IOSR Journal of Nursing and Health Science (IOSR-JNHS)
e-ISSN: 2320–1959.p- ISSN: 2320–1940 Volume 2, Issue 6 (Nov. – Dec. 2013), PP 07-13
www.iosrjournals.org

Effectiveness of Structured Teaching Program on Knowledge Regarding Epilepsy in Children among school teachers.

Naveen Kumar Sharma[1]; K. Lakshmi Prasanna[2]; Ashok Kumar[3]
[1]*Tutor, College of Nursing, AIIMS, Jodhpur*
[2]*Assistant professor, Indo American College of Nursing, Hyderabad*
[3]*Assistant Professor, College of Nursing, AIIMS, Jodhpur*

Abstract: *Childhood is a unique phase of human development. Children are the important feature of every society and also a future of a nation.Though epilepsy is a symptom primarily of a neurological disorder it has a great extent psychiatric and psychological involvement. Epilepsy may cause personality disturbance, depression, poor academic ability, poor self confidence, learning difficulties.*

The aim of the study was to assess the knowledge regarding epilepsy in children among school teachers before and after the Structured Teaching Programme (STP).

The data were generated by using structured questionnaire, Simple random sampling technique was adopted to select 50 subjects based on the sample frame and every 2nd sample was selected for the study. STP was developed in regard to knowledge on epilepsy in children. The data obtained from the study subjects were analyzed and interpreted in term of the objectives and hypothesis of the study. Descriptive and inferential statistics were used for data analysis; the level was set at 0.05 levels.

The mean post test score 36.10 was higher than the mean pre test score 25.38. The computed't' value 23.321, indicated that there was a significant difference between pre test and post test knowledge score. The findings identified that there was no significant association between pre test knowledge score of teachers and the selected personal variables, which shows the knowledge of school teachers was independent of selected personal variables.

This study revealed that the knowledge of teachers regarding epilepsy in children was inadequate and was increased after the administration of STP. Thus the research hypothesis was accepted.

Key Words: *Structured teaching program (STP); Knowledge; Epilepsy in children; School teacher*

I. Introduction

"If I wished to show a student the difficulties of getting at truth from medicalexperience, I would give him the history of epilepsy to read." **Oliver Wendell Holmes**

Epilepsy is the common neurological condition in the children. As it hits the most important formative years of the majority of the patients, education does get hampered, especially when parents are over protective and teachers are either non-supportive or neutral with negative attitude. What is needed is awareness and proper education about different type of seizures, do's and don'ts during an attack to the teachers. Once teachers accept and have empathy for them, peers would automatically accept them. Cordial ambience is bound to stimulate these children to study in sprit of the limitations due to seizures and antiepileptic drugs. They may not be the best but they must be encouraged to be their best.[1]

The word 'epilepsy' was coined by the Greeks to signify something that seized him from without and is called by different names like *'Herculean Sickness' 'Falling Sickness'* '*Sacred Sickness'* and '*Black Sickness'*.[2]After headache, epilepsy is the second most common chronic neurological condition seen by neurologists among all age group worldwide. Epilepsy is a common illness occurring approximately in one percent of the general population in South India. The knowledge about epilepsy and its treatment are often clouded in mysticism, superstition and despair not only among the rural folk who constitute nearly 76.7% of the country's population, but also among the urban people including the intelligential.[3]

Epilepsy is a "neurological disorder resulting from a sudden, excessive, disorderly discharge of neurons, in either a structurally normal or a diseased cerebral cortex, It is characterized by the paroxysmal occurrence of short-lived disturbances of consciousness, involuntary convulsion muscle movement, psychic or sensory disturbances or some conditions there of".[4]

According to WHO the annual incidence of unprovoked seizures is 33–198 per 100,000 and the incidence of epilepsy is 23–190 per 100,000. The overall incidence of epilepsy in Europe and North America ranges from 24 to 53 per 100,000 per year, respectively. The incidence in children is eventuallyhigher and even more variable, ranging from 25 to 840 per 100,000 per year, most of the differencesbeing explained by the differing populations at risk and by the study design. In developingcountries, the incidence of the disease is higher than that in industrialized countries and it is 190 per 100,000. Although one might expect a higher

exposure to perinatal risk factors, infectionsand traumas in developing countries, the higher incidence of epilepsy may be also explained by thedifferent structure of the populations at risk, which is characterized by a predominant distributionof young individuals and a short life expectancy.[5]

Various research studies shows that child with epilepsy also have psychosocial problems along with psychiatric problems like personality changes, maladjustment, and poor academic performance. So teachers should encourage and give especial attention towards child with epilepsy so child can come up with better life in future.According to WHO's "Atlas Epilepsy care in the world" epilepsy is the single largest neurological problem facing developing countries today. Globally, 50 million people have epilepsy, and 33 million of them are children in developing countries, 90% of them untreated. An estimated 2.4 million new cases occurs each year globally.[6]

Epilepsy is probably the most common disorder seen by the child neurologist in India. The prevalence rate in India is 5.59 per 1,000 populations with no gender or geographical difference. The prevalence rate in South India is 1.4-2.99 per 1,000 populations. In the Bangalore urban rural neuroepidemiological survey observed that a prevalence rate is 8.8 per 1000 population, with the rate in rural community being twice that of urban area. According to comprehensive rural epilepsy study in South India prevalence rate in Andhra Pradesh is 6.2 per 1000 population and in Kerala it is 4.9 per 1000 population.The prevalence is fairly at different age, reaching 6-8 cases per 1,000 individuals by adolescence.[7]

Most children spend nearly half their waking hours with their teachers and school personnel. Teachers, in general, do not receive any formal instruction on childhood illness during their training. It is important to consider the attitude and knowledge that teachers may have regarding childhood epilepsy, so teachers could have an important part to play in the management and surveillance of children with epilepsy.

Objectivesof the present study isto assess the knowledge regarding epilepsy in children among school teachers before and after theStructured teaching programme; to determine the effectiveness of Structured teaching programme on knowledge regarding epilepsy in children among school teachers; and to determine the association between pre test knowledge and selected personal variables.

Material and methods for the studyPre-experimentalresearch approach used with OneGroup Pre-test and Post-test research design.

Setting of the studyis in four schools. All the schools are situated in Vijaynagar, Bangalore. All included schools are having 25-30 teaching staff for the 700-800 student strength. The selection of the setting was done for the present study on the basis of Geographical proximity, Feasibility of the study, Availability of sample.

Population and sample is 50 schoolTeachers of four selected school, selected by simple random sampling, a sampling frame of the school teachers of the four schools were prepared and every 2nd teacher was selected for the study till 50 teachers were selected.

Variables under Study areStructures teaching programme as anIndependent Variable andSchool Teacher's Knowledge on epilepsy in children is Dependent Variable.

A self administered questionnaire was used by the investigator for the data collection.A blue print was prepared prior to the construction of structured knowledge questionnaires based on which, the items were developed. Self-administered structured questionnaire includes the domains with relevant questions as on Knowledge (45%), Comprehension (42.5%) and Application (12.5%).

Since no tool was readily available, the investigator constructed tool to collect the data.The tool consists of part I and part II.Part I: Demographic data and Part II: Self administered knowledge questionnaire related to epilepsy in children. Each correct answer was given one and the wrong answer, zero. Total score 40 (100%), A score of ≤50%was considered as inadequate knowledge, a score of 51-75%moderate knowledge and ≥75% score was considered as adequate knowledge.

Resultis organized, analyzed and presented in four sections.Section-I describe distribution of subjects based on demographic characteristics; Section- II showsarea wise comparison of knowledge score before and after STP; Section- III describe significance in difference between pre-test and post-test knowledge score and Section- IV shows association between personal variables with knowledge score.

SECTION- I
TABLE – 1
Frequency and Percentage distribution of Respondents by Demographic Variables
N = 50

Sl. No.	Characteristics	Category	Respondents	
			Number	Percent
1.	Age (years)	21-30	14	28.0
		31-40	22	44.0
		41-50	10	20.0
		>50	4	8.0
2.	Gender	Male	2	4.0
		Female	48	96.0
3.	Religion	Hindu	47	94.0
		Christian	3	6.0
4.	Educational qualification	B.Ed.	32	72.0
		TCH	13	26.0
		M.Ed.	1	2.0
5.	Total years of experience (years)	1-10	32	64.0
		11-20	16	32.0
		21-30	2	4.0
6.	Marital status	Married	44	88.0
		Unmarried	5	10.0
		Widow	1	2.0
7.	Occupational status	Private	50	100.0
8.	Place of domicile	Urban	48	96.0
		Rural	2	4.0
9.	Have you given/seen giving first aid	Yes	13	26.0
		No	37	74.0
10.	Source of information	Health personnel	3	6.0
		Family/friends	13	26.0
		Magazine/newspaper	14	28.0
		T.V./radio	20	40.0
11.	Periodical health check-up for students	Yes	23	46.0
		No	27	54.0

Results shows that 22 (44 %) were in 31-40 years, and majority of them 48 (96 %) were included in female group, and majority of the subjects, 47 (94 %) were Hindus, 36 (72 %) were B.Ed. , 32 (64 %) had 1-10 total years of experience, maximum number of the teachers, 44 (88 %) were married, 48 (96 %) had urban as a place of domicile and 37 (74 %) have not given/seen giving first aid, and 20 (40 %) had source of information as radio/TV, 27 (54 %) teachers answered yes for periodical health check-up for students.

SECTION- II
TABLE – 2
Aspect wise Pre test and Post test Mean knowledge about epilepsy in children

N = 50

Sl No	Aspects	Max. score	Knowledge of Respondents						
			Pre test			Post test			Mean Enhancement (%)
			Mean	SD	Mean%	Mean	SD	Mean%	
1	Meaning & type of epilepsy	4	2.38	0.69	59.50	3.86	0.41	96.50	37.00
2	Incidence, Prevalence, Risk factors & Etiology	5	3.82	1.04	76.40	4.94	0.24	98.80	22.40
3	Sign, Symptoms & Diagnosis	5	3.2	0.9	64.00	4.62	0.67	92.40	28.40

4	Management	14	7.46	1.83	53.29	11.7	1.54	83.57	30.29
5	Follow-up & Rehabilitation	5	3.32	0.79	66.40	4.5	0.65	90.00	23.60
6	Health education	7	5.1	1.22	72.86	6.48	0.65	92.57	19.71
	Overall	40	25.38	3.77	63.45	36.1	1.91	90.25	26.80

The data in table 2 depicts that Mean enhancement percentage was highest (37 percent) in the area of meaning and type of epilepsy and lowest (19.71 percent) in the area of health education. Over all mean enhancement percentage was 26.80.

TABLE - 3
Pre test and Post test knowledge level on epilepsy in children

N = 50

Knowledge level	Classification of Respondents			
	Pre test		Post test	
	Number	Percent	Number	Percent
Inadequate (<50%)	5	8.0	0	0.0
Moderate (51-75%)	41	80.0	0	0.0
Adequate (>75%)	4	12.0	50	100.0
Total	50	100.0	50	100.0

The data in table 3 depicts that in the pre-test knowledge score of teachers on epilepsy in children, 5(8 percent) teachers had inadequate knowledge, 41 (80 percent) had moderate knowledge and 4 (12 percent) had adequate knowledge. In the post test there were no subjects under inadequate and moderate category, all the subjects i.e. 50 (100 percent) were under adequate knowledge category.

SECTION – III
TABLE – 4
Paired‘t’ test showing significant improvement between pre-test and post-test score

N = 50

Sl.No.	Knowledge assessment	Sample size	Mean	SD	Mean difference	Df	t-value	P-value
1.	Pre- test	50	25.38	3.768	10.72	49	23.312	<0.001
2.	Post- test	50	36.10	1.909				

***** Significant at 5% level

The table 4 illustrates that mean post test knowledge score 36.10 is higher than the mean pretest knowledge score 25.38.The mean difference between pretest and post test score 10.72 of knowledge at 0.05 level as the t value 23.312 *P < 0.01.

The differences are significant P< 0.05 from the values obtained from paired t-test at df 49.It was also evident that mean difference gain in knowledge in post test score is more than pre test knowledge score.Hence the research hypothesis was accepted.

These findings revealed that STP was effective in increasing the knowledge of teachers regarding epilepsy in children.

SECTION- IV
Table 5
Association between pre-test knowledge score and selected personal variables

N = 50

Variables	Pre test Knowledge Level			df	$\chi 2$ Value	Table value	Inference
	Below median	Above Median	Total				
Age (years)							
Below mean	20	6	26	1	2.880	3.841	**NS**
Above mean	13	11	24				
Gender							
Male	32	16	48	Fisher's exact probabilities=0.569**			**NS**
Female	1	1	2				
Religion							
Hindu	31	16	47	Fisher's exact probabilities=0.736**			**NS**
Christian	2	1	3				
Educational qualification							
TCH	8	5	13	Fisher's exact probabilities=0.471**			**NS**
BEd / MEd	25	12	37				
Total years of experience (years)							
Below mean	20	10	30	1	0.015	3.841	**NS**
Above mean	13	7	20				
Marital status							
Married	31	14	45	Fisher's exact probabilities=0.209**			**NS**
Unmarried	2	3	5				
Place of domicile							
Urban	31	17	48	Fisher's exact probabilities=0.431**			**NS**
Rural	2	0	2				
Have you given/seen giving first aid							
Yes	10	3	13	Fisher's exact probabilities=0.270**			**NS**
No	23	14	37				
Source of information							
Health personnel/ Family/friends	12	4	16	1	0.849	3.841	**NS**
Mass media	21	13	34				
Periodical health check-up for students							
Yes	18	5	23	1	2.853	3.841	**NS**
No	15	12	27				

***** Significant at 5% level, **NS** – Non significant

** The expected frequencies in one or more of all demographic variables are less than 5.

The data in table 5 shows there was no significant association between the pre test knowledge score and selected demographic variables like Age, Gender, Religion, Educational qualification, Total years of experience, Marital status, Place of domicile, Have you given/seen giving first aid, Source of information and Periodical health check-up for students.

II. Discussion:-

In the present study, the finding reveals that the proportion of teachers 22 (44 %) were in 31-40 years, and majority of them 48 (96 %) were included in female group, and majority of the subjects, 47 (94 %) were Hindus, 36 (72 %) were B.Ed. , 32 (64 %) had 1-10 total years of experience, maximum number of the teachers, 44 (88 %) were married, 48 (96 %) had urban as a place of domicile and 37 (74 %) have not given/seen giving

first aid, and 20 (40 %) had source of information as radio/TV, 27 (54 %) teachers answered yes for periodical health check-up for students.

In the present study pre-test knowledge score of teachers on epilepsy in children, 5(8 percent) teachers had inadequate knowledge, 41(80 percent) had moderate knowledge and 4(12 percent) had adequate knowledge. In the post test there were no subjects under inadequate and moderate category, all the subjects i.e. 50(100 percent) were under adequate knowledge category. (Table 3) The mean and standard deviation (SD) of the results revels that mean score is 25.38 and SD 3.77 in pre test and mean score is 36.10 and SD 1.91 in post test.

The findings of the study are supported by Kankirawatana P who assess the knowledge, attitude, and practice of epilepsy in the school teachers in Thailand Results shows that 38 percent of respondents had not heard of or read about epilepsy, and 46.6 percent believed that epilepsy is a chronic incurable disease and 15 percent of the respondents preferred to place all children with epilepsy in a special classroom. Furthermore, half of the respondents who had experience with first-aid management of seizures used improper and potentially harmful measures.[8]

The mean post-test knowledge score was 36.10 which is higher than mean pre-test score, 25.38. The scores denoted that the structured teaching program was effective. Thus, the research hypothesis, H_1 was accepted by the researcher. Mean difference of pre test and post test was 10.77. The significant difference between the pre-test and post-test were tested by using paired't' and level of significance was set at 0.05. The computed 't' value 23.312 indicates that there is significant difference between pre-test and post-test knowledge score. Thus, it clearly says that the STP was effective in increasing the knowledge of subjects.

The findings of the study are supported by Tiamkao S, Vannaprasaht Swho evaluated knowledge of epilepsy among teachers in KhonKaen. A self-administered questionnaire was distributed to 102 teachers who attended the training lectures on epilepsy. The average total score for correct answers on the questionnaire was about 60 percent. Respondents generally understood that epilepsy is controllable (82 percent) and were able to identify a seizure (78.4 percent). The lowest scores were found in the sectionon identifying the types of seizures (37.8 percent).[9]

III. Conclusion

The study findings revealed thatthe teachers have moderate knowledge regarding epilepsy in children; It was found that there is lack of knowledge for the teachers regarding epilepsy in children, its causes, prevention and management; Education program would help the teachers to updates with necessary knowledge with regards to the causes, prevention, management and effect of epilepsy on child's academic performance; There was no significant association between the knowledge of subjects regarding epilepsy in children and selected demographics variables; There was a marked increase in post- test knowledge score than pre-test knowledge score which explains the effectiveness of structured teaching program. Thus teachers should be encouraged to enhance their knowledge regarding epilepsy in children for proper care, support and timely management to prevent complication of child.The study was concluded by drawing its own limitations and recommendations

IMPLICATIONS:-

Nursing Practice: Teachers are not getting any formal education regarding disease in children during their teachers training program. As a result they may have many misconceptions or prejudices regarding some of the serious disease conditions that may affect a child in his academic performance and development. This emphasizes the teaching program on epilepsy in children and the practice was highly appreciated by teachers. Nurses as a competent health professional have a responsibility to promote the right information and practice to prevent and manage the epilepsy attack among children. As awareness program is needed to improve the quality of life, academic performance and social adjustment of epileptic children with the help of school teachers and helping the teachers to acquire a realistic knowledge and more positive attitude towards children with epilepsy.

Nursing Education: In India, only few research studies have been conducted on structured teaching program regarding epilepsy in children for school teachers. The study reveals that continued education program in schools for teachers is needed in India. The study also revealed that there is knowledge deficit, regarding causes, prevention and proper management and complications compared to other aspects of health and educational program. It emphasizes a great need for research awareness and effectiveness of teaching program regarding epilepsy in children by the teachers.

Nursing Administration: Health personnel play a vital role to provide education to community leaders like teachers to manage and prevent disease like epilepsy which affect the future of the child. Epilepsy education improves the awareness and skills to manage epilepsy attack in children by the teachers. Necessary in-service education is also important for nurses, health workers and other health personnel to provide health education for

teachers, to create sensitivity towards the causes, risk factors, complications, management, prevention and control measures. Health policies should be made to provide special teaching program to teachers in schools.

Nursing research: Nursing research is crucial for the effective delivery of health care and for the role and status of the nursing profession. Nursing research is indispensable in the several of the health care such as the hospital and the community. The need for the research among teachers regarding epilepsy in children has been recognized. Research will provide nurses the credibility to influence the health policy. It will also help to institute appropriate prevention and intervention strategies to meet the need of specific populations.

References

[1]. Singhal BS, Devika Nag. Epilepsy in India. Mumbai: Indian Epilepsy Association; 2002.
[2]. WHO. Epilepsy: historical overview. Fact sheets [serial online] 2001 Feb [cited 2008 Oct 10];168:[4screens].Availablefrom:URL:http://www.who.int/mediacenter/factsheets/fs168/en/print.html
[3]. Ministry of health and family welfare. Report on epilepsy in South India. New Delhi: Stationary office; 2001.
[4]. Sadock BJ, Sadock VA. Kaplan and Sadock's synopsis of psychiatric: Behavioral science/ Clinical psychiatry. 10th ed. New York: Lippincott Williams &Wikins; 2007.
[5]. WHO. Global compaign against epilepsy. Fact sheets [serial online] 2007 [cited 2008 Oct 10];16:[2 screens]. Available from:URL:http://www.who.int /epi
[6]. WHO. Atles: Epilepsy care in world. Geneva: WHO library cataloguing-in-publication data; 2005.
[7]. Shridharna R. Epidemiology of epilepsy. Current science 2002; 82:664-70.
[8]. Kankirawatana P. Epilepsy awareness among school teachers in Thailand. Epilepsia 1999 Apr;40(4):497-501.
[9]. Tiamko S, Aaaevitchayapat N, Arunpongpaisal S, Chaiyakum A, Jitpimolmard S, Phuttharak W, et al. Knowledge of epilepsy among teachers in KhonKaen province, Thailand. J Med Assoc Thai [serial online] 2005 Dec [cited 2008 Oct 10];88(12):[6 screens]. Available from:URL:http://www.pub med.com/16518977.html.