Original Article

Implementation of Evidence Based Guidelines Regarding Epilepsy Management for Patients and Their Family Members

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Abstract

Epilepsy is one of the most common neurological disorders worldwide. Nurses play a critical role in promoting the best health outcomes for people with epilepsy by imparting information about the disease and advancing evidence-based practices which are considered the gold standard in the delivery of health care **Aim:** To evaluate the effect of implementation of evidence based guidelines regarding epilepsy management for patients and their family members **Design:** A quasi-experimental research design was used. **Setting:** The study was conducted at neurologic outpatient clinic, affiliated to Ain Shams University Hospitals, Cairo, Egypt. **Sample:** A purposive sample of 60 patients and 60 family members were attended at the mentioned setting. **Tools:** Three tools were used: (1) Structured interview questionnaire included: patients' demographic characteristics, family members' demographic characteristics and knowledge assessment questionnaire. (2) Epilepsy risk awareness scale, (3) Family members' reported practices questionnaire**. Results:** There were high statistically significant differences between total satisfactory scores of knowledge of the studied patients and family members pre to post implementation. There were high statistically significant differences between some scores of personal safety and health care and all quality of life scores of studied patients pre to post implementation. As well, there was high statistically significant difference between reported practices scores of the studied family members pre to post implementation. **Conclusion**: The implementation of evidenced based guidelines had positive effects on knowledge and awareness of the studied patients, as well, on knowledge and attitudes of family members regarding epilepsy management. **Recommendations:** There is a need to activate implementation of epileptic guidelines manual in the hospitals.

Keywords: Epilepsy, Evidence based guidelines, Family member.

Introduction:

Epilepsy is one of the most common neurological disorders worldwide. It is estimated that over 60 million of the world population had epilepsy in their lifetime. The disease accounts for the highest disability adjusted life year rates among neurological disease. People with epilepsy (PWE) not only suffer from the disease itself, but they also experience repeated stigmatization. Stigma is widely influenced by the general awareness of epilepsy and the attitudes toward PWE. Misconceptions about causes of epilepsy, natural history, treatment and first aid to a seizing person are widespread, as well as, negative attitudes toward PWE. **(AlHarbi et al., 2021; Herrmann et al., 2016)**.

The primary goal of epilepsy management is to achieve seizure freedom, Patients with uncontrolled seizures have increased comorbidity, social and psychological dysfunction, in addition to, an increased risk of premature death. Having seizure in the past 5 years has been associated with increased risk of poor quality of life (QOL), limitations work opportunities, mood disorders and greater incidence of stigma. Also, among patients who don't achieve seizure freedom, reductions in seizure frequency or severity may not improve QOL. Effective communication among patients, caregivers, and healthcare professionals is needed to report these patient experiences and improve outcomes and overall QOL **(Josephson et al., 2017; Thurman et al., 2017).**

Epilepsy management covers a variety of ways other than seizure control with fewer treatment side effects. These ways include social and psychological interventions to help people with epilepsy to lead a normal life and reduce the impacts of the disease and treatment on their QOL. Consequently, to provide a comprehensive management to the patients, quality of life assessment should be an element of the clinical assessment and believed to be a vital outcome measure for them (**Badawy et al., 2018).**

Evidence-based practices (EBP), which initiated in the field of medicine, are now central to the practice and vocabulary of all nurses and considered the gold standard in the delivery of health care. Epilepsy specialist nurses as vital members of the healthcare team have a critical role in advancing the evidence-based practice agenda. In addition, international literature on specialist and advanced practice identifies the need for nurses to be knowledge agents linking evidence to practice, opinion leaders influencing front-line nursing staffs' views on evidence and be involved in the generation and dissemination of evidence. However a significant body of research exists on nurses' knowledge and attitudes to EBP and the barriers to nurses implementing EBP (**Higgins et al., 2019; Veeramah, 2016).**

Many factors influence the quality of life of people with epilepsy, including fear, seizure severity, stigma and the presence of psychiatric or cognitive problems. Patient's education is an important element of quality care and is considered to be a therapeutic outcome for PWE. This helps the

person follow good self‑management practices. Self‑management in PWE refers to adaptive health behaviors and activities that an individual can perform to enhance well‑being and promote seizure control **(Ghosh & Baruah., 2022).**

Significance of the study:

Epilepsy is one of the most common chronic neurologic diseases, affecting over 50 million people worldwide, including 6 million in Europe and 3.4 million in the United States. In addition, epilepsy is the fifth leading contributor to the global disease burden for neurologic disorders, after stroke, migraine, dementia, and meningitis **(Becker, 2021).**

Nurses play a critical role in promoting the best health outcomes for people with epilepsy by reporting information about the disease, discussing treatment options with patients and their families and teaching self-management skills. The nurse's role in seizures presents numerous psychosocial challenges as the disease is a highly stigmatized, frequently misunderstood condition that may limit mobility and employment, in addition to educational and social opportunities**.** As well as teaching patients and their family members about treatments, nurses must act as advocates, helping patients find appropriate community resources, educating the public at large and promoting positive attitudes toward people with epilepsy **(Abd-Elmageed et al., 2022).**

Aim of the study:

To evaluate the effect of implementation of evidence based guidelines regarding epilepsy management for patients and their family members through:

I. Assessing patients and family members' level of knowledge regarding epilepsy management.

II. Assessing patients' awareness regarding epilepsy management.

III. Assessing family members' reported practices regarding first aids of epilepsy attack.

IV. Implementing evidence based guidelines regarding epilepsy management for patients and their family members.

V. Evaluating the effect of implementation of evidence based guidelines regarding epilepsy management for patients and their family members.

Operational definition:

Evidence based guidelines for epilepsy management:

Evidence-based practices (EBP) are central to the practice and considered the gold standard in the delivery of health care. Evidence based guidelines for epilepsy management includes: promoting self-management, antiepiliptic drugs (AED) adverse effects, dietary management, seizure first aids and reducing sudden unexplained death in epilepsy (SUDEP).

Hypotheses:

H1: The implementation of evidence based guidelines will have a positive effect on improving patients and family members' level of knowledge regarding epilepsy management.

H2: The implementation of evidence based guidelines will have a positive effect on improving patients' awareness of patients regarding epilepsy management.

H2: The implementation of evidence based guidelines will have a positive effect on improving family members' reported practices regarding epilepsy management.

Subjects & Methods

I. Technical design:

Research design:

A quasi-experimental design was used in this study.

Quasi experimental design is one that resembles an experiment, but lacks at least one of its defining characteristics. In quasi experimental design, the experimenter presents some independent variables to two preexisting groups. A quasi experiment leaves open the possibility that other differences exist between the experimental and control conditions and thus permit other potential differences to remain **(Singh, 2021)**.

Setting:

The study sample was conducted at the neurologic outpatient clinic affiliated to Ain Shams University hospitals, Cairo, Egypt.

Sample:

A purposive sample of 60 patients and 60 family members were attended at the above mentioned setting.

Patients and family members were selected according to the following *inclusion criteria:*

- Willing to participate in the study.
- Able to communicate and answer questions.

Exclusion criteria:

- Patients who had no previous history of psychosis or mental disorders.

Sample size calculation:

The sample size estimated by using the following equation:

$$n = \frac{N \times p\,(1\text{-}p)}{\{N\text{-}1 \times (d^2 \div z^2)\} + p\,(1\text{-}P)\}}$$

N x p(1-p)	=(71*(0.5*(1-0.5)
N-1	=(71-1)*
d^2/z^2	=0.0025 / 3.8416+
p(1-p)	=0.5*(1-0.5)
N	= 60.1= 60

N= Community size

z= Class standard corresponding to the level of significance equal to 0.95 and 1.96

d= The error rate is equal to 0.05

p= Ratio provides a neutral property = 0.50 *(Suresh & Chandrashekara, 2012).*

Based on the equation, the sample size is 60 patients and 60 family members participated in this study.

Tools for data collection:

Tool I- Structured interview questionnaire:

It was developed by the researchers based on recent literature review **(Chaitra et al., 2019; Mersal et**

al., 2021; Mohamed et al., 2017). It included the following parts:

Part 1: Patients' personal characteristics as age, gender, educational level, occupation and family history of epilepsy.

Part 2: Family members' personal characteristics as age, gender, educational level, occupation and his/ her relation to patient.

Part 3: Knowledge assessment questionnaire:

This questionnaire was used to assess level of knowledge of patients and family members regarding epilepsy and its management. It consisted of 25 questions and reflecting 4 parts: meaning of epilepsy (3 items); causes and risk factors of epilepsy (4 items); signs and symptoms of epilepsy (3 items), epilepsy management included antiepileptic drugs and adverse effects (4 items), diet management (3 items), seizure first aids (5 items) and reducing sudden unexplained death in epilepsy (3 items).

Scoring system of knowledge assessment questionnaire

- The knowledge assessment questionnaire consisted of 25 closed-ended questions and formed of multiple choice, the score 1 for the correct answer, and 0 for incorrect answer.

- The total knowledge scores ranged from 0 to 25 and were categorized as satisfactory if the score $\geq$ 75% of the total score and unsatisfactory < 75% of total scores.

Tool II: Epilepsy risk awareness scale (ERA scale).

This scale was adapted from **Ison et al., (2020)** to assess the risk level of people with epilepsy. It consisted of 30 items and reflecting 3 parts: personal safety (10 items), health care (11 items) and quality of life (9 items).

Scoring system of epilepsy risk awareness scale:

Each item of the scale had 2 responses and was scored as 1 for "yes" and zero for "no" response. The mean scores were calculated pre and post implementation and total scores ranged from 0 to 30 with higher scores reflecting higher awareness of patients with epilepsy regarding personal safety, health care and quality of life.

Tool III: Family members' reported practices questionnaire.

This questionnaire was developed by the researchers based on literature review (**Al.Zubaidi et al., 2017; Chaitra et al., 2019**). It consisted of 5 items to assess family member's practices regarding first aids measures that they provide to their family member during attack of epilepsy.

Scoring system of family member's reported practices questionnaire:

- Each item of the questionnaire had 2 responses and was scored as 1 for "done" and zero for "not done". The mean scores were calculated pre and post implementation and total scores ranged from 0 to 5 and were categorized as satisfactory if the score $\geq$ 75% of the total score and unsatisfactory < 75% of total scores.

II. Operational design:

Preparatory phase include reviewing the available literatures and diverse studies related to

evidence based practices for epilepsy management using books, articles and internet to develop the study tools for data collection.

Content Validity

The study tools were tested for validity by a panel of 5 experts from the faculty of nursing-Helwan University (adult health nursing department) for judgment of clarity, comprehensiveness, relevance of sentences, and appropriateness of content.

Reliability of the tools

Cronbach's Alpha was used to test reliability of the tools. All tools used in the present study showed good reliability. It calculated as follows: knowledge assessment questionnaire cronbach's alpha =0.801, Epilepsy risk awareness scale cronbach's alpha =0.780 and Family member's reported practices questionnaire cronbach's alpha =0.754 (**Mohajan, 2017**).

Pilot Study

A pilot study was conducted on 10 % of the sample (6 patients and 6 family members) to test the applicability and clarity of the tools and estimate the time needed to fill in the tools. Subjects participated in the pilot study were not excluded from the main study sample as no modifications were done.

Field Work

Data collection was completed within 9 months in the period from beginning of October 2021 until the end of June 2022

- Each patient was attending to the neurologic outpatient clinic 1day /week and the researchers interviewed the patients and introduced themselves to them.

- The researchers were available at the clinic one day /week and interview about 4-5 patients and their family members.

- The time needed for collecting the study tools was about 25- 30 minutes for each patient and 20-25 minutes for each family member.

Field work constructed of four phases as the following:

1. Assessment phase: The initial stage was done by using pretest to assess level of knowledge and awareness of patients, as well as, level of knowledge and reported practices of family members regarding epilepsy management to determine the baseline data and plan for implementing evidence based guidelines for patients and their family members.

2. Planning phase: Based on the outcome of the assessment phase, the evidence based guidelines were adapted from **Smith et al, (2019)** after reviewing of the related literature. Detected needs and deficiencies were changed into aim to evaluate the effect of evidenced based guidelines for patients and their family member regarding epilepsy management.

- The teaching methods were: Lectures, group discussions and demonstration and teaching media were booklet and pictures.

3. Implementation phase:

- In this phase, the evidence based guidelines were implemented by the researchers for the

study sample. These guidelines contained two parts:

Theoretical part:

1. The theoretical part was given through 4 sessions; each session lasted for about 45 minutes with total time 3 hours. These teaching sessions were done in groups (10 patients and their family members/ session).

2. Teaching sessions included the following contents: meaning of epilepsy, causes and its risk factors, signs and symptoms of epilepsy, epilepsy management included antiepileptic drugs and adverse effects, diet, seizure first aids and reducing sudden unexplained death in epilepsy.

B-Practical part:

▪ Practical part included 2 demonstration sessions regarding first aids measures during seizure episode; each session lasted for about 45 minutes with total time 1.5 hours. These teaching sessions were done in groups (10 patients and their family members/ session).

Seizure first aids:

▪ Patients and family members must be aware of first aids measures during seizure as preventing injury by clearing the area from any sharp or dangerous objects, avoid restraining the person and putting water, oral medications, or food in the person's mouth, turning patient's head to the side to aid breathing and reduce the risk of post seizure vomiting and calling emergency, if it lasts more than 5 minutes.

4. Evaluation phase: This phase was performed for both patients and their family members through

using the same tools of pre-test, after completing all sessions to evaluate the effect of implementation of evidenced based guidelines regarding epilepsy management for patients and their family member.

III. Administrative design

An official letter delivered from the Faculty of Nursing, Helwan University, including the aim of the study, was forwarded to the director of the neurologic outpatient clinic, affiliated to Ain Shams University Hospitals, to obtain permission to conduct the study.

Ethical Considerations

Prior to collecting the data, an informed oral consent was obtained from patients and their family members. Patients and their family members received the information including the purpose, benefits of this study and data collection procedures. They were informed about their rights to refuse or withdraw at any time without any reason. Also, they were assured that the information given will be remained confidentially and used for the research purpose only.

IV. Statistical design

The collected data were organized, tabulated and statistically analyzed using the Statistical Package for Social Sciences (SPSS), version 20. For Numerical data, the range, mean and standard deviation were calculated. Qualitative data were presented as frequencies and percentages. Comparison between groups was done by chi-square test and T test. A p-value ≤ 0.05 was considered statistically significant.

Results

Table (I): illustrates that 50.0% of the studied patients aged from 30 to less than 40 years with a mean age (32.47 $\pm$ 7.02). 56.7% of the studied patients were male. As well, 46.7% of them had university education. Concerning occupation, 60.0% of the studied patients were working at private settings and 61.6% of them had family history of epilepsy.

Table (2): presents that 48.4% of the studied family members were in the age group from 50 to less than 65 years with a mean age (51.81 $\pm$ 10.02). 63.3% of the family members were female and 35.0% of them had a primary education, as well, 43.3% of them were working at governmental settings. Concerning relation to patient; 70.0% of the studied family members had mother- father relation to their patients.

Figure (1): shows that 76.7% of the studied patients had total satisfactory level of knowledge post implementation compared to 38.3% of them pre implementation. There were high statistically significant differences between total satisfactory scores of knowledge of studied patients pre to post implementation with (P value 0.001).

Figure (2): reveals that 85.0% of the studied patients had total satisfactory level of knowledge post implementation compared to only 15.0% of them pre implementation. There were high statistically significant differences between total

satisfactory scores of knowledge of studied family members pre to post implementation with (P value 0.000).

Table (3): illustrates that there were high statistically significant differences between some scores of personal safety of studied patients pre to post implementation as training of family members in first aid for seizures, having a heat controlled shower, gas cooker alarm and bathroom/ toilet doors open outwards, as well, noting all seizures related injuries with (P value 0.000).

Table (4): presents that there were high statistically significant differences between some scores of health care of studied patients pre to post implementation as description of seizure events in details, identification of type and cause of epilepsy and recording of seizures in a seizure diary, as well, measuring levels of antiepileptic drug regularly and ability of family members to tell potential drug side effects with (P value 0.000).

Table (5): shows that there were high statistically significant differences between quality of life scores of studied patients pre to post implementation with (P value 0.000).

Table (6): illustrates that there were high statistically significant differences between reported practices scores of the studied family members pre to post implementation with (P value 0.000).

Table (1): Frequency and percentage distribution of the studied patients according to their demographic characteristics (N=60).

Patients' Characteristics		No	%
Age (in years)	20 - < 30	15	25.0
	30 - < 40	30	**50.0**
	40 - < 50	13	21.7
	50 - < 60	2	3.3
Mean ± SD	32.47 ± 7.02		
Gender	Male	34	**56.7**
	Female	26	43.3
Educational level	Doesn't read or write	10	16.7
	Primary education	8	13.3
	Secondary education	12	20.0
	University	28	**46.7**
	Post graduate	2	3.3
Occupation	Governmental work	12	20.0
	Private work	36	**60.0**
	Not working	12	20.0
Family history of epilepsy	Yes	37	**61.6**
	No	23	38.3

Table (2): Frequency and percentage distribution of the studied family members according to their demographic characteristics (N=60).

| Patients' Characteristics		No	%
Age (in years)	20 - < 30	3	5.0
	30 - < 40	8	13.3
	40 - < 50	20	33.3
	50 - < 65	29	**48.4**
Mean ± SD	51.81 ± 10.02		
Gender	Male	22	36.7
	Female	38	**63.3**
Educational level	Doesn't read or write	15	25.0
	Primary education	21	**35.0**
	Secondary education	12	20.0
	University	10	16.7
	Post graduate	2	3.3
Occupation	Governmental work	26	**43.3**
	Private work	18	30.0
	Not working	16	26.7
Relation to patient	Mother- father	42	**70.0**
	Sister- brother	12	20.0
	Son- daughter	6	10.0
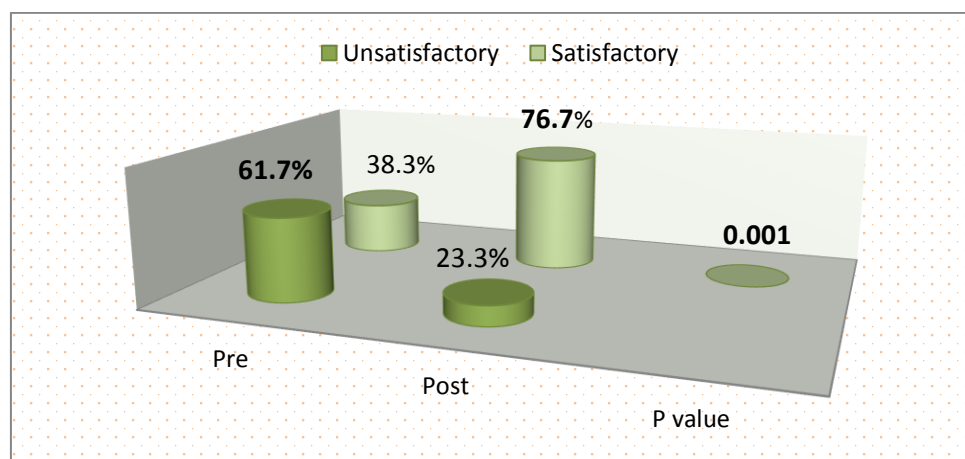
Figure (1): Comparison of total satisfactory & unsatisfactory level of knowledge of the studied patients' pre and post implementation (N=60).
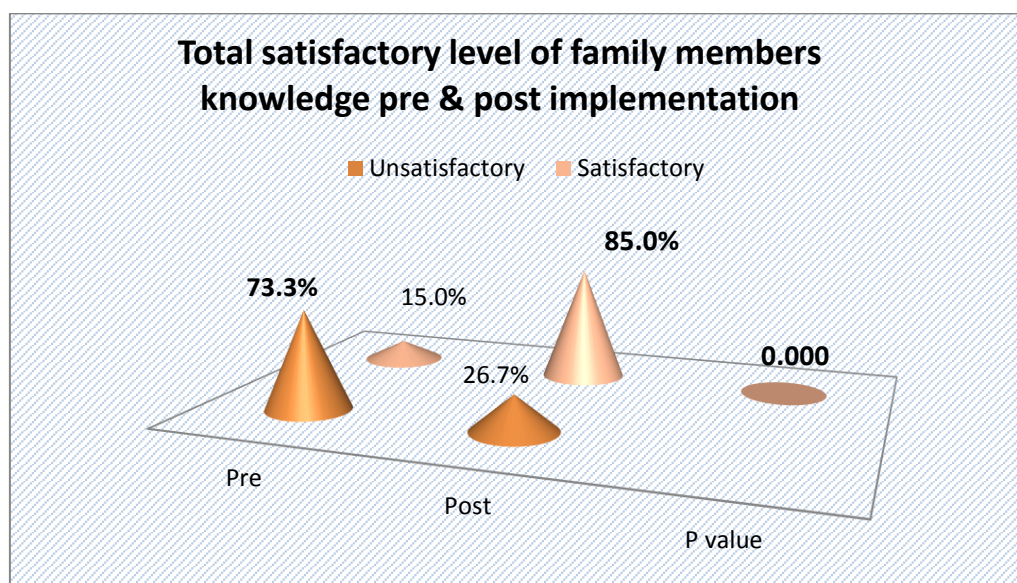

Figure (2): Comparison of total satisfactory & unsatisfactory level of knowledge of the studied family members pre and post implementation (N=60).

Table (3): Comparison of personal safety scores among the studied patients pre and post implementation (N= 60)

Items	Pre		Post		X2	P value
	No	%	No	%		
Personal safety						
▪ Family members are trained in first aid for seizures.	24	40.0	44	73.3	10.3	0.001 **
▪ Having an emergency epilepsy plan (rectal diazepam medication).	15	25.0	47	78.3	5.35	0.019 *
▪ Family members are aware of safety plan (telephone to call).	9	15.0	37	61.7	6.58	0.01 *
▪ Wearing or carrying any identification for epilepsy.	15	25.0	30	50.0	8.43	0.02*
▪ Having a heat controlled shower.	24	40.0	46	76.7	12.1	0.000 **
▪ Having a gas cooker alarm.	18	30.0	39	65.0	13.8	0.000 **
▪ Bathroom/ toilet doors open outwards.	18	30.0	35	58.3	18.3	0.000 **
▪ Having an epilepsy alarm in bedroom.	18	30.0	37	61.7	5.14	0.02 *
▪ Having side rails on bed.	15	25.0	36	60.0	10.7	0.04 *
▪ All seizure related injuries are noted and investigated.	21	35.0	36	60.0	21.5	0.000 **
Total mean score	2.95+ 1.03		6.83 + 1.07		T test value	24.88P 0.000 **

* **Significant (S) p $\leq$0.05**   * * **Highly significant (HS) p$\leq$0.001.**

Table (4): Comparison of health care scores among the studied patients pre and post implementation (N= 60).

Items	Pre		Post		Chi square	P value
	No	%	No	%		
Health care						
Seizure events are described in details.	24	40.0	44	73.3	11.8	0.000**
Type of epilepsy is identified	18	30.0	45	75.0	12.8	0.000**
The cause of epilepsy is known	12	20.0	41	68.3	14.6	0.000**
Seizures are recorded in a seizure diary	15	25.0	42	70.0	12.8	0.000**
Having diagnostic tests regarding epilepsy	15	25.0	44	73.3	10.9	0.03 *
Thinking that seizures are controlled	18	30.0	47	78.3	10.6	0.001 *
Seeing a neurologist regarding epilepsy and management	12	20.0	42	70.0	9.6	0.001*
Going for appointments at outpatient clinic.	15	25.0	41	68.3	10.9	0.041 *
Taking antiepileptic drugs as prescribed	15	25.0	47	78.3	8.2	0.03 *
Antiepileptic drug levels are measured regularly	15	25.0	37	61.7	17.3	0.000**
Family members are able to tell potential drug side effects and/or toxicity	18	30.0	38	63.3	13.9	0.000**
Total mean score	3.0 ± 1.77		8.48 ± 1.62		T test 18.94 P value 0.000 **	

   * Significant (S) p ≤0.05   *** * Highly significant (HS) p≤0.001**

Table (5): Comparison of quality of life scores among the studied patients pre and post implementation (N= 60)

Items	Pre		Post		X2	P value
	No	%	No	%		
Quality of life						
▪ Daily activities include variety of preferred and interesting experiences.	21	35.0	42	70.0	110.7	0.000**
▪ Following a healthy diet as recommended	12	20.0	46	76.7	96.8	0.000**
▪ Sleep patterns are regular and sufficient to avoid sleep deprivation	9	15.0	50	83.3	93.1	0.000**
▪ Bowels movements are regular to avoid diarrhea or constipation	12	20.0	49	81.7	95.0	0.000**
▪ Awareness of what might set off seizures	18	30.0	52	86. 7	95.9	0.000**
▪ Having an ability to avoid triggers of epilepsy	18	30.0	45	75.0	102	0.000**
▪ Patient's mood and behavior are taken into account in treatment.	12	20.0	44	73.3	98.1	0.000**
▪ Having an access to mental health care as needed.	12	20.0	50	83.3	94.5	0.000**
▪ Having an access to counseling as needed.	12	20.0	37	61.7	103.9	0.000**
Total mean score	2.10 ± 1.0		6.91 ± 1.22		T test 23.66 P value 0.000 **	

* **Significant (S) p $\leq$ 0.05**   * * **Highly significant (HS) p$\leq$0.001**

Table (6): Comparison of reported practices scores of the studied family members pre and post implementation (N= 60)

Items	Pre		Post		Chi square	P value
	No	**%**	**No**	**%**		
▪ Preventing injury by clearing the area from any sharp or dangerous objects.	21	35.0	50	83.3	20.5	0.000**
▪ Avoid restraining the person.	20	33.3	52	86. 7	18.3	0.000**
▪ Avoid putting water, oral medications or food in the person's mouth.	23	38.3	54	90.0	21.0	0.000**
▪ Turning patient's head to the side to aid breathing and reduce the risk of post seizure vomiting.	30	50.0	55	91.7	5.09	0.000**
▪ Calling emergency, if it lasts more than 5 minutes.	30	50.0	56	93.3	4.57	0.000**
Total mean score	2.40 ± 1.87		4.55 ± 2.01		T test 20.82 P value 0.000 **	

* Significant (S) p ≤0.05   * * Highly significant (HS) p≤0.001   *** Negatively scored items

Discussion:

Regarding the demographic characteristics of patients, half of the studied patients aged from 30 to less than 40 years with a mean age (32.47 $\pm$ 7.02). This result was in disagreement with **Kiwanuka & Olyet (2018),** who carried out a study about "Knowledge, attitude, and beliefs on epilepsy among adults in Erute South, Lira District, Uganda ", and mentioned that about half of the studied patients aged from 26 to less than 35 years.

The results of the present study revealed that more than half of the studied patients were male and less than half of them had university education. This result was in the same line with **Al-Dossari et al. (2018),** who reported in their study about " Public knowledge awareness and attitudes toward epilepsy in Al-Kharj Governorate Saudi Arabia", that more than half of the studied patients were male and had university education.

The study result illustrated that more than half of the studied patients were working at private settings. This result was inconsistent with **Kiwanuka & Olyet (2018)** who mentioned that more than half of the studied patients were unemployed. This may be due to that half of the sample was in their third and fourth decades of age, in addition to about half of them had university education which qualified them for working.

The present study revealed that less than two thirds of the studied patients had family history of epilepsy, this result is in accordance with **Mersal et al. (2021**), in Egypt in their study about" Impact of applying evidence-based guidelines for epileptic

patient on their knowledge, self- efficacy, drug adherence and quality of life ", who found that two thirds of studied sample had family history of epilepsy. This finding explained by the fact that, inheritance considered a risk factor for certain type of epilepsy.

Regarding the demographic characteristics of family members, less than half of the studied family members were in the age group from 50 to less than 65 years with a mean age (51.81 $\pm$ 10.02) and more than one third of them had a primary education. This result was in disagreement with **Karimi & Akbarian (2016),** who carried out a study about " Knowledge and attitude toward epilepsy of close family members of people with epilepsy in north of Iran ", and mentioned that more than one third of the close family members aged from 37 to less than 47 years and more than one third of them had diploma education.

The results of the present study revealed that about two thirds of the studied family members were female. this result was congruent with a study done by **Wang, et al. (2020),** who reported in their study in China about " An intensive education program for caregivers ameliorates anxiety, depression, and quality of life in patients with drug-resistant temporal lobe epilepsy and mesial temporal sclerosis who underwent cortico amygdalohippocampectomy", and showed that half of the studied family members were female.

The study result illustrated that more than one third the studied family members were working at governmental settings and more than two thirds of them had mother- father relation to their patients. This result was inconsistent with **Chauhan et al.,**

(2016) who mentioned in their study about "Problems, awareness and practices of caregivers of epileptic patients regarding home management of epilepsy" and stated that less than one third of caregivers had a governmental job and less than half of them had mother- father relation to their patients.

Concerning total satisfactory & unsatisfactory level of knowledge of the studied patients' pre and post implementation, majority of the studied patients had total satisfactory level of knowledge post implementation compared to minority of them pre implementation. There were statistically significant differences between total satisfactory scores of knowledge of studied patients pre to post implementation. This finding matched with the results of **Mersal et al. (2021)**, who reported that the majority of the studied patients had high knowledge in the item related to disease crisis, perception of anticonvulsant drugs and adherence at post guidelines implementation phases. Also statistically significant differences were found between pre and post implementation of guidelines phase in all items and total scores of epileptic patient's knowledge. This can be explained by the high educational level of patients raised their awareness about epilepsy and motivated them to improve their knowledge level.

Regarding total satisfactory & unsatisfactory level of knowledge of the studied family members pre and post implementation, majority of the studied family members had total satisfactory level of knowledge post implementation compared to minority of them pre implementation. There were high statistically significant differences between total satisfactory

scores of knowledge of studied family members pre to post implementation. This result is supported by **Wang et al. (2020)**, they stated that there was a statistically significant improvement in total satisfactory scores of knowledge of studied family members post implementation of caregiver intensive education program. This indicated that the family members receiving evidence base guidlines might have better efficacy in learning and practicing the knowledge about patients care and managing mood disorders.

The current findings showed that there were high statistically significant differences between some scores of health care of studied patients pre to post implementation. This finding matched the results of **Ghosh and Baruah (2022)**, in India about "The efficacy of educational intervention in enhancing person's ability to manage their epilepsy well: A systematic literature review ", who found that the planned educational intervention enhance health care of PWE by improving their sleep quality, decreasing stress, concern, and fears related to epilepsy. This reflects the remarkable effectiveness of evidence based guidlines in improving patients' understanding of their health condition, thus increased their satisfaction with the guidelines.

The present study results illustrated that there were high statistically significant differences between quality of life scores of studied patients pre to post implementation. This finding was similar to **Hu et al., (2020)**, in their study about " Effect of intensive self‑management education on seizure frequency and quality of life in epilepsy patients

with prodromes or precipitating factors", who stated that quality of life was improved among patients in study group after attending education and training session. And there were high statistically significant differences between quality of life scores of studied patients pre to post implementation except for seizure worry. This proved the effectivness of implement the evidence based guidlines on enhancing patients' quality of life.

The present study finding revealed that there were high statistically significant differences between some scores of personal safety of studied patients pre to post implementation. This results were congruent with a study done by **Pandey, (2020),** who reported in their study in USA about " Enhancing epilepsy self-management and quality of life for adults with epilepsy with varying social and educational backgrounds using PAUSE to learn your epilepsy", who found that there were statistically significant differences between all scores of personal safety of studied patients pre to post implementation. This reflects the patient's desire to learn and practice relieving measures to overcome this overwhelming problem that bother them.

The present study finding revealed that there were high statistically significant differences between reported practices scores of the studied family members pre to post implementation. This result is in the same line with **Al.Zubaidi et al., (2017),** who reported in their study about ''Assessment of knowledge and attitude and practice of parents towards epilepsy among children in Jeddah city'' and mentioned that the level of practice was inadequate among most of parents.

This can be explained by the effectiveness of the EB guidelines which facilitated family members's practices during first aids of family member with epilepsy attack.

Conclusion:

According to the results and hypothesis of the current study; the implementation of evidence based guidelines had a positive effect on improving patients and family members' level of knowledge regarding epilepsy management, patients' awareness as well as family members' reported practices regarding epilepsy management.

Recommendations:

- There is a need to activate implementation of epileptic guidelines manual in the hospitals.
- Educational programs about epilepsy should be provided periodically and continually to family members to equip them with the necessary knowledge and skills for proper management of the epileptic patients.
- Future research should explore the impact of the promotion of EBP on patient and family outcomes.

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