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Dramatic Improvements in Patient Understanding of Epilepsy in Iraq

Peningkatan Dramatis dalam Pemahaman Pasien tentang Epilepsi di Irak

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Abstract

Background: Epilepsy, a chronic brain disorder causing recurrent seizures, affects over 50 million people globally, leading to significant social challenges due to prevalent misconceptions. **Objective:** This study aims to evaluate patients' knowledge about epilepsy at Baquba Teaching Hospital's neurological department. **Methodology:** A pre-experimental design with pretest and posttest assessments was conducted from July 11 to December 5, 2023, involving 100 epilepsy patients. Data were gathered using the Epilepsy Knowledge Scale (EKS), with both inferential and descriptive statistical analyses. **Results:** Patients initially had insufficient knowledge about epilepsy, but the instructional program significantly improved their understanding, as shown by notable pretest and posttest score differences. **Novelty:** This study highlights the efficacy of instructional programs in enhancing epilepsy knowledge among patients, emphasizing the importance of educational interventions in managing chronic neurological conditions. **Implications:** The results suggest that instructional programs should be routinely implemented in clinical settings to increase epilepsy awareness and knowledge among patients. **Conclusion:** The instructional program effectively enhances epilepsy knowledge among patients, suggesting it should be routinely implemented to improve patient education and outcomes, regardless of socio-demographic factors.

Highlight:

1. Patients initially had low epilepsy knowledge.
2. Instructional program greatly improved understanding.
3. No link between knowledge and demographics.

Keywords: Epilepsy, patient knowledge, instructional program, neurological disorders, Baquba Teaching Hospital

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Introduction

The World Health Organization describes epilepsy as a chronic, non-communicable brain disorder that affects people of all ages, and it is more common in youngsters. There are 5 to 10 incidents of epilepsy per 1000 persons in poor countries. The prevalence of epilepsy varies from 2.8 to 19.5 cases per 1000 people globally. Currently, there are 50 million epileptics worldwide, with 80 % of them living in developing countries. 1. Recurrent seizures, which are brief explodes of uncontrollable movement that can affect one or both sides of the body, are the primary feature of epilepsy. 2. A seizure attack is caused by excessive electrical discharges in a cluster of brain cells, and seizures can occasionally be followed with loss of consciousness and control over bowel or bladder function. 3. It is also defined as a condition where continuous seizures occur with brief episodes spreading throughout the entire body, causing loss of vital organ functions and altering brain functions, leading to repeated seizures4. Approximately 80% of individuals with epilepsy have an unknown underlying cause for their seizures; the most common known causes of epilepsy are strokes and head trauma5.

Methods

The design utilized in this study is a pre-experimental (one group) design, which was implemented through the administration of pre- and post-tests on the study sample using the Epilepsy Knowledge Scale (EKS).

Study Setting

The data collection approach for this study involved administering pre- and post-tests to one group. An instrument was developed to collect data, with the main objective being to gather knowledge about epilepsy. The data collection period was between (July 11th, 2023, and December 5th, 2023) at the Baquba Teaching Hospital in the Iraqi city of Baquba, Diyala Governorate. This Hospital was selected due to its status as one of the largest centers, housing a Respiratory Care Unit (RCU), a Cardiac Care Unit (CCU), an Intensive Care Unit (ICU), an Emergency Unit, a Cardiology Unit, consulting units, and an Outpatient Department for Psychiatry and Neurology. The patients involved in the study were the focus of the researcher.

Study Sample

The sample used in the study was obtained through convenience sampling. Every subject provided their oral informed permission. Patients were referred to a neurologist who conducted interviews, gathered baseline characteristics, and had those complete questionnaires. The participants received verbal instructions on how to fill out the questionnaire. Patients those who had epilepsy were specifically chosen since those staying the epilepsy consulting room. The final sample consisted of 100 participants of both genders.

Study Instrument

A questionnaire was used as a study tool for pre- and post-tests after implementing the instruction. It included 8 questions about the patient's knowledge of epilepsy. Data for this study was collected using the Epilepsy Knowledge Scale, originally developed in English and translated into Arabic through back-to-back translations. The EKS questionnaire was first created by Thapa et al. (2017)32 to evaluate knowledge, with 8 questions each. ; The reliability of internal consistency is an important aspect of the study instrument. In the split-half method, the Cronbach's alpha correlation coefficient is calculated to determine this reliability. To evaluate this, data were collected from 10 patients. The study's results show that the Epilepsy Scale demonstrates acceptable internal consistency (0.775), qualifying it as a reliable measurement instrument. This part includes 3 items measured on a 3-level Likert scale of "know" = 3, "not sure" = 2, and "don't know" = 1. Responses were classified as good (2.1-3), moderate (1.2-2), and poor (0.1-1) categories. The questionnaire also contains sociodemographic characteristics and past medical history related to epilepsy knowledge in patients.

Data Analysis

Various data analysis techniques, including frequencies, percentages, Pearson correlation coefficient tests, paired t-tests, and mean scores, were use to analyze the statistics and compare variables. Inferential statistics analysis was also performed, and Cronbach's Alpha was utilized to estimate the reliability of the research instrument.

Ethical Considerations

The College of Nursing's Ethics Committee gave its permission. Permission was granted as of the adult neurology outpatient clinic verbally, and self-reported consent was obtained from all study participants. Each participant willingly agreed to participate in the study..

Result and Discussion

The research results are particular using descriptive and inferential statistical methods, which are shown in tables and figures. These tables and figures include the necessary information to achieve the aims of the current study.

Variables			
Age	Mean 33.77	Sd 1.107	
	Classification	Freq.	%
Gender	Male	84	84.0
	Female	16	16.0
	Total	100	100.0
Marital Status	Married	24	24.0
	Single	53	53.0
	Divorced	13	13.0
	Widow	6	6.0
	Separated	4	4.0
	Total	100	100.0
Level of Education	Elementary school	59	59.0
	High school	26	26.0
	diploma degree	10	10.0
	College degree	5	5.0
Socioeconomic Status	Low	74	74.0
	Middle	20	20.0
	High	6	6.0
	Total	100	100.0
Residence	Urban	64	64.0
	Rural	36	36.0
	Total	100	100.0
Frequency of seizure	day	5	5.0
	Week	8	8.0
	month	41	41.0
	years	46	46.0
	Total	100	100.0

Table 1. *Descriptive Statistic of Sample Characteristics*

F=Frequency, %= Percent. Arithmetic Mean and Std. Dev. (S.D.).

(Table 1) presents the distribution of the study sample based on their socio-demographic characteristics. The results in this table reveal that out of 100 patients, the study group falls within the mean age group of 33.77 years old. In terms of gender, the majority in the study group are males (n = 84) compared to females (n = 16).

Regarding marital status, the sample's percentage of single people was high. (n = 53), while (n=24) of the sample were married. In terms of education level, most in the study group had an elementary school education (n = 59), followed by those with a high school education (n = 26), and those with a diploma degree (n = 10).

Concerning socioeconomic status, the majority in the study group had a low economic status (n = 74), with a smaller number having a middle economic status (n = 20). In terms of residence, the majority in the study group were urban (n = 64) compared to rural (n = 36).

The highest percentage in terms of seizure frequency was reported in years (n = 46) and months (n = 41).

Question	Answers	Freq.	%
Types of Seizure	Generalized	82	82.0
	clonic seizures	6	6.0
	Myoclonic	4	4.0
	Absence seizure	8	8.0
	Total	100	100.0
Family History of Epilepsy	Yes	13	13

	No	87	87
	Total	100	100
Age of onset for seizures	Mean 9.900	Sd 14.001	

Table 2. *Distribution of Patients According to Past Medical History:*

"(MS) Mean of Scores, (SD) Standard deviation, Level of Assessment (Poor=0.1-1, Moderate=1.2-2, Good= 2.1-3)"

Table (2) presents descriptive statistics of the distribution based on past medical history. The common of patients had Generalized epilepsy (n = 82), followed by those with absence seizures (n = 8). In terms of family history of epilepsy, most patients (n = 87) in the study sample didn't have a family history of epilepsy. The mean age of epilepsy start for the sample was 9.9 years old.

No	Items	Weighted	F.	%	M.s ±SD	Ass.
1	Is epilepsy a mental disease	I don't know	42	42.0	1.89±0.852	Moderate
		Not sure	27	27.0		
		know	31	31.0		
2	Is epilepsy a disease of the brain	I don't know	16	16.0	1.19±0. 465	Moderate
		Not sure	49	49.0		
		know	35	35.0		
3	Is epilepsy a hereditary disease?	I don't know	68	68.0	1.44±0.701	Moderate
		Not sure	20	20.0		
		know	12	12.0		
4	Is epilepsy a contagious disease	I don't know	42	42.0	1.73±0.709	Moderate
		Not sure	43	43.0		
		know	15	15.0		
5	Do you think epilepsy needs long-term treatment	I don't know	26	26.0	2.18±0.821	Good
		Not sure	30	30.0		
		know	44	44.0		
6	Do you think missing the drugs once in a while is harmful?	I don't know	17	17.0	1.32±0.665	Moderate
		Not sure	67	67.0		
		know	16	16.0		
7	Do you think allopathic treatment is beneficial for epilepsy	I don't know	65	65.0	1.44±0.656	Moderate
		Not sure	26	26.0		
		know	9	9.0		
8	Do you think Ayurvedic treatment is beneficial for epilepsy?	I don't know	31	31.0	1.91±0.726	Moderate
		Not sure	47	47.0		
		know	22	22.0		
	total				12.86±1.959	

Table 3. *Evaluate Patients' Knowledge about Epilepsy at Pre-test:*

"(MS) Mean of Scores, (SD) Standard deviation, Level of Assessment (Poor=0.1-1, Moderate=1.2-2, Good= 2.1-3)"

Table (3) shows the evaluation of knowledge in terms of statistical mean and standard deviation. The table demonstrates moderate responses regarding knowledge about epilepsy.

no	Items	Weighted	Freq.	%	M.s ±SD	Ass.
1	Is epilepsy a mental disease	I don't know	25	25.0	2.11±0.777	Good
		Not sure	39	39.0		
		know	36	36.0		
2	Is epilepsy a disease of the	I don't know	22	22.0	2.19±0.775	Good

					MS±SD	Level
	brain	Not sure	37	37.0		
		know	41	41.0		
3	Is epilepsy a hereditary disease?	I don't know	27	27.0	2.13±0.812	Good
		Not sure	33	33.0		
		know	40	40.0		
4	Is epilepsy a contagious disease	I don't know	43	43.0	1.94±0.897	Moderate
		Not sure	20	20.0		
		know	37	37.0		
5	Do you think epilepsy needs long-term treatment	I don't know	21	21.0	2.29±0.795	Good
		Not sure	29	29.0		
		know	50	50.0		
6	Do you think missing the drugs once in a while is harmful?	I don't know	16	16.0	2.38±0.749	Good
		Not sure	30	30.0		
		know	54	54.0		
7	Do you think allopathic treatment is beneficial for epilepsy	I don't know	22	22.0	2.36±0.823	Good
		Not sure	20	20.0		
		know	58	58.0		
8	Do you think Ayurvedic treatment is beneficial for epilepsy?	I don't know	18	18.0	2.40±0.778	Good
		Not sure	24	24.0		
		know	58	58.0		
	total				17.800±2.287	

Table 4. *Evaluate Patients' Knowledge about Epilepsy at Post-test:*

"(MS) Mean of Scores, (SD) Standard deviation, Level of Assessment (Poor=0.1-1, Moderate=1.2-2, Good= 2.1-3)"

(Table 4) shows the patient's statistical distribution based on the mean and standard deviation. It illustrates that the good responses were related to knowledge about epilepsy.

Patents Responds	Pre test		Post -test	
	Freq.	%	Freq.	%
1-8 I don't know	3	3.0	2	2.0
9-16 Not sure	76	76.0	16	16.0
17-24 know	21	21.0	82	82.0
Total	100	100.0	100	100.0

Table 5. *Summary Statistically Distribution of Overall Patients Knowledge toward Epilepsy*

According to Table (5) there is a highly significant difference in the overall answers of the study sample between two measurement periods (pretest-posttest) in comparison to the statistical knowledge scores. Additionally, the consequences of the study demonstrate a significant enhancement in patients' knowledge in the posttest compared to the pretest scores.

pre and post knowledge and				95% Confidence Interval Of the Difference				
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig.
	-4.94000E0	2.92954	.29295	-5.52128-	-4.35872-	-16.863-	99	.000

Table 6. *Deference between pretest-posttests Knowledge toward Epilepsy*

DF: Degree of Freedom; F: Frequency Statistics; sig: Significance; std error: standard Error; t: T-Test

Table (6) There is a statistically significant alteration (P value = .000) in the knowledge of patients with epilepsy

between the pretest and posttest.

Discussion

Part 1. Discussion of the socio-Demographic characteristics of the study

Regarding the socio-demographic characteristics of patients throughout the information analysis, the majority of the samples were mean age (33.77) years old. This result comes alongside a result from a study done by 6.7.8. Which was conducted in Denmark and Iraq showed a mean age of epilepsy of (36.5) years. The researcher thought that it might be related to the fact that the older group was the more active.

Most of his study sample was male (84.0%). This outcome was supported by Study 9, 10.11. This was conducted in Iraq, and found that more adult male the researcher believed that it might be related to exposure to trauma. Concerning marital status, the majority was single (53%). This finding is supported by 12.13.14. This was conducted in Pakistan, Iraq which showed more patients with epilepsy were single. In the researcher's opinion, the researcher believes that a higher percentage of single due to additional money paid affected as according to conversation that has took place between the researcher and patients. Regarding the level of education, the greatest number of them (59%) was patients in elementary school. 15 .16.This outcome is comparable to that of a sixth-grade elementary school in Iraq. The researcher's opinion Due to the recurrence of epileptic seizures, which caused shame, I did not complete the study. Concerning socioeconomic status, the majority of study patients (74%) with epilepsy in the present study have low socio-economic status. This outcome study is in agreement with another study in Baghdad 17 that create the uppermost percentage (44%) of the study sample with modest socio-economic status; in Basrah, Erbil18.19. it was found that (43.2)percent of patients had moderate socio-economic status. The researcher believes patients have a low economic status due to the increased risk of widespread infections and the higher incidence of road traffic injuries and birth-related harms. Residence of the majority of their study sample Urban: this outcome and that of are very similar to result 20, 21 which showed in Netherlands Iraq that urban residents had a higher score than those who were rural residents. Regarding seizure frequency, additional than half of the study sample (46%) suffer from frequent seizures each year; this result22 is fairly comparable to that showed frequent seizures each year in the UK, which described persistent seizures (≥1 per year). The researcher believes that the patient's compliance to treatment leads to a reduction in epileptic seizures.

Part 2: Discussion of the Distribution of Patients According to Past Medical History of the study:

The outcomes of the current study showed a past medical history. The majority of patients suffered from generalized (grand mal) seizure (82%); this result was supported by a study in 23 Denmark that found that (75%) of patients suffered from generalized seizure, which was the major type of seizure according to the type of seizure; generalized seizure (grand male) epilepsy was the largest recorded; grand male was the most common seizure type. A door-to-door study was conducted by AL Ataa, who reported grand male as the most common type of epilepsy in iraq24, and the majority of their study samples don't have a family history of epilepsy (87%). The researcher believes that idiopathic epilepsy. Age of onset for seizures: the present study showed that the common of the patients had an age of onset for seizures. With a mean age of (9.90) years. This result, which was conducted in the Teaching Hospital in Sulaymaniyah, Iraq, presented that greatest of the kids were diagnosed at ages 25. The researcher thought that it might be related to the fact that the age of the patients in the present study showed that febrile fits increased the likelihood of having epilepsy.

Part 3: Discussion difference in between pretest-posttests Knowledge toward Epilepsy

Through the evaluation of patient knowledge about the effect of the instructional program on patients with epilepsy during the pre-test, the researcher found the patients had low knowledge about epilepsy, which was clear from the total mean of (12.86). This finding of the current study comes along with a study done by 26. Which was conducted in Riyadh, Saudi Arabia Furthermore, only 38% lacked adequate knowledge about conditions that increase the possibility of a seizure. According to the researcher's findings, the majority of the analyzed items had low means before the instructional program was implemented, Knowledge relationship to epilepsy.

There was effectiveness of the instructional program in improving patient knowledge concerning epilepsy at the post-test, which, according to the total mean of study knowledge at the post-test, was at a high level (17.80). This finding of the current study comes along with a study done by 27 that was conducted in Italian post-test designs, which includes a follow-up evaluation two months following the intervention and uses a questionnaire to record several aspects of knowledge about epilepsy, After the instruction program, test group students' understanding of epilepsy as well as conducts toward those who suffer from it increased significantly throughout all knowledge parts. The researcher thought that there was a statistically significant difference in participants 'scores between the pretest and posttest times, which indicates the positive effect of the instructional program on the patient's knowledge related to epilepsy.

Part 4: Discussion of the correlation between socio-demographics and the effectiveness of an instructional program on patient knowledge of epilepsy.

The current study analyzes the relationship between the effectiveness of an instructional program, patient

knowledge, and sociodemographic variables.

Regarding the sociodemographic characteristics of patients, the findings indicate that there is no significant relationship between patient age and the instructional program at p (0.427). This result is in agreement with a study of people's self-management with epilepsy conducted in Iran, which also found no significant relationship between patient age and the instructional program28. However, no a significant difference was found between patient sex at p (0.246). Also, there was no statistically significant difference between sex and the instructional program, in agreement with a study conducted in Tehran, which also found no statistically significant variations between the sexes and instruction programs29.

The results of the present study revealed that more than half of the studied patients were single (p = 0.763), and more than half of them had attended elementary school (p = 0.131).a significant difference was found with instructional program. 30which conducted in Egypt. The present results also showed that there was no statistically significant difference in the economic status of patients at p (0.743). This outcome corresponds to a study conducted in Australia, which found significant variations in economic status31.

The present study also found that there were no statistically significant differences between seizure frequency and knowledge posttest. This result is comparable to a study conducted in Germany, which showed that seizure frequency of epilepsy had the highest but still low correlations with instructional program knowledge31..

Conclusion

The study findings indicate that patients have insufficient knowledge about epilepsy. The instructional program has a positive impact on enhancing patients' understanding of epilepsy. The study did not find any statistically significant relationship between patient knowledge and socio-demographic characteristics such as age, education level, social status, and income, with a However, since there are statistically significant differences between the pretest and posttest results of patient knowledge about epilepsy, Recommendations: According to the outcomes of the study, the investigator recommends that an instructional program should be considered for patients with epilepsy to increase their knowledge about the condition.

References

1. . M. H. Bhesania and N. Homi, "Knowledge, Attitude, and Practices of School Teachers Towards Epileptic School Children in Karachi, Pakistan," Pakistan Journal of Medical Sciences, vol. 30, no. 1, p. 220, 2014, doi: 10.12669/pjms.301.4307.
2. . H. Werenberg Dreier, "Cause-Specific Mortality and Life Years Lost in People with Epilepsy: A Danish Cohort Study," Brain, vol. 146, no. 1, pp. 124-134, 2023.
3. . A. Hesham, "Defining the Spectrum of Spasticity-Associated Involuntary Movements," Parkinsonism & Related Disorders, vol. 65, pp. 79-85, 2019, doi: 10.1016/j.parkreldis.
4. . A. Haleema, "Epileptic Seizures," Discoveries, vol. 8, no. 2, 2020, doi: 10.15190/d.2020.7.
5. . N. Jebur, A. K. Abeer, and A. S. Hussain, "Knowledge, Awareness and Attitude of Pharmacy Students Towards Epilepsy in Iraq," Medico-Legal Update, vol. 21, no. 2, 2021.
6. . M. Ruta, S. Juodeikiene, E. Budry, and V. Valmantas, "People with Epilepsy Lack Knowledge About Their Disease," Epilepsy & Behavior, vol. 46, pp. 192-197, 2015, doi: 10.1016/j.yebeh.2015.03.002.
7. . A. Jasim and N. Al-Barody, "Impact of Spinal Cord Injury on Patients' Social Integration in Ibn-Al-Kuff Medical Rehabilitation Center," Journal of Nursing and Health Science, vol. 4, no. 6, pp. 48-52, 2015. Available from: www.iosrjournals.org.
8. . E. Ammash and S. Ahmed, "Evaluation of Nurses' Knowledge About Complications of Craniotomy," Iraqi National Journal of Nursing Specialties, vol. 2, no. 36, pp. 117-126, 2023.
9. . A. Al-Ganmi, S. Al-Fayyadh, M. Abd Ali, A. Alotaibi, L. Gholizadeh, and L. Perry, "Medication Adherence and Predictive Factors in Patients with Cardiovascular Disease: A Comparison Study Between Australia and Iraq," Collegian, vol. 26, no. 3, pp. 355-365, 2019, doi: 10.1016/j.colegn.2019.05.004.
10. . I. Eman, "The Role of Spiral Computerized Tomography in Diagnosis of Stroke," Iraqi National Journal of Nursing Specialties, vol. 26, no. 2, 2013.
11. . Z. Hussein and K. Hatab, "Evaluation of Nurses' Practice About Care of Children with Febrile Convulsion," Iraqi National Journal of Nursing Specialties, vol. 35, no. 2, pp. 8-16, 2022.
12. . M. Tanveer, A. Tahir, M. H. Iqbal, M. Aslam, and A. Ahmed, "Health-Related Quality of Life and Medication Adherence of People Living with Epilepsy in Pakistan: A Cross-Sectional Study," Brain and Behavior, vol. 13, no. 9, e3127, 2023, doi: 10.1002/brb3.3127.
13. . A. Aldraje and A. Jasim, "Effectiveness of an Instructional Program on Teachers' Knowledge About Epilepsy in Elementary Schools at Al-Rusafa Third Education Directorate in Baghdad City/Iraq," Indian Journal of Forensic Medicine & Toxicology, vol. 15, no. 4, pp. 3142-3147, 2021.
14. . A. Khadyer and S. Ahmed, "Evaluation of Nurses' Knowledge About Chest Physiotherapy Techniques for Patients with COVID-19," Iraqi National Journal of Nursing Specialties, vol. 1, no. 36, pp. 1-7, 2023.
15. . N. Abbas and W. Mohammed, "Nurses' Knowledge Toward Care of Unconscious Adult Patients at Teaching

Hospitals in Al-Hilla City," Iraqi National Journal of Nursing Specialties, vol. 32, no. 1, pp. 90-102, 2019. Available from: https://injns.uobaghdad.edu.iq/index.php/INJNS/article/view/327.

16. . M. H. I. Al-Ameri et al., "Antipsychotics-Related Knowledge of Nurses Working at Baghdad Psychiatric Teaching Hospitals," Indian Journal of Public Health Research & Development, vol. 9, no. 12, p. 842, 2018.

17. . A. Ouda, Q. Mohammed, and K. Obaid, "Relationship Between Depression Level and Socio-Demographic Characteristics Among Adolescents Undergoing Chemotherapy Treatment at Pediatric Teaching Hospitals in Baghdad City," Kufa Journal for Nursing Sciences, vol. 11, no. 2, pp. 165-172, 2021.

18. . S. Mohammed and N. Al-Asadi, "Quality of Life and Its Determinants in People with Epilepsy in Basrah, Iraq," Sultan Qaboos University Medical Journal, vol. 12, no. 4, p. 449, 2012.

19. . S. Hasan, N. Shaker, and Z. Ismail, "Impact of Spastic Cerebral Palsy Upon the Quality of Life of Children Under the Age of 12 Years in Erbil City: Parents' Reports," Iraqi National Journal of Nursing Specialties, vol. 28, no. 1, pp. 8-16, 2015.

20. . M. Otte, "Knowledge and Beliefs About Epilepsy Among People with and Without Epilepsy in Urban Suriname," Epilepsy & Behavior, vol. 29, no. 1, pp. 128-132, 2013, doi: 10.1016/j.yebeh.2013.07.001.

21. . S. Al-Fayyadh, "Predicting the Functional Independence During the Recovery Phase for Poststroke Patients," Nursing Open, vol. 6, no. 4, pp. 1346-1353, 2019.

22. . B. Matthew, "Incidence of Early-Onset Epilepsy: A Prospective Population-Based Study," European Journal of Epilepsy, vol. 75, pp. 49-54, 2020, doi: 10.1016/j.seizure.2019.12.020.

23. . G. Joanna, "Epidemiology and Outcome of Idiopathic Generalized Epilepsy in Adults," European Journal of Neurology, vol. 27, no. 4, pp. 676-684, 2020, doi: 10.1111/ene.14142.

24. . F. Al Atta, "The Prevalence of Epilepsy in Baghdad City (Door-to-Door Study)," The Iraqi Commission for the Medical Specializations Journal, vol. 35, pp. 45-57, 2001.

25. . A. A. Ghazy, "Epilepsy and Child History in Rashid Pediatric Teaching Hospital Sulaymaniyah/Iraq," Kurdistan Journal of Applied Research, pp. 117-126, 2021, doi: 10.24017/science.2021.2.11.

26. . H. Alkhamees, A. Selai, C. E. Shorvon, and D. Shorvon, "The Beliefs Among Patients with Epilepsy in Saudi Arabia About the Causes and Treatment of Epilepsy and Other Aspects," Epilepsy & Behavior, vol. 53, pp. 135-139, 2015, doi: 10.1016/j.yebeh.2015.10.008.

27. . M. Aliasgharpour, "Effects of an Educational Program on Self-Management in Patients with Epilepsy," European Journal of Epilepsy, vol. 22, no. 1, pp. 48-52, 2013, doi: 10.1016/j.seizure.2012.10.005.

28. . W. Alexander, "Does the Accumulated Antiepileptic Drug Load in Chronic Epilepsy Reflect Disease Severity," Epilepsia, vol. 61, no. 12, pp. 2685-2695, 2020, doi: 10.1111/epi.16720.

29. . A. Mohammed, A. Abou Zed, and S. Abdel, "Effect of Educational Program on Frequency of Epileptic Attacks and Self-Efficacy for Adolescents," Egyptian Journal of Health Care, vol. 11, no. 2, pp. 1-19, 2020.

30. . G. Shaloo, "Understanding the Burden of Focal Epilepsy as a Function of Seizure Frequency in the United States, Europe, and Brazil," Epilepsia Open, vol. 2, no. 2, pp. 199-213, 2017, doi: 10.1002/epi4.12050.

31. . M. Catrin, "Persistent Knowledge Gaps Between 2005 and 2020 in Women with Epilepsy: Comparison of Multicenter Studies from Germany," European Journal of Epilepsy, vol. 100, pp. 36-43, 2022, doi: 10.1016/j.seizure.2022.06.004.

32. . T. Lekhjung, "Knowledge, Beliefs, and Practices on Epilepsy Among High School Students of Central Nepal," Epilepsy Research and Treatment, vol. 2017, Article ID 6705807, 2017, doi: 10.1155/2017/6705807.