

EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON KNOWLEDGE REGARDING SEIZURES AND ITS FIRST AID MANAGEMENT AMONG PRIMARY AND HIGH SCHOOL TEACHERS OF SELECTED SCHOOLS: A QUASI-EXPERIMENTAL

Health Science (Nursing)

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ABSTRACT

Background: Epilepsy is one of the most common chronic neurological disorders of childhood, characterized by recurrent seizures due to abnormal electrical activity in the brain. It is a non-communicable condition that cannot be transmitted from one person to another. Teachers' knowledge and attitudes toward epilepsy significantly influence the academic performance, social development, and overall well-being of affected children. **Objectives: Primary:** (1) To assess the knowledge regarding seizures and their first aid management among primary and high school teachers; (2) To evaluate the effectiveness of a planned teaching programme. **Secondary:** To determine the association between post-test knowledge scores and selected demographic variables. **Hypothesis:** H_0 : No significant difference between pre-test and post-test knowledge scores. H_1 : Significant difference between pre-test and post-test knowledge scores at 0.05 level of significance. **Methodology:** A quantitative, pre-experimental one-group pre-test post-test design was adopted. A total of 80 teachers were selected using non-probability convenience sampling. Data were collected using a self-structured questionnaire and analyzed using descriptive and inferential statistics (paired t-test and chi-square test). **Results:** Pre-test findings showed that 40% had poor, 45% fair, and 15% good knowledge (mean = 11.25 ± 1.40 ; 22.12%). Post-test results indicated improvement, with 42.5% having very good and 57.5% excellent knowledge (mean = 11.85 ± 2.75 ; 56.12%). The increase in knowledge was statistically significant. **Conclusion:** The planned teaching programme was effective in improving teachers' knowledge regarding seizures and their first aid management. H_1 was accepted and H_0 was rejected. **Recommendations:** Further studies can be conducted on larger samples and different populations. Comparative and video-assisted teaching interventions may also be explored to enhance effectiveness.

KEYWORDS

Epilepsy, Seizures, First Aid Management, School Teachers, Teaching Programme

INTRODUCTION

"The secret of getting ahead is getting started."

- Mark Twain

Epilepsy is one of the most common chronic neurological disorders of childhood, characterized by recurrent seizures due to abnormal electrical activity in the brain. The term epilepsy is derived from the Greek word "epilepsia," meaning "to seize," reflecting its clinical manifestation as sudden, involuntary disturbances in movement, sensation, behavior, or consciousness.¹

Seizures may range from brief lapses in awareness or staring episodes to generalized convulsions, depending on the area of the brain involved. Although epilepsy is a chronic condition,² it is non-communicable and does not spread from person to person.³

Teachers play a crucial role in shaping the academic performance, social development, and psychological well-being of children with epilepsy. Their knowledge and attitude significantly influence students' school experiences, peer interactions, and future opportunities. Negative perceptions or discrimination by teachers can adversely affect the overall development and quality of life of these children.

The etiology of epilepsy is multifactorial, with many cases remaining idiopathic. However, known causes include brain injury, infections, tumors, stroke, and congenital abnormalities, all contributing to abnormal neuronal discharges in the cerebral cortex, a process known as epileptogenesis.³

Background of the Study

An experimental study conducted in Belagavi, Karnataka (2020) evaluated the effectiveness of a Structured Teaching Programme (STP) on knowledge regarding first aid management of seizures among school teachers. A one-group pre-test post-test pre-experimental design was adopted, and 40 teachers were selected using purposive sampling from Mahila Vidhyalaya English Medium School. Data were collected using a 24-item structured knowledge questionnaire with high reliability ($r = 0.92$). The findings revealed a significant improvement in knowledge, with mean post-test scores (83.33%) higher than pre-test scores (50%). The calculated paired t-value ($t = 16$, $p < 0.05$, $df = 39$) indicated a statistically significant difference between pre-test and post-test scores. The study concluded that school teachers had inadequate baseline knowledge, and the STP

was effective in enhancing their knowledge regarding first aid management of seizures.⁴

Need of the Study

Seizures may occur in school settings, where teachers often act as first responders. Their knowledge of epilepsy and seizure first aid is essential for ensuring the safety, academic performance, and social well-being of affected children. However, studies indicate inadequate knowledge and negative attitudes among teachers regarding epilepsy management.⁵

Epilepsy contributes significantly to the global disease burden, with prevalence in India ranging from 3.0 to 11.9 per 1,000 population. Evidence from multiple studies also highlights persistent gaps in teachers' knowledge, despite improvements following educational interventions.⁶ Therefore, there is a need to enhance teachers' knowledge through structured teaching programmes to ensure appropriate first aid management of seizures and promote a supportive school environment.

Review of Literature

A pre-experimental study which is aimed to evaluate the knowledge and effectiveness of a structured teaching program on epilepsy in children among primary school teachers in the Sangli, Miraj, and Kupwad region in (2018). A total of 80 participants were selected using a non-probability cluster sampling method. A structured questionnaire was utilized to gather data. Findings indicated that 56.3% of primary school teachers had an average knowledge score, while post-test results revealed that 57.5% achieved a good knowledge score and 38.8% an excellent score. This suggests a significant improvement in knowledge post-intervention and indicates that the planned teaching program was successful. The chi-square analysis between pre-test knowledge and selected variables suggested that knowledge levels were independent of age, gender, qualifications, experience, and prior knowledge.⁷

A descriptive cross-sectional study on Knowledge of Epilepsy and Seizure First Aid Among Teachers in Eastern Province, Saudi Arabia, targeting teachers in schools of all educational levels using a self-administrated validated questionnaire in Arabic in (2023). A total of 423 teachers fulfilling the inclusion criteria were included. Teachers' ages ranged from 18 to more than 50 years with mean age of 42.6 ± 9.3 years old. Exactly 261 (61.7%) teachers were females and 400 (94.6%)

were Saudi. There research found that teachers have poor knowledge about epilepsy, wherein 38.5% had good overall knowledge level while 61.5% had poor knowledge regarding epilepsy. However, only a 9.2% had first-aid training, which suggests that knowledge and practice of epilepsy first aid needs to be improved via public awareness campaigns and first-aid training courses in schools.⁸

Hypothesis

Will be tested at 0.05 level of significance.

H₀- There is no significant difference between pre-test and post-test on knowledge score regarding seizures and its first aid management among primary and high school teachers of selected schools.

H₁- There is significant difference between pre-test and post-test on knowledge score regarding seizures and its first aid management among primary and high school teachers of selected schools.

Objective of the Study

Primary Objective

1. To assess the knowledge regarding seizures and its first aid management among primary and high school teachers of selected schools.
2. To evaluate the effectiveness of the planned teaching programme on knowledge regarding seizures and its first aid management among primary and high school teachers of selected schools.

Secondary Objective

1. To determine the association of post-test knowledge score with their selected demographic variable.

METHODOLOGY

Research Approach

A quantitative research approach was adopted to evaluate the effectiveness of planned teaching program on knowledge regarding seizures and its first aid management among primary and high school teachers of selected schools.

Research Design

A quasi-experimental one-group pre-test post-test research design was used. This design was chosen to assess the effectiveness of planned teaching program on knowledge regarding seizures and its first aid management among primary and high school teachers of selected schools.

Setting of the Study

The study was conducted in selected schools.

Population

The target population comprised primary and high school teachers at selected schools.

Accessible Population

Primary and high school teachers who are available during data collection.

Sample Size and Sampling Technique

A sample of 80 teachers was selected using Non-probability Convenient Sampling.

Inclusion Criteria

In this study teachers who are :-

1. Teaching 1st Std to 4th Std are included as Primary school teachers and 7th Std to 10th Std are included as High school teachers.
2. Willing to participate in the study.
3. Available at time of data collection.

Exclusion Criteria

In this study teachers who are :-

1. Not present on the day of data collection.
2. Participated in pilot study and attended similar kind of study less than 6 months.

Tool For Data Collection

The research instrument was developed to assess the knowledge of school teachers regarding seizures and their first aid management. Based on the study objectives, a self-structured questionnaire was prepared after an extensive review of literature from textbooks, journals, and online sources.

Section I: Demographic Variables: This section included five variables: age, gender, area of residence, previous exposure to seizure cases, and actions taken during such events.

Section II: Structured Knowledge Questionnaire: A self-structured questionnaire consisting of 25 multiple-choice questions was developed to assess knowledge regarding seizures and their first aid management. Each correct response was awarded one mark, and incorrect responses were given zero. The total score ranged from 0 to 25.

Reliability

Reliability was assessed using appropriate tests from pilot data. The correlation coefficient 'r' of the tool was 0.83, and the tool was found reliable.

Pilot Study

A pilot study was conducted to assess feasibility. No major modifications were required.

Data Collection Procedure

Data collection was carried out from 19/02/2025 to 25/03/2025 after obtaining permission from the concerned school authorities. A non-probability convenient sampling technique was used to select participants from selected schools. The samples were approached in small groups on a daily basis. Prior to data collection, the investigator introduced herself and explained the purpose and objectives of the study, and written informed consent was obtained from all participants. Baseline knowledge was assessed using a structured questionnaire. Following this, a planned teaching programme on seizures and their first aid management was administered to enhance the knowledge of the participants.

RESULT

The Pre-test findings showed that 40% teachers had poor knowledge, 45% fair, and 15% good, with a mean score of 11.25 ± 1.40 (22.12%). Post-test results demonstrated significant improvement, with 42.5% having very good and 57.5% excellent knowledge, and a mean score of 11.85 ± 2.75 (56.12%). The findings indicate that the planned teaching programme was effective in improving teachers' knowledge regarding seizures and their first aid management.

Table 1: Significance of difference between knowledge score in pre and post test regarding seizures and its first aid management among primary and high school teachers of selected school n=80

Overall	Mean	SD	Mean Difference	t-value	p-value
Pre-Test	11.25	1.40	11.23±2.36	36.121	0.0001 S, p<0.05
Post Test	21.11	2.66			

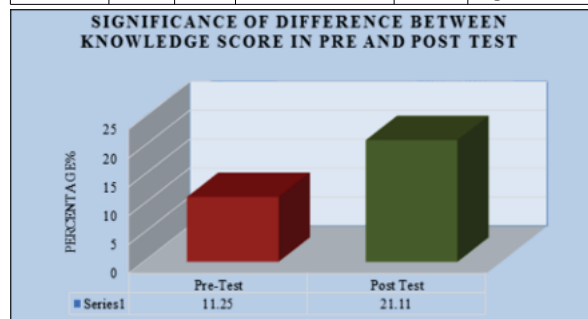


Figure 1: Significance of difference between knowledge score in pre and post test regarding seizures and its first aid management among primary and high school teachers of selected schools

DISCUSSION

The present study demonstrated a significant improvement in teachers' knowledge regarding seizures and their first aid management following the planned teaching programme. The mean knowledge score increased notably from pre-test to post-test, and the calculated paired t-value indicated a statistically significant difference ($p < 0.05$), confirming the effectiveness of the intervention. These findings are consistent with previous studies, which also reported significant enhancement in knowledge after structured teaching programmes. The results highlight that teacher initially had inadequate knowledge, which improved substantially after the intervention. Additionally, a significant association was observed between knowledge scores and selected demographic variables such as age and prior exposure to seizure cases, while no association was found with other variables. Overall, the study supports the effectiveness of educational interventions in improving teachers' preparedness for seizure first aid management.

CONCLUSION

After detailed analysis, this study leads to the following conclusion :
The study demonstrated a significant improvement in teachers' knowledge regarding seizures and their first aid management following the planned teaching programme. The difference between pre-test and post-test scores was statistically significant; hence, H_1 was accepted and H_0 was rejected. The intervention was found to be effective.

REFERENCES

1. Fisher RS, Acevedo C, Arzimanoglou A, Bogacz A, Cross JH, Elger CE, et al. ILAE official report: A practical clinical definition of epilepsy. *Epilepsia*. 2014;55(4):475–82.
2. World Health Organization. *Epilepsy: A public health imperative*. Geneva: World Health Organization; 2019.
3. Kumar V, Abbas AK, Aster JC. *Robbins and Cotran Pathologic Basis of Disease*. 10th ed. Philadelphia: Elsevier; 2021.
4. Patil S, Desai R. Effectiveness of structured teaching programme on knowledge regarding first aid management of seizures among school teachers in Belagavi, Karnataka. *Int J Nurs Educ Res*. 2020;8(3):245–50.
5. World Health Organization. *Epilepsy fact sheet*. Geneva: WHO; 2023.
6. Jones C, Reilly C. Teachers' knowledge and attitudes towards epilepsy: A systematic review. *Epilepsy Behav*. 2016;59:59–68.
7. Shinde M, Patil S. Effectiveness of structured teaching programme on epilepsy among primary school teachers in Sangli, Miraj and Kupwad. *Int J Sci Res*. 2018;7(6):112–5.
8. Alqahtani JM, Alenezi AM, Alqahtani SA, et al. Knowledge of epilepsy and seizure first aid among teachers in Eastern Province, Saudi Arabia. *Epilepsy Res Treat*. 2023;2023:1–7.