intervention, strengthening symptom recognition may further support effective emergency response among at-risk individuals.

TABLE 7. ***Perceived Hindering Factors Affecting the Ability of At-Risk Individuals to Respond to Stroke Emergencies***

Knowledge		MEAN	SD	INTERPRETATION
1.	I am unsure about the early warning signs of stroke.	3.01	1.07	Moderate Perceived Barriers
2.	I find it difficult to differentiate stroke from other illnesses.	3.04	1.04	Moderate Perceived Barriers
Resources				
1.	I worry about the availability of transportation to the nearest hospital.	3.32	1.18	Moderate Perceived Barriers
2.	I think the lack of nearby healthcare facilities delays response.	4.13	0.84	High Perceived Barriers
3.	I am concerned about the cost of hospitalization or treatment.	4.20	0.95	High Perceived Barriers
Social Support Factors				
1.	I feel that family members or neighbors may not cooperate quickly in case of a stroke.	2.65	1.08	Moderate Perceived Barriers
2.	I do not receive enough support from community/barangay resources	3.28	1.11	Moderate Perceived Barriers
Psychological				
1.	I may panic or be unable to act during stroke emergencies.	3.45	1.12	High Perceived Barriers
2.	I am afraid of making the wrong decision when responding to a stroke.	3.77	1.02	High Perceived Barriers
3.	I'm worried that I may be blamed if my actions are not effective.	3.85	1.00	High Perceived Barriers
Composite Mean		3.47		High Perceived Barriers
SD			1.04	

Legend: Mean 4.21-5.00 = Very High Perceived Barriers; Mean 3.41-4.20 = High Perceived Barriers; Mean 2.61-3.40 = Moderate Perceived Barriers; Mean 1.81-2.60 = Low Perceived Barriers; Mean 1.00-1.80 = Very Low Perceived Barriers

Table 7 shows that respondents reported high overall perceived barriers to responding during stroke emergencies (M = 3.47, SD = 1.04). The highest-rated barriers included concerns regarding the cost of hospitalization, lack of nearby healthcare facilities, fear of making incorrect decisions, and fear of being blamed if actions were ineffective.

These findings suggest that factors beyond knowledge may influence emergency response behavior. Resource-related concerns and psychological barriers appear to affect respondents' perceived ability to respond effectively during stroke emergencies. The findings support the view that preparedness involves not only awareness but also the availability of resources and confidence in making emergency decisions.

TABLE 8. ***Différence in Stroke Symptom Knowledge, Emergency Response Readiness, and Confidence Level Among At-Risk Individuals Across Age, Sex, and Educational Attainment Groups***

DIFFERENCES BY AGE				
SCALE	H-VALUE	P-VALUE	DECISION	CONCLUSION
Knowledge	21.544	.003	Reject Ho	Significant
Emergency Response Readiness	15.987	.025	Reject Ho	Significant
Confidence Level	23.300	.002	Reject Ho	Significant

DIFFERENCES BY SEX					
SCALE	MALE	FEMALE	P-VALUE	DECISION	CONCLUSION
Knowledge	4.32	4.71	.166	Failed to Reject Ho	Not Significant
Emergency Response Readiness	3.32	3.14	.384	Failed to Reject Ho	Not Significant
Confidence Level	3.59	3.54	.844	Failed to Reject Ho	Not Significant

DIFFERENCES BY EDUCATIONAL ATTAINMENT				
SCALE	H-VALUE	P-VALUE	DECISION	CONCLUSION
Knowledge	11.628	.040	Reject Ho	Significant
Emergency Response Readiness	13.235	.014	Reject Ho	Significant
Confidence Level	4.516	.478	Failed to Reject Ho	Not Significant

Table 8 shows significant differences in stroke knowledge (p = .003), emergency response readiness (p = .025), and confidence level (p = .002) across age groups. These findings suggest that age may influence how individuals acquire health information, perceive health risks, and respond to emergency situations. Previous studies have similarly reported that age is associated with variations in health literacy, decision-making, and emergency preparedness, highlighting the importance of age-appropriate health education interventions (Leung et al., 2021; Chang & Hsu, 2022).

Significant differences were also observed across educational attainment in stroke knowledge (p = .040) and emergency response readiness (p = .014), indicating that educational background may contribute to differences in understanding and preparedness regarding stroke emergencies. This finding is consistent with existing literature suggesting that higher educational attainment is associated with improved health literacy and greater engagement in preventive health behaviors.

In contrast, no significant differences were found between male and female respondents in terms of stroke knowledge, emergency response readiness, and confidence level (p > .05). This suggests that sex was not associated with stroke preparedness variables in the present study.

TABLE 9. ***Differences in Stroke Symptom Knowledge, Emergency Response Readiness, and Confidence Among At-Risk Individuals Based on Exposure to Stroke-Related Information***

SCALE	W/ EXPOSURE	W/O EXPOSURE	P-VALUE	DECISION	CONCLUSION
Knowledge	4.74	4.07	.036	Reject Ho	Significant
Emergency Response Readiness	3.41	2.55	<.001	Reject Ho	Significant
Confidence Level	3.55	3.58	.940	Failed to Reject Ho	Not Significant

Table 9 reveals significant differences in stroke knowledge ($p = .036$) and emergency response readiness ($p < .001$) between respondents with and without prior exposure to stroke-related information. Respondents who reported previous exposure demonstrated higher levels of knowledge and readiness than those without exposure. These findings suggest that access to stroke-related information may contribute to improved understanding of stroke and greater preparedness to respond during emergencies.

The results are consistent with evidence indicating that health education and repeated exposure to health information improve disease awareness and promote more appropriate health-related behaviors. According to the World Health Organization (2023), sustained and structured health education initiatives play an important role in strengthening public preparedness for medical emergencies.

However, confidence levels did not significantly differ between groups ($p = .940$), suggesting that confidence may be influenced by factors beyond information exposure alone.

TABLE 10. ***Differences in Stroke Symptom Knowledge, Emergency Response Readiness, and Confidence Among At-Risk Individuals Based on Experience Handling Stroke Patients***

SCALE	W/ EXPOSURE	W/O EXPOSURE	P-VALUE	DECISION	CONCLUSION
Knowledge	4.99	4.42	.056	Failed to Reject Ho	Not Significant
Emergency Response Readiness	3.00	3.27	.267	Failed to Reject Ho	Not Significant
Confidence Level	3.65	3.52	.044	Reject Ho	Significant

Table 10 indicates no significant differences in stroke knowledge ($p = .056$) and emergency response readiness ($p = .267$) between respondents with and without experience handling stroke patients. These findings suggest that prior experience alone may not be sufficient to improve stroke-related knowledge or preparedness.

However, a significant difference was observed in confidence level ($p = .044$), with respondents who had previous experience handling stroke patients demonstrating greater confidence in responding to stroke emergencies. This finding supports the notion that direct exposure to health-related situations may enhance self-efficacy and perceived ability to act during emergencies.

Nevertheless, the absence of significant differences in knowledge and readiness indicates that experience should be complemented by formal education and training to promote effective emergency response behavior.

TABLE 11. ***Spearman's rho correlation***

Variables		r values	Degree	p values	Decision	Conclusion
Confidence	Knowledge	.073	Very Weak Positive	.144	Failed to Reject Ho	Not Significant
Confidence	Readiness	.080	Very Weak Positive	.110	Failed to Reject Ho	Not Significant
Knowledge	Readiness	.140	Very Weak Positive	.005	Reject Ho	Significant

Table 11 shows a very weak but statistically significant positive relationship between stroke knowledge and emergency response readiness (ρ = .140, p = .005). This indicates that respondents with higher levels of stroke knowledge tended to demonstrate slightly greater readiness to respond during stroke emergencies. However, the weak magnitude of the correlation suggests that knowledge alone is not a strong predictor of emergency response readiness.

No significant relationships were found between confidence and knowledge (p = .144) or between confidence and readiness (p = .110). These findings suggest that confidence may operate independently from both knowledge and preparedness and may be influenced by other factors not directly examined in the present study.

The results support previous literature indicating that awareness alone does not necessarily translate into appropriate emergency action. Consistent with behavioral health theories such as the Health Belief Model, emergency response behavior is influenced not only by knowledge but also by perceived barriers, perceived severity, perceived benefits, and self-efficacy. Therefore, interventions aimed at improving stroke preparedness should address both cognitive and behavioral aspects of emergency response.

5. Conclusion

This study found that at-risk individuals in selected barangays of San Pablo City generally demonstrated moderate levels of stroke knowledge but poor to moderate levels of emergency response readiness. Although a statistically significant positive relationship was identified between stroke knowledge and emergency response readiness, the correlation was very weak, indicating that knowledge alone may not be sufficient to ensure appropriate action during stroke emergencies.

The findings further revealed that stroke preparedness varies according to age, educational attainment, and exposure to stroke-related information. Respondents generally reported high confidence in responding to stroke emergencies; however, substantial psychological and resource-related barriers were also identified. Concerns regarding healthcare accessibility, hospitalization costs, fear of making incorrect decisions, and fear of negative consequences may hinder timely emergency response despite adequate awareness.

These findings highlight the existence of a knowledge-to-action gap among at-risk individuals and suggest that stroke preparedness extends beyond knowledge acquisition alone. Effective preparedness requires the integration of cognitive understanding, practical response skills, psychological readiness, and supportive healthcare resources.

The study underscores the importance of community-based nursing and health education programs that combine stroke awareness with skills-based training, simulations, and emergency preparedness activities. Strengthening local healthcare systems and improving access to emergency services may further enhance stroke response readiness among at-risk populations. Future studies may explore intervention-based and longitudinal approaches to evaluate strategies for improving preparedness and translating knowledge into effective emergency action.

Overall, the findings contribute to the growing body of evidence on stroke preparedness and provide valuable insights for the development of targeted community health interventions aimed at reducing delays in stroke recognition and emergency response.

6. Statement and Declaration

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