

Evaluate the Effectiveness of STP on Knowledge Regarding Epilepsy and Its First aid Management Among School Teachers of Selected Schools of Sri Goindwal Sahib, District Tarn-Taran, Punjab, 2023

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ABSTRACT

Introduction: Epilepsy is neurological condition that causes seizures which is characterized by abnormal, excessive electrical discharges in the brain's cortical neurons. This disorder's prevalence exceeds 50 million individuals. The estimated occurrence of epilepsy is approximately 6.54 cases per 1,000 individuals across both children and adults. The aim of the study was to evaluate the effectiveness of STP on knowledge regarding epilepsy and its first-aid management among school teachers of selected schools so that their knowledge can be enhanced. The study's goals were to it was conducted by using quasi-experimental research design (experimental group and control group). A self-structured knowledge questionnaire was used to assess the subject's level of knowledge both before and after using STP on the sample of 60 (30 in experimental group and 30 in control group) which were selected using non-probability convenience sampling technique. The study findings indicated that after implementing the STP the

experimental group showed a higher average knowledge score of 21.33 ± 4.14 compared to the control group's score of 17.30 ± 5.35 . The mean difference of 4.03 between the groups was statistically significant. An independent t-test confirmed this, yielding a t-value of 3.261 with 58 degrees of freedom and p-value of .002, indicating significant improvement in epilepsy and its first aid management knowledge in the experimental group post-STP. This study has highlighted the effectiveness of structured teaching programs in improving knowledge about epilepsy among school teachers. Such interventions are essential in promoting a supportive and informed environment for students with epilepsy, ensuring their safety, and reducing the stigma associated with the condition. This study contributes to the existing body of knowledge and underscores the significance of continued efforts in educators and raising awareness about epilepsy in schools and communities. Recommendations: a similar study may be undertaken on a large sample for better

generalization by adopting comparative research design.

Keywords: Knowledge, STP, epilepsy, first-aid management, school teachers

INTRODUCTION

Background of the Study

‘Epilepsy’ is derived from the Greek word ‘‘Epilambanein’’ meaning is ‘to be seized’’. Epilepsy is a chronic neurological disorder which means repeated seizure activity which affects around 60-70 million the people of all age groups, races, social class, geographical locations.¹

Epilepsy is one of the most prevalent conditions affecting children, characterized by recurrent unprovoked seizures triggered by sudden, excessive electrical discharges in the brain’s cortical neurons.²

Furthermore, it is important to note that seizures can occur during school hours, and in such situations, teachers often become the first point of contact for providing initial care and support. Epilepsy can exert a detrimental influence on a child’s physical health, behaviour, academic performance and mental well-being, with potential long-term consequences for their quality of life and future adult roles, particularly during their school years.³

The attitude and awareness of teachers towards epilepsy play a crucial role in preventing complications and ensuring optimal student performance, social development, and future employment prospects.⁴

As of May 2015, the World Health Organization [WHO] estimated that there were more than 50 million individuals living with epilepsy worldwide, with approximately 2.5 million of them in developing countries. Additionally, the global annual incidence of epilepsy stands at 2.4 million new cases.⁵

PROBLEM STATEMENT

Evaluate the effectiveness of structured teaching programme on knowledge

regarding epilepsy and its first-aid management among school teachers of selected schools of Shri Goindwal Sahib, District Tarn-Taran (Punjab).

AIM OF THE STUDY

To enhance the structured teaching programme on knowledge regarding epilepsy and its first aid management among school teachers.

OBJECTIVES

1. To assess the pre-test knowledge score regarding epilepsy and its first-aid management among school teachers.
2. To develop and give STP on knowledge regarding epilepsy and its first-aid management
3. To assess the post-test knowledge score regarding effectiveness of structured teaching programme on knowledge regarding epilepsy and its first-aid management among school teachers.
4. To compare pre-test and post-test knowledge score regarding epilepsy and its first-aid management among school teachers.
5. To investigate the relationship between post-test knowledge score of experimental groups with selected demographic variables.

OPERATIONAL DEFINITIONS

Assess: This term refers to the examination of teachers' knowledge concerning epilepsy and the first-aid management of children with epilepsy.

Effectiveness: in this study, effectiveness refers to the desired change in teachers' knowledge regarding epilepsy and its first-aid management of children with epilepsy after participating in a structured teaching program.

Structured Teaching Programme: This refers to systematically developed written and verbal instructions designed for a selected group of teachers in specific schools in Sri Goindwal Sahib. Its purpose is to provide information on epilepsy and

the first-aid management of children with epilepsy.

Knowledge: This term denotes the level of information among teachers regarding prevention, adherence to therapeutic regimens, and the first-aid management of children with epilepsy. It is assessed using a self-structured questionnaire.

Epilepsy: Epilepsy is a condition in which a person has recurring seizures. A seizure is defined as an abnormal, disordered discharge of the brain's nerve cells, resulting in a temporary disturbance of motor, sensory or mental function

REVIEW OF LITERATURE

Pawan Dhull, S.K Patnaik et al. (2019) was conducted a retrospective cohort study on long term study about incidence of epilepsy in a cohort of service personnel from India. The data were derived from the electronic medical records (EMRs) of male service personnel. The participants (age <18years) were enrolled into active service between 1990 and 2015 in good health. The data included the 51,217 participants of age range 17-54 (median age 33years) with a mean follow up of 12.5 years, giving a cumulative follow up duration of 613,925 person-years. A total of 291 patients develop epilepsy during the study, giving an incidence of 0.47 per 1000 person- years. Previous studies from India have shown that the incidence rate varied between 0.2 and 0.6 per 1000 population. This study concludes that the report showed the incidence rates of epilepsy from a large service population of India.⁶

Nora Al Muslim, Mohammed Alhaddad et.al (2023) was conducted a descriptive cross-sectional study in eastern province Saudi Arabia, targeting teachers in schools of all educational levels using a self-administrated validated questionnaire in Arabic. Total of 423 teachers fulfilling the inclusion criteria were included. Teacher's 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. The study revealed that teachers have poor knowledge about epilepsy, wherein 163 (38.5%) had good overall knowledge level while 260 (61.5%) had poor knowledge regarding epilepsy. This study concludes that only 9.2% had first-aid training, which suggests that knowledge and practice of epilepsy first aid need to be improved via public awareness campaigns and first-aid training courses in schools.⁷

Shirjana Shrestha et al. (2023) was conducted a quantitative pre-experimental study for evaluation of the effectiveness of structured teaching programme on knowledge regarding first aid management of epilepsy among primary school teachers, Bangalore. The aim of the study was to evaluate the effectiveness of STP on knowledge regarding first aid management of epilepsy among primary school teachers. A pre-experimental one group pre-test and post-test design was used for the study. The sample consists of 60 primary school teachers of selected schools, Bangalore. Non-probability purposive sampling technique was adopted to collect data. A structured knowledge questionnaire was used to collect data from the subjects. This study revealed that, in the pre-test majority of the respondents had inadequate knowledge with mean knowledge score of 43.2% whereas in post-test there was a significant gain in mean knowledge score of 85.3%. A significant association was found between demographic variables at 5% level of significance. This study concludes that the structured teaching programme was effective in enhancing the knowledge regarding first aid management of epilepsy among primary school teachers working in selected schools, Bangalore.⁸

Vaishali Taksande, Nilesh Burbare, Karishma Chaure et.al (2020) was conducted a descriptive study on 110 Anganwadi female workers. The aim to assess the effectiveness of planned teaching on the knowledge regarding epilepsy in children among the Anganwadi workers.

Non-probability convenient sampling technique was used. Pre-test knowledge of Anganwadi worker 3(2.73%) had a poor level of knowledge score, and 48(40.9%) had a good knowledge score whereas in post-test 65(59.09%) had very good knowledge score and 23(20.9%) had excellent knowledge score.⁹

MATERIALS AND RESEARCH METHODS

RESEARCH DESIGN

The research design selected for this study was Quasi experimental design to assess the effectiveness of structured teaching programme on knowledge regarding epilepsy and its first-aid management among school teachers of selected schools of Shri Goindwal Sahib, District Tarn-Taran (Punjab).

RESEARCH SET-UP

The present study was carried out in the selected schools of Shri Goindwal Sahib, District Tarn-Taran, (Punjab).

TARGET POPULATION

The study participants were School teachers from the chosen schools of Shri Goindwal Sahib, District Tarn-Taran, (Punjab).

ACCESSIBLE POPULATION

The school teachers which were available at the time of study.

SAMPLE SIZE:

There were 60 school teachers (30 in experimental group and 30 in control group).

SELECTION AND DEVELOPMENT OF TOOL

The instrument contains two parts:

Part -A:- Socio-demographic data consists of 10 items as Age, Gender, Religion, Qualification, Teaching experience, Marital status, Place of domicile, source of information regarding epilepsy, ever seen giving first-aid to epileptic person, periodic health checkup of students in school.

Part-B: Self-structured questionnaire tool. It consists of 30 questions related to knowledge regarding epilepsy and its first aid management. All items will give equal score. Each correct answer will be given score of 1 and wrong will be given no mark /score.

RELIABILITY OF TOOL

Reliability of the tool was done with pilot study.

DATA COLLECTION PROCEDURE

Official approval was received from the relevant authorities. Sample subjects were selected conveniently. Tool was provided to the study subjects then agreement was obtained. Firstly, pretest was taken. Structured teaching was given to experimental group only. Post test was take after 7 days using the same tool.

RESULTS AND DISCUSSION

Table1: Socio-demographic Profile of the school teachers. N=60

S. No.	Variables	Experimental Group(n=30)		Control Group(n=30)	
		F	%	F	%
1.	Age (years)				
	21-25	5	16.7	1	3.3
	26-30	9	30.0	19	63.3
	31-35	2	6.7	3	10.0
	Above35	14	46.7	7	23.3
2.	Gender				
	Male	4	13.3	9	30.0
	Female	26	86.7	21	70.0
3.	Religion				
	Sikh	24	80.0	26	86.7
	Hindu	4	13.3	4	13.3

	Muslim	1	3.3	0	0
	Christian	1	3.3	0	0
4.	Qualification				
	Graduation	16	53.3	7	23.3
	Post-Graduation	14	46.7	21	70.0
	M. Phil	0	0	2	6.7
5.	Teaching experience				
	0-3years	13	43.3	15	50.0
	4-7years	7	23.3	9	30.0
	8-11years	2	6.7	2	6.7
	Above11 years	8	26.7	4	13.3
6.	Marital status				
	Married	18	60.0	18	60.0
	Unmarried	9	30.0	12	40.0
	Divorced	3	10.0	0	
7.	Place of domicile				
	Urban	9	30.0	5	16.7
	Rural	21	70.0	25	83.3
8.	Source of information regarding Epilepsy				
	Media	11	36.7	17	56.7
	From health professionals	9	30.0	5	16.7
	Family/Friends	4	13.3	4	13.3
	Colleagues	2	6.7	1	3.3
	Others	4	13.3	3	10.0
9.	Have you ever seen giving first aid to epileptic person				
	Yes	14	46.7	12	40.0
	No	16	53.3	18	60.0
10.	Periodical health check-up of students in your school				
	Yes	26	86.7	21	70.0
	No	4	13.3	9	30.0

Table 2: Pre-test Level of knowledge regarding epilepsy and its first aid management among school teachers. N=60

S. No.	Level of knowledge	Experimental Group (n=30)		Control Group (n=30)	
		F	%	f	%
1.	Average	25	83.3	20	66.7
2.	Below average	5	16.7	10	33.3

Table 2 depicts that Pre-test Level of knowledge regarding epilepsy and its first aid management among school teachers. The experimental group displayed a higher level of knowledge, with 83.3% of its members rated as having average knowledge, compared to 66.7% in the control group. Conversely, a higher percentage of teachers in the control group (33.3%) fell into the below-average knowledge category, in contrast to 16.7% in the experimental group. This disparity highlights a significant variance in the

understanding of epilepsy and its management between the two groups, emphasizing the need for enhanced educational efforts, particularly in the control group, to ensure effective and informed first aid responses in school settings

Section III: Finding Related to assess the post-test knowledge score regarding effectiveness of structured teaching programme on knowledge regarding

epilepsy and its first aid management among school teachers.

Table 3 Post-test Level of knowledge regarding epilepsy and its first-aid management among school teachers. N=60

S. No.	Level of knowledge	Experimental Group (n=30)		Control Group (n=30)	
		F	%	F	%
1.	Good	18	60.0	10	33.3
2.	Average	12	40.0	16	53.3
3.	Below average	0	0	4	13.3

Table 3 displays that Post-test Level of knowledge regarding epilepsy and its first aid management among school teachers. The experimental group showed a higher proficiency, with 60% (18 teachers) demonstrating 'Good' knowledge, compared to only 33.3% (10 teachers) in the control group. Furthermore, while 40% (12 teachers) of the experimental group were assessed as having 'Average' knowledge, this figure was higher at 53.3% (16 teachers) in the control group. Notably, none in the experimental group fell into the

'Below average' category in contrast to the control group where 13.3% (4 teachers) were classified as such. This disparity underscores a more advanced understanding of epilepsy and its first aid management in the experimental group, highlighting the need for targeted educational enhancements in the control group.

Section III: Finding Related to comparison of pre-test and post-test knowledge score regarding epilepsy and its first aid management among school teachers.

Table 4: Comparison the Pre- test knowledge score regarding epilepsy and its first aid management among school teachers in experimental and control group. N=60

S. No.	Group	Mean	SD	MD	t value	df	P value
1.	Experimental	13.43	2.97	1.40	1.351	58	.182 ^{NS}
2.	Control	12.03	4.83				

NB: SD=Standard deviation, MD= Mean difference, t= independent t test, df=degree of freedom, NS= non-significant

Table 6 show that comparison the Pre-test knowledge score regarding epilepsy and its first aid management among school teachers in experimental and control group. The experimental group had an average score of 13.43 with a standard deviation (SD) of 2.97, while the control group had a slightly lower average score of 12.03 with a higher SD of 4.83. The mean difference (MD) between the groups was 1.40. However, an independent-test revealed

that this difference was not statistically significant, yielding at- value of 1.351 with 58 degrees of freedom (df) and a p-value of .182 (NS). This indicates that, before any specific educational intervention, the two groups had comparable levels of knowledge regarding epilepsy and its first aid management, establishing a baseline for evaluating the effectiveness of subsequent training or interventions.

Table 5: Comparison the Post-test knowledge score regarding epilepsy and its first aid management among school teachers in experimental and control group. N=60

S. No.	Group	Mean	SD	MD	t value	df	P value
1.	Experimental	21.33	4.14	4.03	3.261	58	.002 ^S
2.	Control	17.30	5.35				

NB: SD=Standard deviation, MD= Mean difference, t= independent t test, df=degree of freedom, S= Significant at 0.05 level

Table 5 present that Comparison the Post-test knowledge score regarding epilepsy and its first aid management among school teachers in experimental and control group. The experimental group, comprising 30 teachers, demonstrated a higher average knowledge score of 21.33 with a standard deviation (SD) of 4.14. In contrast, the control group, also with 30 teachers, had a lower average score of 17.30, with a higher SD of 5.35. The mean difference (MD) between the two groups was significant at 4.03. This significant difference is further under scored

by the results of an independent t-test, which yielded at-value of 3.261 with 58 degrees of freedom (df) and a highly significant p-value of 0.02. This indicates that, following the educational interventions or training, the experimental group significantly improved their knowledge regarding epilepsy and its first aid management compared to the control group. This significant improvement at the 0.05 level suggests the effectiveness of the training or interventions provided to the experimental group. Hence null hypothesis is rejected and alternative hypothesis is accepted.

Table 6: Association between Post-test knowledge score with selected demographic variables in experimental group. N=30

S. No.	Variables	Level of knowledge		χ^2 value	df	P value
		Average	Below average			
1.	Age (years)					
	21-25	4	1	4.345	3	.250 ^{NS†}
	26-30	3	6			
	31-35	1	1			
	Above 35	10	4			
2.	Gender					
	Male	3	1	.433	1	.632 ^{NS†}
	Female	15	11			
3.	Religion					
	Sikh	15	9	2.396	3	.749 ^{NS†}
	Hindu	2	2			
	Muslim	0	1			
	Christian	1	0			
4.	Qualification					
	Graduation	11	5	1.094	1	.296 ^{NS††}
	Post-Graduation	7	7			
	M.Phil					
5.	Teaching experience					
	0-3 years	9	4	9.161	3	.021 ^{S†}
	4-7 years	1	6			
	8-11 years	1	1			
	Above 11 years	7	1			
6.	Marital status					
	Married	12	6	5.00	2	.125 ^{NS†}
	Unmarried	6	3			
	Divorced	0	3			
7.	Place of domicile					
	Urban	4	5	1.296	1	.231 ^{NS†}
	Rural	14	7			
8.	Source of information regarding epilepsy					
	Media	6	5	4.863	4	.349 ^{NS†}
	From health professionals	7	2			
	Family/Friends	2	2			
	Colleagues	0	2			
	Others	3	1			
9.	Have you ever seen giving first aid to epileptic person					

	Yes	9	5	.201	1	.654 ^{NS††}
	No	9	7			
10.	Periodical health checkup of students in your school					
	Yes	16	10	.192	1	1.00 ^{NS†}
	No	2	2			
NB:S=Significant, NS=non-significant, †=Fisher test, ††=Chi-square						

Table 6 depicts that Association between Post-test knowledge score with selected demographic variables in experimental group. The study revealed that 6tmost variables did not show a significant association with the teachers' knowledge levels post- intervention. Age, gender, religion, educational qualification, marital status, place of domicile, source of information regarding epilepsy, witnessing first aid to an epileptic person, and periodic health checkups of students in the school were found to be non- significantly associated with the post-test knowledge levels. However, teaching experience emerged as a significant variable, indicating that the level of teaching experience played a notable role in the post-test knowledge about epilepsy and its first aid management among the experimental group.

DISCUSSION

The present study was undertaken to assess the effectiveness of structural teaching programme on knowledge regarding epilepsy and its first aid management among school teachers of selected schools.

A quasi- experimental research design was adopted for this study. Convenience sampling technique was used to enrolled the study subjects. A total of 60 samples were enrolled in the study, whom met the inclusion criteria, all of whom met the inclusion criteria. The data was collected using demographic proforma, self-structured knowledge questionnaire on first aid and management of epilepsy. The study subjects were assessed and analyzed. The data collected was analyzed using descriptive and inferential statistics. Thus, present study reveals that an experimental group demonstrated a higher average knowledge score of 21.33 with standard deviation of

4.14. In contrast, the control group had a lower average score of 17.30, with a higher standard deviation of 5.35.

CONCLUSION

In conclusion, this quasi-experimental study aimed to evaluate the effectiveness of astructuredteachingprogramonenhancingthe knowledgeofepilepsyanditsfirstaid management among school teachers in selected schools of Shri Goindwal Sahib, District Tarn-Taran, Punjab. The findings of this study have provided valuable insights into the impact of structured educational interventions in improving knowledge levels among school teachers.

The results demonstrated that the structured teaching program had a significant positive effect on enhancing knowledge about epilepsy in the experimental group. This was evident through the statistically significant increase in post-test knowledge scores compared to the control group. This indicates that the educational intervention was successful in increasing awareness and understanding of epilepsy and its management among the participating school teachers.

Delimitations of the study

- The study was confined to a two week duration period.
- Teaches in the selected schools.
- Teachers who are present in the school at the time of data collection.
- Limited to the area of Sri Goindwal Sahib.

Recommendations/Future Implications Based on the findings of study, the following recommendations are stated.

- A similar study on a large scale to enhance the validity of the generalization of findings.
- A comparative study can be undertaken to assess the knowledge and effectiveness of structured teaching programs on epilepsy management among school teachers in both rural and urban settings.
- A descriptive study design to delve deeper into the attitudes and practices of school teachers regarding the management of epilepsy in students.
- An innovative approach could involve evaluating the effectiveness of video-assisted teaching methods for school teachers regarding first aid management of epilepsy in schoolchildren.
- A study could be conducted to assess the knowledge of caregivers regarding home care management of epilepsy in children

Declaration by Authors

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