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A STUDY TO ASSESS THE EFFECTIVENESS OF VIDEO-ASSISTED TEACHING REGARDING THE RISK FACTORS AND WARNING SIGNS OF STROKE AMONG NON-MEDICAL STAFF AT SHARDA UNIVERSITY

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ABSTRACT:
Introduction: Stroke is an illness that happens suddenly when the brain's blood flow is interrupted, leading to loss of brain function and neurologic disability. (Al-maymuni, Bashayer et al. (2025))
In India, the incidence of stroke is higher than in Western countries, largely due to poor control of risk factors and a lack of awareness. (Ali, R. et al. (2024))
Aim: This study was carried out to assess the effectiveness of Video Assisted teaching regarding Risk factors and Warning signs of Stroke among Non-medical staff.
Methodology: A quantitative research approach with a pre-experimental one-group pre-test post-test design was adopted. The study was conducted among 60 non medical staff basically teaching faculties teaching in various schools of Sharda University,Greater Noida. Participants were selected using Purposive sampling technique. Data were collected using a self structured knowledge questionnaire. A video Assisted teaching was given to the participants.
Result: The mean pre-test knowledge score was 18.4 ± 7.27, indicating a moderate level of baseline knowledge among the participants. Following the Video-Assisted Teaching programme,the mean post-test score increased to 25.2 ± 4.09. The comparison between pre-test and post-test scores showed a statistically highly significant improvement in knowledge, with a calculated t-value of -7.16 and a p-value of 0.000 ($p < 0.05$) which shows that there is no significant association between knowledge and selected demographic variables.

KEYWORDS: Stroke, Risk Factors, Warning Signs, Video-Assisted Teaching, Effectiveness.

INTRODUCTION

Strokes affect more than 12 million individuals globally each year, and the yearly mortality rate has risen to almost 5.5 million in the last 20 years. Based on statistics, stroke is the second most common cause of death and permanently affects around five million individuals. As a result, it results in a disproportionately higher financial and social burden on families and society. Stroke is influenced by a number of aggravating variables, including food, exercise, psychological issues, smoking, obesity, diabetes mellitus, and hypertension.More than 80% of stroke cases can be prevented with the correct measures and activities. (Shinjar, Fatima et al. (2025))
A global study based on vital records and data modeling estimates that approximately 15 million people experience stroke each year, resulting in around 5 million deaths and leaving another 5 million individuals with long-term cognitive and physical disabilities. (Uddin, J., & Tama, T. J. (2025))
Stroke, additionally referred to as the "silent killer," is an illness in which the brain's blood supply is cut off, impairing brain function. A stroke can be triggered by a number of causes, which can be separated into those that can be changed and factors that cannot. Hypertension, smoking, diabetes mellitus (DM), heart disease, dyslipidemia, drug and alcohol misuse, oral contraceptives, blood disorders, sleep, lipoproteins, and homocysteine are among the variables and modifiers. Age, gender, race/ethnicity, and genetics, on the other hand, are unchangeable. (Azmii, Nazhira et al. (2024))
Stroke remains a major cause of hospital admissions worldwide, making early recognition of its risk factors and symptoms essential for prompt intervention. (Mohanlal, M., et al. (2024))
Ischemic stroke, previously considered a condition mainly affecting older adults, is now increasingly seen in individuals aged 18–50 years, a group often regarded as the most economically and socially productive. This changing trend leads to substantial physical, psychological, social, and economic impacts. (Eldhose, N. (2025)).
The magnitude of the incidence of stroke can be lowered by controlling the risk factors of stroke. (Abadi, F. (2021))
Non-hemorrhagic stroke (NHS) is a leading cause of both mortality and long-term disability. Although hypertension is widely acknowledged as a general risk factor for stroke, there is insufficient evidence

specifically establishing its direct association with NHS, highlighting a gap in existing research in this area. (Putri, D. et al. (2026))
Stroke is a major health concern and a leading cause of disability and mortality, with rising incidence rates. Delays in seeking treatment are often linked to inadequate awareness among family members about stroke risk factors and early symptoms, which can negatively affect timely hospital care and worsen clinical outcomes. (Faidah, N., Sari, . (2026))
People should be aware of the many risk factors and warning indications of stroke since it is a deadly disease that can cause a sudden halt in the blood supply to the brain, resulting in lifelong neurologic disability. The rate of impairment can be decreased and stroke can be controlled by early detection of risk factors.

MATERIALS AND METHODS

The main aim of the study is to assess the Effectiveness of Video Assisted Teaching regarding Risk Factors and Warning Signs of Stroke among Non-medical staff at Sharda University. A quantitative research approach with a pre-experimental one-group pre-test post-test design was adopted. The study was conducted among 60 non medical staff basically teaching faculties teaching in various schools of Sharda University,Greater Noida. Participants were selected using a non-probability Purposive sampling technique. Data were collected using a self structured knowledge questionnaire. A video Assisted teaching was given to the participants.Data were analyzed using descriptive and inferential statistics, including paired t-test, chi-square test, and Pearson correlation coefficient.

RESULT

Section 1: Discussion related to Socio-demographic characteristics of participants

In the present Study, majority 37 (61.7%), belonged to the age group of 22–31 years.This was followed by 10 (16.7%) participants each in the age groups 32–41 years and 42–51 years, showing moderate representation from middle-aged individuals. Only 3 (5.0%) participants were aged 51 years and above.With regard to gender, the study sample consisted predominantly of males (34, 56.7%), while females accounted for 26 (43.3%) of the participants. There were no participants identified under transgender or other gender categories.In terms of designation, the majority of respondents were Assistant Professors (35, 58.3%), suggesting that most participants held mid-level academic positions. This was followed by Senior Tutors (11, 18.3%), Associate Professors (9, 15.0%), and Professors (5, 8.3%).Regarding educational qualification, most participants were Postgraduates (37, 61.7%), indicating a high level of academic attainment among the respondents. Additionally, 13 (21.7%) participants had a PhD, reflecting advanced academic qualifications. Graduates constituted 10 (16.7%) of the sample, while none of the participants had an MPhil qualification.The area of residence showed that a significant majority of participants, 45 (75.0%), 13 (21.7%) participants belonged to sub-urban areas, while only 1 (1.7%) each were from rural and isolated/remote areas.With respect to family type, most participants, 42 (70.0%), belonged to nuclear families, whereas 18 (30.0%) were from joint families.Finally, the socio-economic status of the participants showed that the majority belonged to the middle class (35, 58.3%), followed by upper middle class (13, 21.7%) and upper class (9, 15.0%). Only 3 (5.0%) participants were from the lower class.

SECTION 2: Findings related to Knowledge Scores

Part1: Discussion related to knowledge regarding risk factors and warning signs of Stroke before Video Assisted Teaching.

Table 2.1 Frequency and percentage of pretest knowledge regarding risk factors in warning signs of stroke.

Pre-Test Knowledge	Score	Frequency	Percentage (%)
Poor	0-10	7	11.7
Average	11-20	30	50.0
Good	21-30	23	38.3

The distribution of pre-test knowledge scores among the study participants indicates varying levels of baseline understanding prior to the intervention. The findings reveal that the majority of participants, 30 (50.0%), had average knowledge scores (11–20). This suggests that half of the sample possessed a moderate level of knowledge, indicating some familiarity with the subject matter but also a clear scope for improvement through educational intervention. A considerable proportion of participants, 23 (38.3%), demonstrated good knowledge (21–30) in the pre-test. However, a smaller segment of the participants, 7 (11.7%), fell into the poor knowledge category (0–10). Overall, the results suggest that while a substantial portion of participants had average to good pre-existing knowledge, there remains a meaningful proportion with insufficient understanding. This underscores the importance of structured teaching or intervention programs to enhance knowledge levels across all categories, particularly targeting those with poor baseline scores while also reinforcing and advancing the knowledge of others.

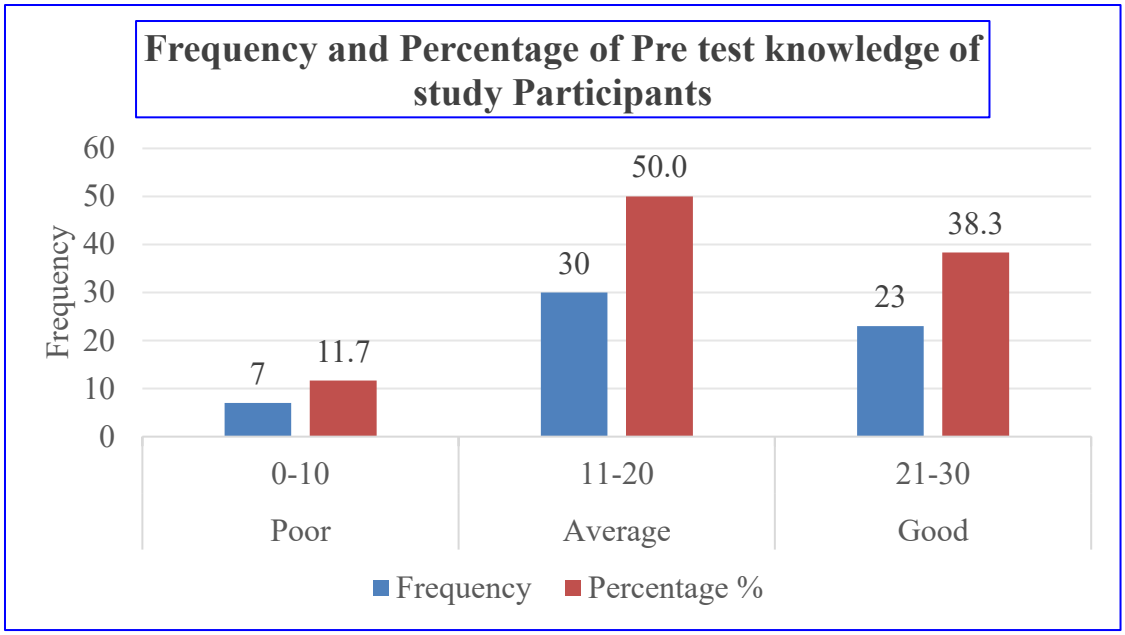

Figure 2.1 Bar Diagram Showing the frequency and percentage of Pre test knowledge of study participants

Part2: Discussion related to knowledge regarding risk factors and warning signs of Stroke after Video Assisted Teaching.

Table 2.2: Frequency and percentage of Post test knowledge regarding risk factors and warning signs of stroke.

Post-Test Knowledge	Score	Frequency	Percentage %
Poor	0-10	4	6.7
Average	11-20	1	1.7
Good	21-30	55	91.7

The post-test knowledge scores demonstrate a significant improvement in the level of understanding among the study participants after the intervention. The vast majority of participants, 55 (91.7%), achieved good knowledge scores (21–30). This indicates that nearly all respondents attained a high level of knowledge following the teaching or intervention program, reflecting its strong effectiveness in enhancing learning outcomes.Only a very small proportion of participants, 1 (1.7%), fell into the average knowledge category (11–20). Additionally, 4 (6.7%) participants remained in the poor knowledge category (0–10) even after the post-test. Although this proportion is low compared to the pre-test findings. Overall, the post-test results clearly demonstrate a marked shift toward higher knowledge levels, with a substantial increase in the number of participants in the "good" category. This suggests that the intervention was highly effective in improving knowledge among the study participants, significantly reducing the proportion of individuals with poor and average knowledge levels while enhancing overall learning outcomes.

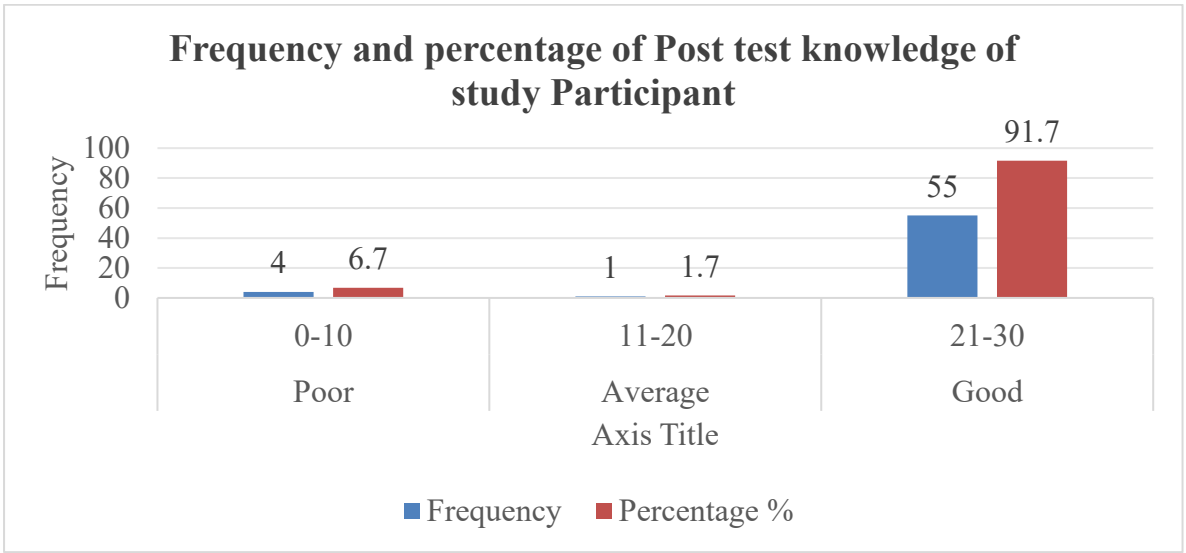

Figure 2.2 Bar Diagram Showing the frequency and percentage of Post test knowledge of study participants

SECTION 3: Discussion related to effectiveness of the educational intervention programme

Table 3.1 Comparison of Pre test and Post test knowledge scores regarding risk factors and warning signs of Stroke among non medical staff

Knowledge Score	Mean	SD	T Value	Df	P Value
Pre-test Mean	18.4	7.27	-7.16	59	0.000
Post-test Mean	25.2	4.09			

The comparison of pre-test and post-test knowledge scores shows a clear improvement in participants' knowledge following the intervention. The mean pre-test score was 18.4 with a standard deviation (SD) of 7.27, indicating that, before the intervention, participants had a moderate level of knowledge with relatively wide variability in their scores. In contrast, the mean post-test score increased to 25.2 with an SD of 4.09, suggesting not only an improvement in overall knowledge but also a reduction in variability, meaning participants' scores became more consistent after the intervention.

The calculated t-value of -7.16 reflects a substantial difference between pre-test and post-test mean scores. The negative sign indicates that the post-test scores were higher than the pre-test scores when the difference was computed (pre-test minus post-test). With 59 degrees of freedom (df), the obtained p-value of 0.000 ($p < 0.05$) is statistically highly significant. This means that the observed improvement in knowledge scores is unlikely to have occurred by chance.

Overall, these findings provide strong statistical evidence that the intervention was effective in significantly enhancing the knowledge of the participants. The increase in mean scores, along with reduced variability and a highly significant p-value, confirms that the teaching or training program had a meaningful and positive impact on participants' learning outcomes.

SECTION 4: Discussion related to association of knowledge with selected demographic variables.

Table 4.1 : Association between demographic variables with knowledge levels regarding Risk factors and Warning signs of Stroke among Non-medical staff.

S.No	Variables	Poor	Average	Good	Total	Chi-Square	Df	P-Value
1	Age in years							
	22-31	4	15	18	37	8.185	6	0.225
	32-41	1	8	1	10			
	42-51	1	5	4	10			
	51 and above	1	2	0	3			
2	Gender							
	Male	5	20	9	34	4.723	2	0.094
	Female	2	10	14	26			
	Transgender							
	Others							
3	Designation	1	5	5	11	1.08	6	0.982
	Senior tutor	4	19	12	35			
	Assistant professor	1	4	4	9			
	Associate professor	1	2	2	5			
	Professor							
4	Qualification							
	Graduate	1	4	5	10	1.015	4	0.908
	Post graduate	4	20	13	37			
	MPhil	2	6	5	13			
	PhD							
5	Area of residence							
	Urban	6	21	18	45	10.674	6	0.099
	Sub-Urban	0	8	5	13			
	Rural	1	0	0	1			
	Isolated/Remote	0	1	0	1			
6	Type of family							
	Nuclear family	6	18	18	42	2.999	2	0.223
	Joint family	1	12	5	18			
	Seperated							
	Single							
7	Socio Economic status							

	Upper Class	2	5	2	9	3.621	6	0.728
	Upper Middle Class	1	7	5	13			
	Middle Class	3	17	15	35			
	Lower Class	1	1	1	3			

The association between selected demographic variables and the level of knowledge (poor, average, and good) among the participants was analyzed using the chi-square test. The findings indicate that none of the demographic variables showed a statistically significant association with knowledge levels at the 0.05 level of significance. With regard to age, the calculated chi-square value was 8.185 with 6 degrees of freedom and a p-value of 0.225, which is greater than 0.05. In terms of gender, the chi-square value was 4.723 with 2 degrees of freedom and a p-value of 0.094, which is also greater than 0.05. Regarding designation, the chi-square value of 1.08 with 6 degrees of freedom and a p-value of 0.982 indicates no significant association between designation and knowledge levels. Similarly, for educational qualification, the chi-square value was 1.015 with 4 degrees of freedom and a p-value of 0.908, indicating no statistically significant association. With respect to the area of residence, the chi-square value was 10.674 with 6 degrees of freedom and a p-value of 0.099, which is slightly higher than 0.05. For type of family, the chi-square value was 2.999 with 2 degrees of freedom and a p-value of 0.223. Lastly, regarding socioeconomic status, the chi-square value was 3.621 with 6 degrees of freedom and a p-value of 0.728, which is not statistically significant.

Conceptual Framework

The modified Ludwig von Bertalanffy Open System Theory (1968) served as the conceptual foundation for this study. According to this theory, a system consists of several interconnected parts or components within a defined boundary that work together to achieve a common goal. A system may represent an individual, a family, or a community.

Future Recommendation

In this study, we make some practical recommendations for improving the knowledge regarding risk factors and warning signs of stroke among non-medical staff.

Encourage nurses and health-care professionals to actively participate in community-based health education activities related to stroke prevention.

Develop standardized educational modules and training materials that can be easily used in hospitals and community health settings.

Organize mock drills and emergency response training programme to improve confidence and readiness in handling stroke emergencies.

Conduct regular health education programme and awareness sessions on stroke prevention for non-medical staff, students, patients, and the general public.

Promote awareness regarding the FAST approach (Face drooping, Arm weakness, Speech difficulty, Time to seek help) for early identification of stroke symptoms.

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Conflict Of Interest

Authors declares no any conflict of interest.

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