Effectiveness of an Instructional Program on Teachers' Knowledge about Epilepsy in Elementary Schools at Al-Rusafa Third Education Directorate in Baghdad City/Iraq

Ahmed Jasim Mohammed Aldraje[1], Aqeel Habeeb Jasim[2]

[1]M.Sc. Student, University of Baghdad, College of Nursing, Community Health Nursing Department,
[2]Assist Prof (PhD), University of Baghdad, College of Nursing, Fundamentals of Nursing Department

Abstract

Background: Teachers knowledge about epilepsy is an important issue since teachers have lots of effect when children spend epileptic seizure at the school, and plays a vital role on providing an educational support for epileptic child and to keep good communication between epileptic and normal child.

Objectives of the Study: The aim of this study is to determine the effectiveness of an instructional program on Elementary school teacher's knowledge concerning epilepsy.

Methodology: A quasi-experimental design used in the present study with the application a (pre-posttest approach) for the study group and control group after implementation of instructional program. Data collection was done at two times: for both study and control group and (15) days after giving the instructional program in the study group.

Results: The results of the study shows that there is a highly significant differences related to teacher's knowledge concerning epilepsy at Al-Rusafa Third Education Directorate in Baghdad City, There is a significant association between teacher's knowledge with their socio-demographic characteristics in term of educational level, marital status, and family monthly income.

Keywords: Teachers, Knowledge, Epilepsy.

Introduction

Epilepsy is a continuum of disorders, in which a child, can experience often irregular seizures (fits). Most seizures are well managed by medications and other therapies, but epilepsy may cause problems in social, school and work conditions, making it difficult to live independently [11]. Students with seizures appear to have both physical problems (e.g. fractures, bruises and a significantly greater chance of sudden death) and psychological issues due to the stigma attached to the disorder. Epileptic students and their families may lack social support or experience social isolation, humiliation, fear and prejudice and some parents may feel guilty [9]. Epilepsy self-management refers to, a broad variety of health habits, and practices which can be practiced and adjusted by epileptic students to monitor their seizures, and improve their wellbeing. This strategy includes a collaboration between its students and the service providers [11].

Teachers play a critical role in, students with epilepsy becoming mentally, socially and academically well-rounded. Teachers who know how to respond to seizures can boost school safety levels and influence fellow students' and school staff reactions. A teacher who calmly and supportively responds to the seizures will help others learn to do the same. In certain cases, the teachers are the first to note and understand a student's signs of seizures. Teachers who recognize,

encourage and inspire epileptic students foster learning, confidence and self-esteem [7].

Methodology

A quasi-experimental design used in the present study with the application a (pre-posttest approach) for the study group and control group after implementation of instructional program. The study instrument and program were constructed by the researcher to measure the aim of the study. Data collection was done at two times: for both study and control group and (15) days after giving the instructional program in the study group. The period of the study was from (1st of October, 2020) to (1st of June, 2021) to. A non - probability (purposive) sample selected from Al-Rusafa Third Education Directorate schools in Baghdad City, The sample divided into two groups (30) teachers considered as study group, and another (30) teachers considered

as control group. The study group was exposed to an instructional program, while the control group was not exposed to the program. Data collection performed through the use of the study instrument and the application of the instructional program both constructed and developed by the researcher through extensive review of previous literature. Validity is determined through panel of (14) experts in health care fields who have more than (10) years of experience. Reliability of instrument is determined through the use of the computation of Alpha Cronbach's test (Alpha Correlation Coefficient); internal consistency method was used for determining the reliability, the results was (0.73, Data analysis is done through the use of descriptive statistics via SPSS version 20 with and excel application (frequency, percentage, mean of score, and standard deviation) and inferential analysis procedure (Cronbach's alpha, Pearson Correlation Coefficient, and Paired sample T-test).

Results

Table (1): Distribution of the Sample According to their Socio-demographic Characteristics

List	Characteristics	Study Group		Control Group		X2	df	P-value	Sig.
		f	%	f	%				
	Age (years)								
1	20 – 29	12	39.9	12	40	22.643	4	.598	N.S
	30 – 39	11	36.7	10	33.4				
	40 ≤	7	23.4	8	26.6				
	Total	30	100	30	100				
	Gender								
2	Male	13	43.3	14	46.7	.475	1	.491	N.S
	Female	17	56.7	16	53.3				
	Total	30	100	30	100				
	Level of education								
3	Diploma	20	66.7	21	70	3.375	6	.497	N.S
	Bachelor	8	26.6	7	23.3				
	High diploma	2	6.7	2	6.7				
	Total	30	100	30	100				

f: Frequency, %: Percentage, X^2: Chi-square, df: degree of freedom, p: Probability, Sig: Significance, S: Significant, N.S: Not significant

This table show that teachers in the study group are with age 20-29 years as referred by the highest percentage (39.9%) and the highest percentages also refer for those in the control group refer to 40% for age 20-29 years.

Regarding gender variable, the finding indicates that more than half of teachers are females for those in study group (56.7%) and in control group (53.3%).

The level of education indicates that teachers are with diploma among the study and control group (study= 66.7% and control= 70%)

Table (2): Overall Evaluation of Teachers' Knowledge about Epilepsy in Children at elementary Schools among Study and Control Group

Levels of Knowledge	Study Group (N= 30)								Control Group (N= 30)							
	Pre-test				Post-test				Pre-test				Post-test			
	f	%	M.S	SD	f	%	M.S	SD	f	%	M.S	SD	f	%	M.S	SD
Poor	30	100			1	3.3			30	100			30	100		
Fair	0	0			10	33.4			0	0			0	0		
Good	0	0	2.13	1.106	19	63.3	20.13	4.599	0	0	2.13	1.224	0	0	2.37	1.273
Total	30	3.3			30	100			30	100			30	100		

f: Frequency, %: Percentage, M.S: Mean of score, SD Standard deviation

Poor= 0-10, Fair= 11 -20, Good= 21-30

This table presents the overall evaluation of teachers' knowledge; the findings indicate that teachers in the study group are showing poor level of knowledge during the pre-test time (100%) while they are showing good level of knowledge during the post-test time (100%) that indicate the significant changes in their level of knowledge.

The teachers in the control group are showing poor level of knowledge over both times; pre-test and post-test (100%) that doesn't reveal changes in their level of knowledge.

Table (1): Discussion of the socio-demographic characteristics.

Age

The study shows that the highest percentage (12; 39.9%) of study participants in both study and control groups were age (20-29 years).

This results agree with a cross sectional study was conducted in Kathmandu, Metropolitan City done by Khanal, Maharjan, Pokharel, and Sanjel (2015) which stated that the median age of (165) teachers are (29 years). Additionally, comparable to Toudou-Daouda and Ibrahim-Mamadou (2020) which certain that a high percentage of participants were age less than 30

years old.

Gender

The finding of the presents study indicate that more than half of teachers are females in study group and control group (56.7%) (53.3%) respectively.

This totally agree with [18] that it results showed a percentage (65.5%) of the study participants were female. Moreover, agree with Bhesania, Rehman, Savu, and Zehra (2013) which point out that the female and male percentage was (36.56 ± 10.92).

Educational level

The highest percentage of teachers are with diploma among the study and control group (66.7%), (70%) respectively.

This finding similar to a cross sectional study with analytic portion, conducted in Baghdad done by [3] which displayed that a percentage (63.4%) of study participants were institute graduate. Furthermore, agree with results obtained in a study done by Salih (2015) which presented that (54.0%) of participants were graduate from Institute.

Table (2): Discussion of the instructional program effectiveness on teacher's knowledge (comparison significance of participant's knowledge, pre and post the intervention between study and contro**l group's related to overall domains).**

The findings indicate that teachers in the study group are showing poor level of knowledge during the pre-test time (100%) while they are showing good level of knowledge during the post-test time (100%). The teachers in the control group are showing poor level of knowledge over both times; pre-test and post-test (100%).

The findings reveals that educational program is highly effective on teachers' knowledge regarding epilepsy in children as indicated by high significant difference in times of pre-test and post-test (at p-value=0.01) among the study group on the contrary

of control group.

Poor knowledge at pretest for both groups were common and may be due to few serious conditions of epilepsy occurs in Iraqi schools or due to the absence of statistics related to confirm such conditions; as well supported by many relevance and recent international studies which revealed deficient knowledge about epilepsy among teachers both in developing countries such as the results obtained in a study done by Kadhim et al. (2021) supported the results of this study which mentioned that the majority of participants have a moderate level of knowledge. Others studies like Mohammed (2018), Elhassan et al. (2017), additionally in Goal, Singh, Lal, and Singh (2014).

As this topic is a public health condition, it appears that the educational program has a good impact in improving teacher's knowledge toward epileptic children.

Conclusion

The study concluded that the majority of study sample has poor knowledge regarding epilepsy in elementary schools at Al-Rusafa third education directorate in Baghdad city. Teacher's knowledge concerning epilepsy at Al-Rusafa Third Education Directorate in Baghdad City has been improved after application of the instructional program in the study group, which confirmed the effectiveness of the delivered program toward improving knowledge teacher's knowledge concerning epilepsy.

Recommendations

The study recommended to applying this program as an instructional booklet in all the directorate of Ministry of Education in all Iraqi governorates and on a larger sample to increase teachers knowledge about epilepsy.

Financial Disclosure: There is no financial disclosure.

Conflict of Interest: None to declare.

Ethical Clearance: "All experimental protocols were approved under the University of Baghdad and carried out in accordance with approved guidelines".

References

1. Abdulmalek Y, Ibrahim A. Health education program in improving knowledge regarding emergency contraception among school teachers in Duhok. AL- Kindy Col Med J. 2016; 12 (1).

2. Ahmed, N, Hameed, R. Constructing of an Educational Program for Primary School Teachers Regarding Hepatitis A Control in Kirkuk Governorate. Mosul Journal of Nursing. 2013; 1(1): 17-21.

3. Al Shatari S, Sebri, M, Sadiq, M. First-Aid Knowledge And Practice Of Primary-Schools Teachers In The Catchment Area Of Hay Al-Salaam Al-Sakany Phc, Baghdad-Iraq. International Journal of Innovation Sciences and Research. 2018; 7(12): 1331-1337.

4. Alahmadi, N, El Keshky, M. Assessing primary school teachers's knowledge of specific learning disabilities in the Kingdom of Saudi Arabia. Journal of Educational and Developmental Psychology. 2019; 9(1): 9-22.

5. Bhesania, N, Rehman, A, Savul, I, Zehra N. Knowledge, attitude and practices of school teachers towards epileptic school children in Karachi, Pakistan. Pakistan journal of medical sciences. 2014; 30(1): 220.

6. Choudhary A. Effectiveness of structured teaching program on knowledge regarding sexual health among young adults', Journal of research in medical sciences. 2018; 4.

7. Edmonton Epilepsy Association. A Guide for Teachers epilepsy. 2011.

8. Elhassan, M, Alemairy, A, Amara, Z, Hamadelneel, A, Mohamed, A, Elaimeri, A. Epilepsy: knowledge, attitude, and practice among secondary school teachers in Khartoum state. Neurology and therapy. 2017; 6(2): 225-235.

9. England, M, Liverman, C, Schultz, A, Strawbridge, L. Epilepsy across the spectrum: Promoting health and understanding. A summary of the Institute of Medicine report. Epilepsy &

Behavior. 2012; 25(2): 266-276.

10. Eze, C, Ebuehi, O, Brigo, F. Effect of health education on trainee teachers' knowledge, attitudes, and first aid management of epilepsy: An interventional study. Seizure. 2015; 33: 46-53.

11. Fleeman, N, Bradley, P. Care delivery and self-management strategies for children with epilepsy. Cochrane database of systematic reviews. 2018 ; (3).

12. Goel, S, Singh, N, Lal, V, Singh A. Evaluating the impact of comprehensive epilepsy education programme for school teachers in Chandigarh city, India. Seizure. 2014; 23(1), 41-46.

13. Hussein MA, Fatima W. Knowledge and attitudes of primary school teachers toward First-Aid in AL-Najaf AL-Ashraf city, International Journal current Research Academic Review 2016; 4(12):64-79.

14. Hussein, A, Sheren, A, Fatah, K. Knowledge and Attitude of Teachers about Communicable Diseases in some of Primary Schools in Erbil. kufa Journal for Nursing sciences. 2012; 2(2).

15. Karimi, N, Heidari, M. Knowledge and attitudes toward epilepsy among school teachers in West of Iran. Iranian journal of neurology. 2015; 14(3): 130.

16. Khanal, K, Maharjan, R. School teachers' knowledge about epilepsy in Kathmandu Metropolitan City. Kathmandu University Medical Journal. 2015; 13(4): 316-322.

17. Mohammed J. Knowledge about tuberculosis among secondary school Teachers in Baghdad City. Iraqi J. Comm. 2018; 87-90.

18. Mustapha, A, Odu, O, Akande, O. Knowledge, attitudes and perceptions of epilepsy among secondary school teachers in Osogbo South-West Nigeria: a community based study. Nigerian journal of clinical practice. 2013; 16(1): 12-18.

19. Salih H. Assessment of Primary School Teachers' Knowledge regarding Child abuse in Kirkuk city Hewa. Mosul Journal of Nursing. 2015; 3(1), 43-48.

20. Sharma, N, Prasanna K, Kumar, A. Effectiveness

of structured teaching program on knowledge regarding epilepsy in children among school teachers. Journal of Nursing and Health Science (IOSR-JNHS). 2013; 2320-1940.

21. Toudou-Daouda, M, Ibrahim-Mamadou, A. Teachers' Knowledge about Epilepsy and Their Attitudes toward Students with Epilepsy: A Cross-Sectional Survey in the City of Tahoua (Niger). Neuropsychiatric Disease and Treatment. 2020; 16: 2327.