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Research Article

Impact of Applying Evidence-Based Guidelines for Epileptic Patient on Their Knowledge, Self-Efficacy, Drug Adherence and Quality of Life

Fathia Ahmed Mersal[1]*, Shereen Ahmed Ahmed Qalawa[2] and Amany Gamal Algharib[3]

[1]*Professor, Community Health Nursing, Faculty of Nursing, Ain Shams University, Egypt*

[2]*Assistant Professor, Medical, Surgical Nursing, Faculty of Nursing, Port-Said University, Egypt*

[3]*Lecturer, Medical, Surgical Nursing, Faculty of Nursing, Port-Said University, Egypt*

***Corresponding Author:** Fathia Ahmed Mersal, Professor, Community Health Nursing, Faculty of Nursing, Ain Shams University, Egypt.

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Abstract

Background: Epilepsy is considered as a chronic brain disorder characterized by recurrent derangement of the nervous system caused by sudden extreme discharge of the cerebral neurons.

Aim and Objective: To evaluate the impact of applying evidence-based guidelines for epileptic patient on their knowledge, self efficacy, drug adherence and quality of life. Design: A Quasi-experimental design.

Methods: The study was conducted on 54 epileptic patients underlying three phases; assessment, planning, implementing, and evaluating phase which emphasized on estimating the effect of the evidence based guidelines implementation before (Pre-test) and re-interviewed after one month and four months of implementation for the guidelines to assess their knowledge, self efficacy, drug adherence and quality of life (posttest, follow-up).

Results: Reflected that there are a significant positive correlation were found between epileptic patient's self efficacy and their family history, level of education and between total epileptic patients knowledge and their marital status in the posttest phase (Ps = .040, .013, .049) respectively .Also, the mean scores of epileptic patient's knowledge pre-implementing guidelines phase was 17.28 which improved post implementing guidelines phase to 21.54 while it slightly decreased in flow up phase to 19.79.

Conclusion: The majority of epileptic patients had low self efficacy and quality of life levels in the pre implementation of guidelines phase comparing to Post and follow-up guideline implementation phases. Also, the majority of them had high knowledge and perception level in the item related to disease crisis, perception of anticonvulsant drugs and adherence at post and follow-up guidelines implementation phases. Relevance to clinical practice: There are obvious needs to activate implementation of epileptic guidelines manual in the hospitals.

Keywords: *Impact; Applying; Evidence-Based; Guidelines; Epileptic Patient; Knowledge; Self Efficacy; Drug Adherence; Quality of Life*

Introduction

Epilepsy is considered as a chronic brain disorder characterized by recurrent derangement of the nervous system caused by sudden excessive discharge of the cerebral neurons. It is a neurological condition that knows as no geographic, social, or ethnic boundaries, occurring in men and women and affecting people of all ages. However, the word Epilepsy is derived from the Greek word "epilepsia" which can be broken into epi (upon) and lepsis (to take hold of or seizure). It affects approximately 50 million people worldwide and can occur at any stage and added negative psychosocial consequences not only on people with epilepsy but also on their family [1].

According to the World Health Organization (WHO), 2010 approximately 50 million people of all ages around the world are affected by epilepsy, with more than 85% living in the developing world. An estimated 4.7 million people with epilepsy live in the WHO Eastern Mediterranean Region. The existence prevalence of epilepsy at Al Kharga in Egypt district was 6.76/1,000 with the highest peak during early childhood. The annual incidence rate was 43.14/100,000, and age-specific incidence rate with two peaks of incidence at early infancy and elderly [2]

Antiepileptic drugs are a frequently effective treatment used for epilepsy. So, failure of drug adherence is interrupt the outcome, increased risk of seizures occurrence and other associated problems including increased health care costs [3]

On the other hands, the quality of life (QOL) of people with epilepsy is estimated lower than that of people with other chronic diseases which this disease has an enormous influence on three main dimensions of the QOL (physical, mental and social health), which is directly and indirectly decreasing opportunities for participation in routine daily living activities [4].

Furthermore, Epilepsy treatment remain central to managing psychosocial dimension and improving patient's quality of life through efforts to improving the magnitude of self-management and efficacy [5]. Thus, epilepsy has a major impact on quality of life for both epileptic patients and their family members [1].

Moreover, the psychological problems experienced by epileptic people can cause significant effects on quality of life than seizures themselves plus distressing thoughts and self confidences such as shame, embarrassment, anger, feelings of guilt and self-blame [6].

Furthermore, appropriate management of neurological disorders is directly associated with professional supports, right outpatient management. Perceived self-efficacy has become a significant and valuable impact because it is reflected the people ability to cope and manage various behavioral challenges. Thus, epileptic patients who endow with social support suffered less depression, heightened self-esteem and self-efficacy, and improved quality of life, even after adjusting for baseline health and socioeconomic status [7].

Operational definitions

Evidence-Based Guidelines**:** Are scientifically designed tool to help administrators, practitioners and patients making decisions regarding appropriate health care for specific disorder.

Self efficacy**:** it is anticipatory coping with decline crises and a successful effort to relinquish; long-term preservation patient at risks which assists in making judgments and in initiating adaptive coping actions and a variety of situation-tailored coping strategies.

Drug adherence**:** control of a person who follow the method by leading, advising and being a role model to the beginner others.

Quality of life: WHO defines Quality of Life as individuals' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. It is a wide ranging concept affected in a complex way by the person's physical health, psychological state, level of independence, social relationships, personal beliefs and their relationship to salient features of their environment.

Subjects and Method

Aim of the study

This study was evaluated the impact of applying evidence-based guidelines for epileptic patient on their knowledge, self efficacy, drug adherence and quality of life in Port-Said City through:

- Assessing knowledge among epileptic patient.
- Assessing the self efficacy and drug adherence among epileptic patient.
- Assessing the quality of life status among epileptic patient.
- Designing and implementing evidence-based guidelines program according to epileptic patient's needs.
- Evaluating epileptic patient's knowledge, self efficacy, drug adherence and quality of life after applying evidence-based guidelines program.

Hypothesis of the study

In order to accomplish the research aim of this study the following hypotheses was suggested: implementation of evidence-based guidelines program would improve epileptic patient's knowledge, self efficacy, drug adherence and quality of life.

Research design

The present study is a quasi-experimental study design.

Setting

This study was carried out at outpatient clinic in Mental and psychological health hospital at Port-said city which is located in Suez-Canal district which this hospital is considered as a main governmental hospital in Port said city centered to treat epileptic patients.

Sample

A purposive sampling used in this study, 54 adult epileptic patients were directly involved in evidence based program according to inclusion Criteria and willing to fill in a questionnaire and/or be interviewed, were included in the study. Whereas patient's having cognitive impairment, cerebral infections or tumors and pregnant women were excluded from the study.

Tools of data collection: data was collected through used 3 main tools; the first tool was structured interview questionnaire used to collect data related to this study; it was written in a simple Arabic language developed by researchers. The first part was concerned with demographic characteristics of studied it was contains information related to sociodemographic characteristics of the studied patients as their age, gender, educational class level, marital status, occupation, duration of epileptic disease, family history. The second part included 32 items adapted from Jayachandran,2006. to assess the epileptic patient's knowledge and perception towards the epilepsy as: effects of epilepsy, clinical manifestations for each phase of seizures, investigations, perceptions of some investigations as EKG, perceptions of some anticonvulsant drugs ….etc. The third part consisted of It includes 8 items adopted from [8] Based on [9] to assess the epileptic patient's self adherence with their drugs as : missed dose, repeated dose, drugs during seizures, drugs when travelling, and barriers of anticonvulsant drug adherence . The second tool consisted of It includes 15 questions adopted from Kakacek,2014 to assess the epileptic patient's self efficacy state of their locus of control with their disease as : epilepsy crisis, relationship with family, friends and heath care workers, emotional upset, and seizures The third tool includes 30 questions adopted from [10,11] based on SF36 to assess the epileptic patient's quality of life state with their disease as : overall quality of life as patient's perceived ranged from very poor to very good and assess memory condition, concentration which ranged from all the time to rarely, and assess work activities, recreational activities, emotional upset which ranged from all the time to rarely, and assess anxiety, social relation, sexual relation which ranged from no anxiety to a lot of anxiety, and effects of anticonvulsant drugs on patient's activities . Which each item takes scores from 1to 5 of all items which arranged as very annoying, annoying, sometimes, usually and no annoying. It is adapted from the provincial guidelines for the management of epilepsy in adults and children, 2015 which is the result of a collaborative effort between CCSO, the Epilepsy Implementation Task Force (EITF), and Provincial Neurosurgery Ontario (PNO). The EITF was established in June 2013 to develops and implements a simple framework of guidelines for ideal epilepsy care and practices in Ontario. The fourth tool includes 4 main items related to adherence and monitoring as Initiation of epileptic treatment, Drug monitoring, appointment and follow-up, Discontinuation of treatment.

Scoring system

The knowledge and perception scores one was given for each correct answer and zero for incorrect answer. For each area of knowledge and perception, the scores of the questions were summed-up and the total score divided by the number of the items. These scores were converted into a percent score. The total patient' knowledge and perception was considered satisfactory if the percent score was 60% or more and unsatisfactory if less than 60%. The drug adherence and self efficacy scores ranged as each item takes scores from 0 to 4 of all items which arranged as rarely, sometimes, usually, often and always .While quality of life scores ranged as each item takes scores from 1to 5 of all items which arranged as very annoying, annoying, sometimes, usually and no annoying.

Validity and reliability

The tools were tested for their content validity by a jury of five experts in the Medical surgical nursing, neurological medical specialists. The required modifications were carried out accordingly. Testing reliability of the study tools was done by Cronbach alpha, the result was. 720 for knowledge questionnaire, .972 for drug adherence, .983 for self efficacy and .984 for quality of life.

Pilot study

A pilot study was conducted on 10% of epileptic patients to test the clarity of questions and to estimate the time required for using the tools and to determine the time needed to fill the tool. Patients included in the pilot study excluded from the study sample.

Field work

Permission was obtained from the Dean of the Faculty of Nursing, Port Said University to hospital director before starting the research and after filled approval and informed consent to conduct scientific research and follow scientific research ethics protocol in the Hospitals of Mental Health and Addiction Treatment protocol as a part of policy and rules of hospital and data were collected after clearing up the aim of the study to all participants. Consent from every studied group individually before the beginning of the interview was taken. Explanation of the aim of the study was done to studied group to obtain their permission to participate. Data collection was done pre and post evidence based guidelines implementation for two times (after 1 and 4 months). Data were collected and program was implemented over a period of 7 months,2 days/week and 4 hours/day starting from March 2018 to August 2018. Researchers designed the training materials to teach a practical approach to best self efficacy and quality of life well being. The educational guidelines booklet and simple media as pamphlets was implemented for each group one session per week for a total of eight sessions for each group. The duration of the session was about one hour, and it carried at the pre-mentioned setting after posted announcement in the clinic with the date and time for session conduction. The booklet was distributed to all participants in the first day of starting implementation phase after explaining the aim of the educational guidelines booklet to all participants (participants divided into small groups each one contained about 10 patients). In relation to the methods used in the educational guidelines booklet were lectures, discussion, and role play. Suitable teaching aids were prepared also, to help the participants assimilate and refresh videos, power point and posters was provided.

Assessment phase

The tools of data collection were developed into Arabic language by the researchers after thorough detailed review of literature. The researchers started with a pilot test, and then validated the tool through the opinions of experts in nursing and medical field. Each patient was individually interviewed to complete data collection (pretest/assessment phase).

Planning phase

Based on the assessment phase, the program content and media (in the form of the implementation of guidelines) were prepared. The health instructions were developed on the basis of the results of the assessment phase and reviewing the relevant literature in Arabic language.

Program objectives

The evidence based guidelines program aims to improve the epileptic patient's knowledge, perception, self efficacy, drug adherence and quality of life Contents: The content of the health instructions selected and the health instructions were planned and developed according to careful study of epileptic patient's educational needs revealed from the assessment phase, and reviewing the relevant literature. It includes general concepts about epilepsy (definition, clinical manifestations, types and treatment), use of drugs, side effects, safety precaution, warning signs of drug interactions, seizures.

Teaching methods

Were selected to suit teaching small groups' learners in the form of lectures, group discussion. Teaching materials were prepared as booklet, brochures and colored posters that covered theoretical and practical information. Researchers designed the training materials to teach a manageable approach to best self efficacy and quality of life practices.

III-Implementation phase

Implementation of the evidence based program conducted with the epileptic patients after explanation of the purpose of the study and their acceptance of participation. The evidence based guidelines was implemented through eight sessions, and was given in small groups; each group consisted of five to seven participants. Patients were given a handout containing all information's for future reference. The health instructions have been implemented through eight sessions. The length of each session ranged about 35-45 minutes. Individual sessions, group discussions used as teaching methods, brochures and introduction of a booklet were used to facilitate the process of educational program to serve the purposes for which it designed.

IV-Evaluation phase

The evaluation phase emphasized on estimating the effect of the evidence based guidelines implementation on epileptic patients' knowledge, self - efficacy and proper action and handling regarding drug adherence and quality of life, the patients were individually interviewed before (Pre-test) and re-interviewed after one month and four months of implementation for the guidelines to assess their knowledge, self efficacy, drug adherence and quality of life (posttest, follow-up).

Ethical considerations

Study participants were individually interviewed after obtained informed written consent and informed them that their participation was voluntary and they could withdraw at any time without consequences. The participants were assured that their responses would be treated confidentially through the use of strict coding system.

Data analysis

Data collected were entered, edited and coded in SPSS (Statistical Package for the Social Sciences), Version 16. All comparisons were two tailed and p-values <0.05 were considered significant. Descriptive statistics for the various variables, such as frequencies and percentages were used to describe the sample. To compare variables between the pre, post and follow-up guidelines implementation, chisquared test (for qualitative variables) were used. Repeated ANOVA test for comparing the phases of tests. Probability (p-value) was considered as follows:

- P value > 0.05 insignificant
- P < 0.05 mild significant
- P < 0.01 moderate significant
- P < 0.001 highly significant

Results

Table 1 Shows that (61.1%) of epileptic patients were in age group 25-45 years with mean age 36.72±1.2 while (55.6%) of them were male and (59.3%) of them had Literal works. (53.7%) of them had ≤ 5days absenteeism rate from work. (64.8%) of them had family history of epilepsy and (50%) of epileptic patients had primary level of education.

Parameter	N=	%
age: >25	10	18.5
25-	33	61.1
45-	9	16.7
<65	2	3.7
Mean of age:	36.72±1.2	
Gender		
Male	30	55.6
female	24	44.4
Mean of Disease duration	23.4630±12.31	
Occupation		
No Job	12	22.2
Governmental Job	10	18.5
Literal works	32	59.3
Absenteeism days last month		
≥5 days	25	46.3
≤ 5days	29	53.7
Family history of Epilepsy		
Yes	35	64.8
No	19	35.2
Level of education		
Illiterate	16	29.6
Primary	27	50
Secondary	9	16.7
Higher	2	3.7

Table 1: *Number and percent distribution of participants according to their demographic characteristics.*

Table 2 Shows that there are a statistically significant difference were found between pre and post implementation of guidelines phase in all items and total scores of epileptic patient's knowledge while the statistically significant difference were found between post and follow-up implementation of guidelines phase regarding only items namely knowledge of antiepileptic treatment (P < 0.001).

Item	Pre intervention		Post intervention		Follow up intervention		X^2	P-value	X^2	P-value
	No.	%	No.	%	No.	%	Pre-post		Post-follow up	
Knowledge of causes of epilepsy										
Satisfactory	4	7.4	51	94.4	9	16.7	81.84	0.000	3.37	0.12
unsatisfactory	50	92.6	3	5.6	45	83.3				
Knowledge of symptoms of epilepsy:										
Satisfactory	3	5.6	32	59.3	30	55.6	35.54	0.000	0.15	0.846
unsatisfactory	51	94.4	22	40.7	24	44.4				
Knowledge of diagnosis of epilepsy										
Satisfactory	5	9.3	38	70.4	35	64.8	42.07	0.000	0.38	0.681
unsatisfactory	49	90.7	16	29.6	19	35.2				
Knowledge of seizures										
Satisfactory	3	5.6	42	77.8	39	72.2	57.94	0.000	0.44	0.657
unsatisfactory	51	94.4	12	22.2	15	27.8				
Knowledge of treatment of epilepsy:										
Satisfactory	3	5.6	48	88.9	30	55.6	75.23	0.000	14.95	0.000
unsatisfactory	51	94.4	6	11.1	24	44.4				
Total knowledge of epilepsy:										
Satisfactory	3	5.6	41	75.9	28	51.9	55.38	0.000	6.78	0.016
unsatisfactory	51	94.4	13	24.1	26	48.1				
Score of total knowledge	17.28±1.11		21.54±2.92		19.79±3.48		Repeated-measured ANOVA F= 52.55 p Value 0.000			

Table 2: *knowledge difference pre, post and follow up implementation of guidelines phases among epileptic patients.*

Figure 1 Shows that mean scores of epileptic patient's knowledge pre-implementing guidelines phase was 17.28 which improved post implementing guidelines phase to 21.54 while it slightly decreased in flow up phase to 19.79.

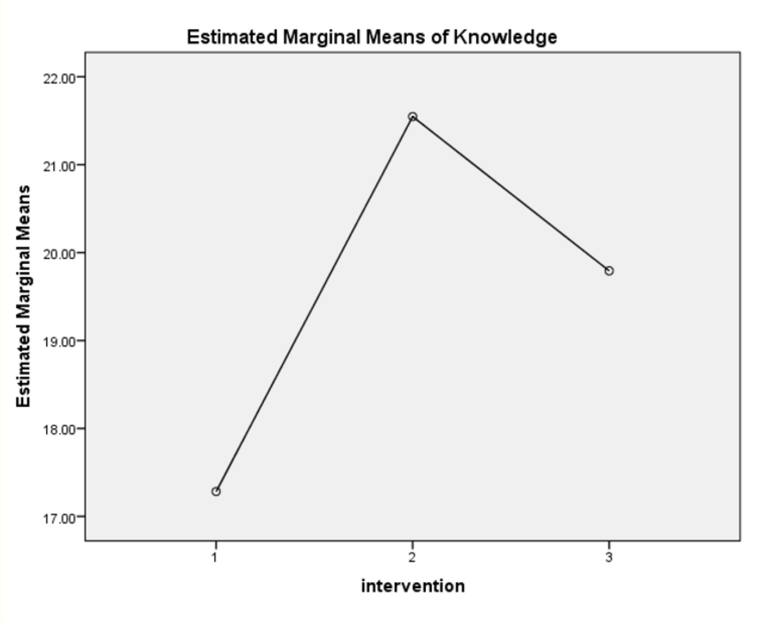

Figure 1: *Mean epilepsy knowledge scores difference pre, post and follow up implementation of guidelines phase among epileptic patients.*

Table 3 Shows that there are a statistically significant difference were found between pre, post and follow up implementation of guidelines phase regarding total epileptic patient's self efficacy scores (P < 0.001).

Items	pre		post		Follow up		Repeated measure ANOVA	P value
	No	%	No	%	No	%		
Self-efficacy								
High score	6	11.1	53	98.1	52	96.3	306.42	0.000
Low score	48	88.9	1	1.9	2	3.7		
Mean Score	26.68±7.93		56.35±6.67		53.98±5.49			

Table 3: *Self-efficacy scores difference pre, post and follow up guidelines implementation phase among epileptic patients.*

Table 4 Shows that there are a statistically significant difference were found between pre, post and follow up implementation of guidelines phase regarding epileptic patient's medication adherence scores (P < 0.001).

Items	pre		post		Follow up		Repeated measure ANOVA	P value
	No	%	No	%	No	%		
adherence to medication								
High score	9	16.7	37	68.5	29	53.7	40.622	0.000
Low score	45	83.3	17	31.5	25	46.3		
Mean Score	16.35±4.71		26.07±7.40		21.57±5.12			

Table 4: *Medication adherence scores difference pre, post and follow up intervention phase among epileptic patients.*

Table 5 Shows that there are a significant positive correlation were found among epileptic patients' knowledge, self efficacy, drug adherence and Quality of life with their sociodemographic characteristics in pre implementation of guidelines phase (P < 0.001).

		Age	Gender	Duration	Occupation	Familyhistory	Level Of Education	Marital
tot.pre.SE	R	-.103	-.007	-.080	.037	.081	-.076	.039
	P value	.459	.961	.564	.793	.560	.586	.779
Tot.K.pre	R	.121	.081	.120	-.005	.171	.325*	.135
	P value	.382	.558	.387	.973	.217	.017	.330
tot.comp.pre	R	-.138	-.099	-.120	-.033	.204	.108	.069
	P value	.321	.475	.388	.813	.139	.437	.618
QLpre	R	-.163	-.091	-.090	.280*	.502**	.043	.045
	P value	.238	.514	.516	.040	.000	.759	.749

***Table 5:** Correlation between knowledge, self efficacy, drug adherence, Quality of life and sociodemographic characteristics of epileptic patients in pretest phase.*

***. Correlation is significant at the 0.01 level   (2-tailed).*

**. Correlation is significant at the 0.05 level (2-tailed).*

Table 4 Shows that there are a statistically significant difference were found between pre, post and follow up implementation of guidelines phase regarding epileptic patient's medication adherence scores (P < 0.001).

Items	pre		post		Follow up		Repeated measure ANOVA	P value
	No	%	No	%	No	%		
adherence to medication								
High score	9	16.7	37	68.5	29	53.7	40.622	0.000
Low score	45	83.3	17	31.5	25	46.3		
Mean Score	16.35±4.71		26.07±7.40		21.57±5.12			

***Table 4:** Medication adherence scores difference pre, post and follow up intervention phase among epileptic patients.*

Table 5 Shows there are a significant positive correlation were found between total epileptic patient's knowledge scores and their level of education and between total quality of life and their occupation while there are a highly statistical correlation were found between total epileptic patients quality of life   and their family history in the pre - test phase (Ps = .017, .040, .000) respectively.

		Age	Gender	Duration	Occupation	Familyhistory	Level Of Education	Marital
tot.pre.SE	R	-.103	-.007	-.080	.037	.081	-.076	.039
	P value	.459	.961	.564	.793	.560	.586	.779
Tot.K.pre	R	.121	.081	.120	-.005	.171	.325*	.135
	P value	.382	.558	.387	.973	.217	.017	.330
tot.comp.pre	R	-.138	-.099	-.120	-.033	.204	.108	.069
	P value	.321	.475	.388	.813	.139	.437	.618
QLpre	R	-.163	-.091	-.090	.280*	.502**	.043	.045
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Table 4 Shows that there are a statistically significant difference were found between pre, post and follow up implementation of guidelines phase regarding epileptic patient's medication adherence scores (P < 0.001).

Table 5 Shows there are a significant positive correlation were found between total epileptic patient's knowledge scores and their level of education and between total quality of life and their occupation while there are a highly statistical correlation were found between total epileptic patients quality of life and their family history in the pre - test phase (Ps = .017, .040, .000) respectively.

Table 6 Shows there are a significant positive correlation were found between epileptic patient's self efficacy and their family history, level of education and between total epileptic patients knowledge and their marital status in the posttest phase (Ps = .040, .013, .049) respectively.

		Age	Gender	Duration	Occupation	Family History	Level Of Education	Marital
tot.comp.post	R	.184	-.192	.100	-.162	-.055	-.035	.235
	P value	.183	.165	.474	.242	.695	.800	.088
tot.post.SE	R	.181	-.042	.173	.065	.281*	.337*	-.028
	P value	.190	.763	.212	.638	.040	.013	.842
QLpost	R	.121	-.044	.072	.186	.012	-.131	.023
	P value	.382	.753	.603	.177	.933	.345	.866
K.total.post	R	-.039	-.009	-.075	.114	-.196	-.117	.269*
	P value	.778	.950	.591	.414	.156	.398	.049

Table 6: *Correlation between epileptic patients knowledge, self efficacy, Quality of life and sociodemographic characteristics in posttest phase.*

***. Correlation is significant at the 0.01 level (2-tailed).*

**. Correlation is significant at the 0.05 level (2-tailed).*

Table 7 Shows there are a significant correlation were found between total epileptic patient's drug adherence scores and their only age, and family history phae(Ps = .008, .045) respectively.

		Age	Gender	Duration	Occupation	Family History	Level Of Education	Marital
K.tot.F	R	-.127	.184	-.123	.016	.069	-.169	-.101
	P value	.361	.183	.375	.911	.620	.223	.467
tot.F.SE	R	.071	-.079	.073	.058	.231	.065	-.014
	P value	.611	.570	.600	.679	.092	.640	.922
QLF	R	-.112	-.030	.044	-.046	-.008	-.250	.042
	P value	.421	.831	.754	.743	.951	.069	.763
tot. Drug Adherence	R	.359**	.022	-.222	-.121	.274*	-.192	-.169
	P value	.008	.875	.107	.382	.045	.164	.222

Table 7: *Correlation between total epileptic patient's knowledge, self efficacy, drug adherence, Quality of life scores and their sociodemographic characteristics.*

Discussion

Health-related self-management for patients with epilepsy is chiefly embedded patient education, awareness, and engagement. However, a lack of patient education about their state is a widespread problem which one of the most common reasons for 'break through' seizures is medication non-adherence. Thus, first and foremost supports of epileptic patients are concerned with patient education for increasing their knowledge towards disease cycle, consequence, coping and improving decision-making (Hixson, 2016).

According to sociodemographic characteristics of epileptic patients the current study found that more than half of epileptic patients were in age group 25 - 45 years with mean age 36.72 ± 1.2 and male also, more than half of them had Literal works and had ≤ 5days absenteeism rate from works and had family history of epilepsy . While half of them had primary level of education.

Regarding epileptic patient's knowledge, the present study revealed that there are a significant difference were found between pre and post implementation of guidelines phase in all items and total scores of patient's knowledge and perception while the statistically significant difference were found between post and follow-up implementation of guidelines phase regarding only items namely knowledge of antiepileptic treatment . These finding goes in the same line with [12] In Iran who reported from WHO that there are a significance of conducting a research for developing countries to improve understanding and awareness of epileptic patients . All the same, JACOB, 2011 added that the developing countries are prone for convulsive disorders. This disorder are more common for the reason that lack of services for convulsions, lack of knowledge regarding epilepsy and its first aid management, lack of treatment competence, ease of access care for convulsion and diagnostic evaluation of the convulsive disorders. Even though Sayemiri, Tavan, Sayemiri, Mohammadi, and Carson, 2014 reported that there is a limited knowledge regarding epilepsy in developing countries; particularly in Iran is high with 6% incidence rate among adult population.

Adjacent to, in florida, USA**,** [13] examine the impact of epilepsy on epileptic patient and family members and revealed that it is important to identify gaps in knowledge and propose best practices for both patients and their family.

From another point of views, In Ethiopia, [14] conducted study to assess the perceived stigma and factors associated with among epileptic patients and emphasized on that lack of awareness and education often make people with epilepsy be stigmatized, depressive, and withdrawal from society because problems their faced at work and economic difficulties . Also, patient's attitude added a psychosocial dilemma as well as anxiety with apprehension about getting a job or construction a family with epilepsy. On the other hands, [1] In Switzerland investigate factors that influence QoL in hospitalized adult epileptic patients and their relatives and necessitated on the importance of attention to both patients and family members 'knowledge which the main reason for disease deterioration and hospitalization .

Concerning drug adherence the current study revealed that there are a significant difference were found between pre, post and follow up implementation of guidelines phase regarding epileptic patient's medication adherence scores .These findings goes in the same line with Bano and Numan, 2016 In Pakistan who painted on examine factors associated with non-compliance with epilepsy drugs and revealed that medication troubles (more than 2 antiepileptic drugs), treatment duration (more than 6 months) and elderly age (above 55 years) were the major reasons of non-compliance and recommended the implementation of educational programs for epileptic patient would assist to increase levels of epileptic drugs compliance.

On the other hand, In Netherland Kinderen., *et al.* 2014 estimate the annual health care costs for epileptic patient and their family resulting from side-effects of antiepileptic drugs and discovered that about 88% of epileptic patient experience side-effects of antiepileptic drugs which burden to their costs.

likewise, Nixonaand Angalakuditib, 2011 highlighted on that epilepsy can influence patient's cognitive, concept, and physical abilities and other concepts such as future hopes, burden, self-esteem and recommended that education and teaching through using conceptual model enhanced patients' adherence with epileptic treatment. Whereas, [5] In Iran recommended that epileptic patients need comprehensive motivation, monitoring, and family support. However, lack of support create critical adverse effect on reducing patients' motivation and impede them from accepting personal responsibility for their adherence to treatment regimen.

Concerning the relationship between 'knowledge, self efficacy, drug adherence and Quality of life with their sociodemographic characteristics, the present study revealed that there are a significant correlation were found between epileptic patients 'knowledge, self efficacy, drug adherence and Quality of life with their sociodemographic characteristics in pre implementation of guidelines phase these findings goes in the same way with Tedrus., *et al.* 2015 in Brazil who investigated how marital status affect quality of life (QOL) in epileptic patients and reported that there are a greater occurrence of divorce among epileptic patients than in the healthy Brazilian population. In this interim,, Jin Lee., *et al.* 2014 In Korea concluded that sociodemographic characteristics are a main factors which indirect effects on Quality of life by aggravating adverse effects of antiepileptic drugs. While anxiety did not have a direct effect on Quality of life; it had only indirect effect through the adverse effects of antiepileptic drugs. Meanwhile, in china [15] stated that epilepsy is recognized as a major cause of economic burden which indirectly affect quality of life for epileptic patients.

Moreover, in florida, USA [13] investigate the influence of epilepsy on the psychological and social well-being of individuals and their family members and recommended that for improving psychological, physical well-being, satisfaction and perceived level of support among epileptic patient and their family there are an obvious needs for conducting educational training programs regarding how to improve their quality of life and daily living activities plus a positive family support are important issues that can help epileptic patients to best deal and live with their disease . In this concern, Cianchetti., *et al.* 2015 in Italy, who conduct study aimed to evaluate the impact of epilepsy on patient's quality of life and their families and highlighted on that the degree of family ' concerns and the severity of the disease correlated with a deterioration of quality of life in both the patient and family and impairs all dimensions of quality of life . In addition to, [5] In Iran who mentioned that self-management awareness and proper coping strategies regarding all aspects and phases of seizures and lifestyle modifications has a chief impact on preventing the occurrence of seizures and overcome fears, anger and tension, sleep trouble for both patients and their family.

Surprisly, [16] in Rhodes at Europe investigated the challenges to identify the extent of epilepsy treatment burden, the factors associated with it, and its impact to caregiver quality of life (QOL) and revealed that this challenges are associated with particular patient and caregiver characteristics and has a negative consequence on caregiver quality of life.

According to [4] who conduct their study to assess the impact of the seizure severity and frequency on the quality of life of Bulgarian patients and revealed that the seizure severity and the seizure frequency have a restricted impact, typically on the social dimension of quality of life. And concluded that continue using multidisciplinary approach with proper guidance and comprehensive monitoring of a neurologist, a specialist in epilepsy, psychologist and a social worker greatly help in reducing the negative control of seizure frequency and severity among epileptic patients. In distinguish [6] in India discovered in their study to assess awareness and practices of caregivers with epileptic patients regarding home management and discovered that the practices of managing epilepsy were good amongst majority of the caregivers. However, there is a need for conducting more studies on the practices of caregivers for epileptic patients.

Regarding total scores of epileptic patient's knowledge, drug adherence, self efficacy and quality of life, the current study revealed that there are a significant positive correlation were found between total epileptic patient's drug adherence scores and their only age, and family history . These findings contradicting with Bano and Numan, 2016 In Pakistan who highlighted on examine factors associated with non-compliance with epilepsy drugs and found a correlation between gender and drug adherence which male epileptic patients more compliance of epileptic drugs comparing to female patients.

Opens oveIn Taiwan Fang Chen., *et al.* 2016 Implement study to assess seizure frequency; types, number, frequency, adverse effect of antiepileptic drugs and social support as important factors that can affect quality of life, daily living activities among epileptic patients.

Also, [17] In Spanish discovered in assess the impact of antiepileptic drugs types on Quality of life and treatment satisfaction among epileptic patients that patients treated with lamotrigine more satisfied and higher improvement on their Quality of life than those on the valproic acid drug.

Whereas, in Bangalore, India, [18] evaluated patterns of using antiepileptic drugs and its impact on patient's quality of life and highlighted on the importance of choice for safer antiepileptic treatment options, and monitoring for adverse effects catch a vital role in preventing seizure occurrence and maintain getting best quality of life among epileptic patients.

In distinguish, saadi., *et al.* 2016, In India, mentioned in their study which conducted to assess the quality of life among epileptic adults in the lower middle-income country of Bhutan and assess the potential associated factors with better quality of life and recommended that factors most significantly prognostic of improved quality of life among epileptic patients are patient's age, level of education, and decreased self-perceived stigma.

Regarding self efficacy, [7] in East Azerbaijan concluded from their study to assess relationship between self-efficacy and psychosocial care among epileptic patients that those patients have strong needs for information and knowledge regarding preventing and managing seizures and to communicate about updated strategies for dealing with seizures and enhancing self-efficacy.

Finally, In India, saadi*., et al.* 2016 recommended that educational attainment may result better awareness of seizure prevention, management and education of medication adherence, reduced self-perceived stigma, and better access to employment opportunities and income. Additionally, higher educational level is also associated with effective improvement and utilization of coping strategies that positively influence QOL . Furthermore, [1] In Switzerland emphasized that there are significance need to patient-centered approach and include both the epileptic patients and their relatives and concentrate on family support in order to alleviate stress in the patients and relatives in a similar way .As well, [19-27] highlighted on the role of self-management and educational programs for epileptic patients which play a significance role in patient's awareness and their quality of life.

Conclusion and Recommendations

The majority of epileptic patients had low self efficacy and quality of life levels in the pre implementation of guidelines phase comparing to Post and follow-up guideline implementation phases. Also, the majority of them had high knowledge and perception level in the item related to disease crisis, perception of anticonvulsant drugs and adherence at post and follow-up guidelines implementation phases. Based on study findings, it recommended that there are obvious needs to activate implementation of epileptic guidelines manual in the hospitals, further study about impact of implementing designed guidelines on epileptic patients' awareness and quality of life and self efficacy should be emphasized.

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