

EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING EPILEPSY AND ITS FIRST AID MANAGEMENT AMONG DRIVERS AND CONDUCTORS FROM TRANSPORT AGENCIES.

Mr. Gateeb Ratnadeep Satardey^{1*} Dr. Shubhangi R. Malavade²

1. Msc. (N) MSN (CCN), Des. Smt. S. K. Jindal College of Nursing, Pune – 04.
2. ICN (Infection Control Nurse). Asian International University, Manipur - 40.

***Corresponding Author- Mr. Gateeb Ratnadeep Satardey**

ABSTRACT

Introduction: Epilepsy is a chronic condition that significantly impacts patients' lives. It is the most prevalent neurological disorder necessitating prolonged healthcare engagement. With the increasing incidence of epilepsy, ensuring safe transportation services for affected individuals is crucial. Educating personnel within transport agencies is essential to achieving this objective. **Aims:** This research study aims to assess the effectiveness of a Structured Teaching Programme in enhancing knowledge about epilepsy and its first aid management among drivers and conductors employed by transport agencies in the city. **The objectives of the study were:** To evaluate the effectiveness of a structured teaching program on the level of knowledge regarding epilepsy and its first aid management among drivers and conductors from selected transport agencies in the city. **Material and Method:** The study employed a pre-experimental one-group pretest-post-test design, with a sample size of 60 drivers and conductors selected from transport agencies. Non-probability convenience sampling techniques were utilized to select the participants. The data collection tool comprised a demographic section and structured questionnaires on knowledge regarding epilepsy and its first aid management. Informed consent was obtained from all participants before the commencement of the study. A structured teaching program was conducted in the transport agencies, following formal permission obtained from the relevant authority. **Results and Findings:** The study examined the demographic profile of participants, which included age, gender, marital status, type of work, years of experience, education level, awareness of first aid management of epilepsy, experience witnessing epilepsy cases, and training on first aid management of epilepsy. The mean scores for the pretest and post-test were 8.484 and 15.484, respectively. The evaluation of the structured teaching program's effectiveness revealed an 82.50% improvement in knowledge from the pretest to the post-test, with a calculated 't' value of 13.135 indicating a significant difference. Significant associations were found between the pretest knowledge levels of drivers and conductors from transport agencies and various demographic variables. The chi-square (χ^2) values for the demographic variables were significant at $p < 0.05$, except for Years of Experience and Education Status. **Conclusion:** The study findings demonstrate the effectiveness of the structured teaching program on epilepsy and its first aid management among drivers and conductors from selected transport agencies in the city. It is recommended

that such training programs be organized for individuals working in transport agencies to enhance passenger safety and comfort during travel.

Keywords: Epilepsy, First aid management, Knowledge, Transport agencies, Structured teaching program, Drivers, Conductors

INTRODUCTION

The term epilepsy, originating from the Greek word *epilepsia* which translates to "seizure," was once considered a divine malady. It includes a variety of syndromes marked by repeated, unprovoked seizures that can present in different forms, such as loss of consciousness, convulsions, sensory alterations, and behavioral changes. In the United States, epilepsy affects about 2.3 million people, with 181,000 new cases emerging each year. Epilepsy is categorized as either primary (idiopathic) or secondary, where seizures are due to underlying issues like brain tumors, head injuries, or infections such as meningitis.¹

However, in nearly half of the cases, no specific cause is found. Worldwide, epilepsy impacts roughly 3% of the population, with most cases beginning in childhood. Progress in diagnostic techniques, especially electroencephalography, has improved our comprehension of epilepsy, while increased public awareness has helped diminish the stigma surrounding the condition. Although epilepsy generally does not restrict individuals from traveling, seizures can be triggered by factors like fatigue, stress, or excitement, particularly during long trips.²

First aid, which is the immediate care given before professional medical help arrives, is crucial for handling sudden medical incidents like seizures. Teaching first aid is vital for empowering people to assist in emergencies, and young individuals can be trained to deliver effective care. A well-organized teaching plan ensures the distribution of accurate information and strategies to engage learners.³

With the rising prevalence of epilepsy, especially in the context of travel, educating transportation staff—such as drivers and conductors—is essential to ensure the safety and well-being of those with epilepsy. This study seeks to evaluate the effect of structured teaching programs on epilepsy first aid among transport workers, aiming to prevent complications related to inadequate seizure management during travel.⁴

Need for Study

Epilepsy is a persistent neurological condition impacting approximately 50 million individuals worldwide, posing a major public health issue. This disorder is marked by repeated seizures resulting from irregular electrical activity in the brain, with symptoms ranging from minor attention lapses to intense convulsions.⁵ The occurrence and prevalence of epilepsy are notably higher in low- and middle-income nations, where about 80% of those affected live, primarily due to factors such as infectious diseases, injuries, and limited access to healthcare. In these areas, the incidence can be as high as 100 per 100,000 people each year, nearly twice the rates found in developed countries.⁶

In Latin America and the Caribbean, mortality rates related to epilepsy exceed those in wealthier nations, with the convulsive state accounting for 5-15% of epilepsy-related deaths.⁷ Furthermore, around 5 million new cases of epilepsy are diagnosed annually, with an estimated 50 million people living with active epilepsy globally. In India, the prevalence is 3-11 per 1,000 individuals, affecting 3.4 million people, including 470,000 children.⁸ Given the rising prevalence and increasing number of epilepsy-related incidents, especially during travel, there is an urgent need for improved public education and awareness regarding the condition and seizure management.⁹

Aim of the study

To evaluate the impact of a Structured Teaching Programme on improving knowledge about epilepsy and its first aid management among drivers and conductors working for transport agencies in the city.

RESEARCH METHODOLOGY

➤ MAIN OBJECTIVE:

The objectives of the study were: To evaluate the effectiveness of a structured teaching program on the level of knowledge regarding epilepsy and its first aid management among drivers and conductors from selected transport agencies in the city.

➤ RESEARCH TYPE:

Quantitative Research Approach

➤ RESEARCH DESIGN:

Pre-experimental One Group Pre-Test Post-Test Design.

➤ SAMPLE:

Drivers and Conductors of the city from selected transport agencies of the city.

➤ SAMPLE SIZE: 60 sample

➤ SAMPLE TECHNIQUE:

Non-Probability Convenient Sampling Techniques.

➤ TOOL DESCRIPTION:

The study tool comprised two parts: a consent form (Part A) and a structured questionnaire (Part B). Part B included demographic variables (Section I) and a questionnaire assessing drivers' and conductors' knowledge of epilepsy and its first aid management (Section II). This tool ensured accurate data collection for the study.

➤ RELIABILITY:

The reliability of the study tool was assessed using the test-retest method, with a correlation coefficient calculated via Karl Pearson's formula.¹⁰ A reliability score of 0.84 confirmed the tool's consistency and appropriateness for the study. This ensures the tool's effectiveness in measuring the intended attributes.

➤ PILOT STUDY:

A pilot study was conducted in selected transport agencies to assess the feasibility and effectiveness of an intervention. Using a non-probability convenient sampling technique, pre-existing data was collected, followed by an intervention and post-test analysis. Results showed a highly significant difference, confirming the feasibility and effectiveness of the study design.

RESULT AND FINDINGS:

Table: Frequency and percentage distribution of level of knowledge regarding Epilepsy and its First Aid Management among drivers and conductors.

Level of knowledge score	Pre-test score		Post-test score	
	Frequency	Percentage	Frequency	Percentage
Poor	17	28.33 %	0	00.00%
Average	39	65.00 %	13	21.66 %
Good	04	06.66%	47	78.66 %

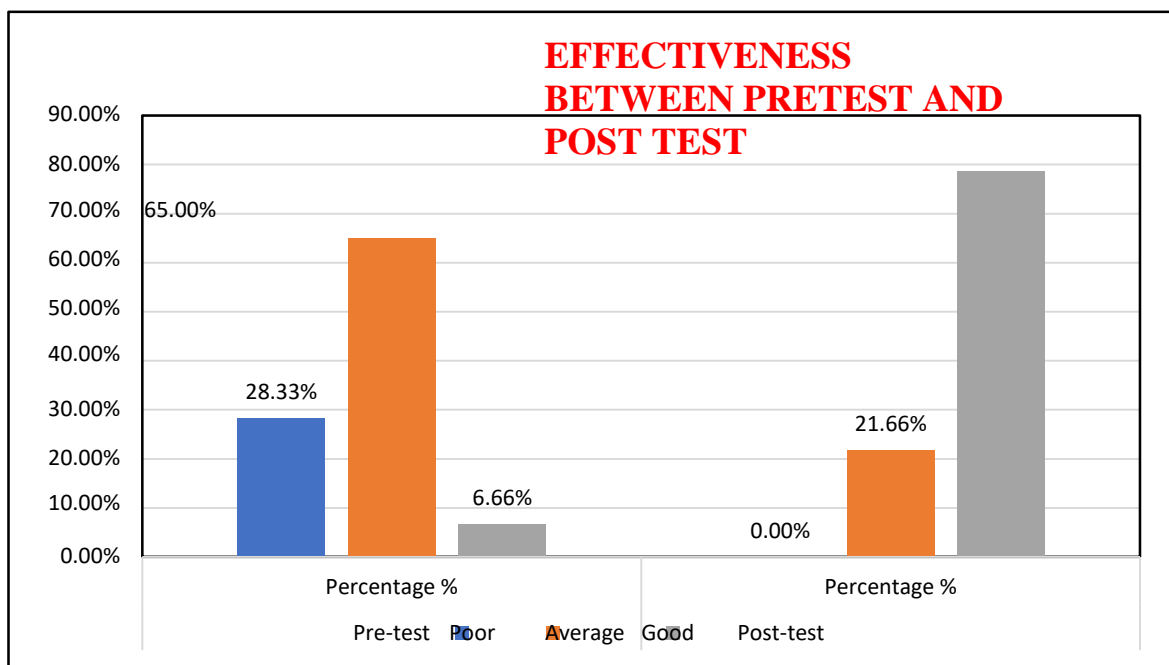


Figure: Percentage-wise distribution of sample according to level of knowledge is pre-test and post-test.

The provided data indicates that the level of knowledge in both the pre-test and post-test was

evaluated to measure the effectiveness of the structured teaching program. The evaluation showed an effectiveness percentage of **82.50%**, demonstrating an improvement in knowledge between the pre-test and post-test.

Table: Mean, Standard Division, Mean Difference a score and 't' value for study related to Epilepsy and its First Aid Management among drivers and conductors.

Sr. no	Knowledge level	Mean	SD	MD	t value	Significance
1	Pre-test	08.484	02.98	07	13.135	P<0.05
2	Post-test	15.484	02.85			
P<0.05 level				*significance		

The table above illustrates that the mean pre-test score was 8.484 with a standard deviation of 2.98, while in the post-test, the mean score was 15.484 with a standard deviation of 2.85. The mean difference between the pre-test and post-test scores was 7. The calculated 't' value was 13.135, indicating a significant difference compared to the tabulated 't' value. This suggests a notable improvement in knowledge concerning the study of epilepsy and its first aid management among drivers and conductors.

DISCUSSION

This research assessed the impact of a Structured Teaching Programme (STP) on the knowledge of epilepsy and its first aid management among drivers and conductors from selected city transport agencies. A pre-experimental one-group pretest-post-test design was employed, involving 60 participants chosen through convenient sampling. Data collection encompassed demographic details and a structured questionnaire to evaluate knowledge before and after the STP.

Demographic analysis revealed that the majority of participants (38.33%) were aged between 21 and 30 years, with 91.66% being male. Educational backgrounds varied, with 35% holding graduate degrees, and 75% lacking prior knowledge of epilepsy first aid. Furthermore, 93.33% acknowledged the necessity for training.

Pre-test results showed that 28.33% had poor knowledge, 65% had average knowledge, and only 6.66% had good knowledge. Post-test results indicated a significant improvement: 78.66% exhibited good knowledge, and no participants remained in the poor knowledge category. The mean pre-test score of 8.484 rose to 15.484 post-test, with a significant 't' value of 13.135 ($p < 0.05$), validating the STP's effectiveness.

Significant associations were identified between pre-test knowledge and demographic factors such as marital status, type of work, and prior exposure to epilepsy cases. The study underscores the importance of structured training programs for transport professionals to enhance emergency preparedness.

Implications include incorporating epilepsy first aid training into driver and conductor induction programs, conducting awareness campaigns, and enforcing safety regulations. **Limitations** include a small sample size and limited generalizability. Future research should involve larger populations, True experimental designs, and comparative evaluations of different teaching methods. This study demonstrates that structured education significantly enhances first-aid knowledge among transport workers, promoting passenger safety and improving emergency response.

CONCLUSION

This study evaluated the effects of a structured teaching program on enhancing the knowledge of epilepsy and its first-aid management among drivers and conductors in specific transport agencies. The findings revealed a significant improvement in knowledge levels following the intervention, highlighting the success of structured education in addressing the awareness and preparedness gaps. This research emphasizes the vital role of targeted educational initiatives for transport staff, who frequently encounter emergencies, to ensure timely and appropriate first-aid responses. These results underscore the necessity of integrating structured training programs into the routine professional development of drivers and conductors, ultimately contributing to improved passenger safety and emergency management in transport systems.

CONFLICT OF INTEREST

The authors declare no conflict of interest regarding this research titled “Effectiveness of a Structured Teaching Programme on Knowledge Regarding Epilepsy and Its First Aid Management Among Drivers and Conductors from Transport Agencies.” The study was conducted independently without any financial, commercial, or institutional influence that could affect the findings and conclusions.

FUNDING SOURCE

"This research, titled 'Effectiveness of a Structured Teaching Programme on Knowledge Regarding Epilepsy and Its First Aid Management Among Drivers and Conductors from Transport Agencies,' was carried out without external funding."

REFERENCES

1. Cavanna AE. Seizures and Epilepsy. In springer; 2018. p. 123–8.
2. Olson D, Westermarck, T, Ekvall SW. Seizures And Epilepsy. In oxford university new york ny; 2005. p. 93–6. First aid: Teaching young people the basics. British Journal of School Nursing. 2009 Oct 1;4(8):409.
3. Mohamad R, Albalawi A, Alshahrani R, Alqahtani T, Khalif F, Albalawi N, et al. Knowledge, attitude, and practice regarding epilepsy first aid among caregivers of epileptic patients in Tabuk city, Saudi Arabia. International Journal of Medicine in Developing Countries. 2023 Jan 1;1717–23.
4. Bazil CW. Epilepsy: Management. 2001 Apr 19.
5. Arnaout AY, Nerabani Y, Arnaout K, Arnaout I, Hamdan O, Alhejazi TJ, et al. The

- prevalence and risk factors of functional dyspepsia among adults in low- and middle-income countries: An international cross-sectional study. *Medicine*. 2023 Oct 6;102(40):e35437.
6. Mbizvo GK, Schnier C, Duncan SE, Chin RFM, Simpson CR. A national study of epilepsy-related deaths in Scotland: Trends, mechanisms, and avoidable deaths. *Epilepsia*. 2021 Sep 19;62(11):2667–84.
 7. Zack MM, Kobau R. National and State Estimates of the Numbers of Adults and Children with Active Epilepsy - United States, 2015. *MMWR Morbidity and Mortality Weekly Report*. 2017 Aug 11;66(31):821–5.
 8. Modi SS, Chavhan D, Sancheti P, Dabadghav R, Shyam A. Awareness and attitude of first-aid seizure management among physiotherapy undergraduate students. *Physiotherapy - The Journal of Indian Association of Physiotherapists*. 2022 Jul 1;16(2):77–80.
 9. Tufiş PA, Alwin DF, Ramírez DN. A Catch-22—the Test–Retest Method of Reliability Estimation. *Journal of Survey Statistics and Methodology*. 2023 Dec 20.