Mothers' Awareness regarding Care of their Epileptic Children

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Abstract

Background: Strengthening maternal awareness is essential to optimize care, reduce stigma, and promote better health outcomes in pediatric epilepsy. **The aim** of this study was to assess mothers' awareness regarding care of their epileptic children. **Research design:** Descriptive research design was utilized to conduct this study. **Setting:** This study was conducted in the Neurology Outpatient Clinic affiliated to Benha University Hospital, Egypt. **Sample:** Simple random sample of mothers had children with epilepsy included 218 mothers. **Tools: Two tools** were used **I):** An interviewing questionnaire which consisted of three parts. **Part I: A):** Socio-demographic characteristics of the studied mothers. **B):** Personal characteristics of the studied children with epilepsy. **C):** Medical history of the studied children. **Part II**: Mothers' knowledge regarding epilepsy. **Part III**: Mothers' reported practices regarding care of their children with epilepsy. **II):** Mothers' attitude scale regarding epilepsy. **Results:** 66% of the studied mothers had poor total level of knowledge regarding epilepsy, 74.8% of them had unsatisfactory total reported practices in caring for their children with epilepsy, and 59.6% of them had negative total attitudes regarding epilepsy. **Conclusion:** There were statistically significant positive correlation between studied mothers' total knowledge, total reported practices and total attitudes regarding epilepsy (P=< 0.01). **Recommendations:** Health educational program for mothers should be conducted in different grades with emphasis primary health care services especially for epileptic children care to improve the mothers' knowledge and attitudes.

Keywords**:** Mothers' awareness, Children Care, Epilepsy.

Introduction

One of the most prevalent chronic neurological diseases is childhood epilepsy. Epilepsy is characterized by a persistent predisposition to seizures and abnormal brain activity that causes unusual behavior, sensations, and sometimes loss of awareness, with neurobiological, cognitive, psychological and social consequences. Epilepsy affects

approximately 50 million individuals worldwide; it is estimated that there are 3.4–11.3 cases per 1,000 children. The cause of epilepsy includes genetic, structural, metabolic, infective, and neuroimmune causes *(Almomani et al., 2025)*.

Epilepsy remains the most common chronic neurological disease in children. Epileptic seizures occur as the direct result of a primary change in electrophysiological activity of the brain; they are a symptom of many different causes and therefore should be referred to as epilepsies. Its prevalence among children, ranging from 0.5% to 1%. It ranks as the fourth most common brain disorder. The global prevalence of epilepsy varies with age, with bimodal peaks at ages 5–9 years (374·8 cases per 100000 population) and in those older than 80 years (545·1 cases per100000 population). The incidence of epilepsy in childhood ranges from 41 cases to 187 cases per100000 population, with higher incidences reported from lower-middle income countries, especially in rural areas, at the two extremes of age *(Menon & Cross, 2025; Al-Ghawanmeh et al., 2025)*.

Epilepsy is caused by both modifiable and nonmodifiable risk factors. However, the causes are varied significantly between developing and developed countries. The main etiologies of epilepsy in developing countries are birth asphyxia, febrile seizures, perinatal and neonatal problems, and head related traumas. Whereas the common etiologies reported in developed countries are brain tumors, traumatic head injury, and cerebrovascular diseases. In addition, epilepsy is found to be higher in children with family history of seizure. More than 20% of childhood epilepsy is associated with genetic inheritance.

Furthermore, parasitic infections like onchocerca volvulus, neurocysticercosis, and infection with plasmodium species are associated with increased rate of childhood epilepsy *(Biset et al., 2024)*.

Knowing of the etiology of epilepsy is essential for treatment, follow-up, and the prediction of morbidity. To diagnose epilepsy, a wide range of clinical and laboratory tests are used. Along with detailed anamnesis, ElectroEncephaloGraphy (EEG), and brain-imaging methods to determine the seizure semiology of patients with epilepsy, metabolic and genetic tests have gained significance in increasing the diagnostic probability. Anti-seizure treatments of patients who are followed up with a diagnosis of epilepsy are adjusted according to the epilepsy type, EEG findings, underlying etiology, and prescribed duration of drug use *(Balcı et al., 2024)*.

Epilepsy type, seizure type, aetiology, and epileptic syndrome are the four categories used by the International League Against Epilepsy (ILAE) to classify epilepsy. Prior febrile seizures, birth trauma, head injuries, infections of the central nervous system such as neurocysticercosis, and a family history of epilepsy were discovered as risk factors for epilepsy. Classification of epilepsy based on whether the seizure type is focal or generalized is of primary importance in localization in the brain focus. There are four distinct phases of an epileptic seizure: Prodromal, aura, ictal, and postictal. The existence of these phases varies among children with epilepsy; for example, in contrast to other studies, one study found that many children with generalized epilepsy also had aura. Automatism is another manifestation of epilepsy observed mainly in children with focal epilepsy *(Nasir et al., 2023)*.

Pediatric epilepsy presents unique challenges that extend far beyond seizure control, significantly impacting multiple aspects of a child's life and the family's well-being. Children with epilepsy often experience comorbidities such as developmental delays, speech and language impairments, intellectual disabilities, and Attention Deficit Hyperactivity Disorder (ADHD), as well as other neurological and psychiatric conditions. These comorbidities contribute to difficulties in academic performance, social interactions, and emotional well-being, further compounding the challenges faced by families. Families often report increased stress, financial burdens, and strained interpersonal relationships as they adapt to caregiving roles *(Al-Ghawanmeh et al., 2025)*.

Mothers of children with epilepsy play a key role in the management of their child's condition. Their level of Health Literacy (HL), which refers to their ability to seek, understand, assess, remember, and utilize health information, is essential for handling the child optimally. Mothers play a crucial role in managing their children's condition by participating in the decision-making regarding treatment and acting as a team partner along with the multidisciplinary healthcare providers. In addition, mothers must cope with stress due to unpredictable seizures, administer drug treatments (both seizure-preventing and seizure-stopping drugs), try to adapt to a seizure-preventing lifestyle, and manage the strain placed on healthy siblings. Dealing with such a difficult situation requires knowledge, skills, and emotional resources on the part of the mothers. Also, interpreting the diagnosis of epilepsy which lay the groundwork for the child's understanding of the illness and its significance *(Sadanandan et al., 2023)*.

Community Health Nurses (CHNs) have important role in care of epileptic children, which the first role is promotive that includes improving the ability of mothers in performing emergency treatment to children with epilepsy at home. The second role is preventive where the role is being able to take actions that can prevent new problems from occurring, such as injuries. The third role is curative that involves providing nursing services by collaborating with other health teams to manage symptoms, and the fourth role is rehabilitative that help children to be more independent and adjust to the disease condition so that the children can recover and be able to do activities as before being admitted to the hospital *(Widyastuti et al., 2024)*.

Significance of the study:

Epilepsy is classified as a neurological condition impacting the nervous system, with varying occurrence and severity. Globally, more than 11 million children aged less than 15 years have active epilepsy. In Egypt, prevalence of childhood epilepsy is 123 /1000 per year with higher prevalence among children less than 12 years than adolescents. Idiopathic epilepsy was found in more than half of the affected children (59.4%) *(Kishk et al., 2024; Amro et al., 2025)*.

Building a strong relationship with mothers is considered one of the most effective approaches in the management of childhood epilepsy. Since some mothers may lack adequate awareness regarding the proper care of their epileptic children, assessing their level of awareness is essential*(Khuan et al., 2024).*

Therefore, this study was carried to assess mothers' awareness regarding the care of their epileptic children and contributed to effective seizure management, reduced complications, improved medication adherence, and enhanced quality of life for both children and families.

Aim of the study

This study aimed to assess mothers' awareness regarding care of their epileptic children.

Research questions

Q1- What is mother`s knowledge regarding epilepsy?

Q2-What are mother`s reported practices regarding care of their children with epilepsy?

Q3- What is mother`s attitudes towards children with epilepsy?

Q4- Is there a relation between the mother`s socio-demographic characteristics and their knowledge regarding care of their epileptic children?

Q5-- Is there a relation between the mother`s socio-demographic characteristics and their reported practices regarding care of their epileptic children?

Q6- Is there a relation between the mother`s socio-demographic characteristics and their attitude regarding care of their epileptic children?

Q7- Is there a correlation between the mother`s total knowledge and total reported practices and total attitude regarding care of their epileptic children?

Subjects and method

Research design

A descriptive research design was utilized to conduct this study.

Setting

This study was conducted in the Neurology Outpatient Clinic affiliated to Benha University Hospital.

Sampling

Simple random sample of mothers had children with epilepsy was used in this study. The total number of mothers that attended to the previously mentioned setting were (480) in the last six months and they were be chosen according to inclusion criteria; children aged < 1year to14 years, diagnosed with epilepsy, and mothers accepted to be involved in the study.

Tools for Data Collection: Two tools were used for data collection.

Tool I: An interviewing questionnaire: It was designed by the investigator after reviewing related literature to collect the required data, and was written in simple Arabic language and include:

Part I (A): Socio demographic characteristics of studied mothers and included 10 items.

Part I (B): Personal characteristics of studied children and included 4 items.

Part I (C): Medical and Family history of children regarding epilepsy and included 9 items.

Part II: Was concerned with mothers' knowledge regarding epilepsy and included 12 closed ended question.

Scoring system of knowledge: -

The questionnaire contained of 12 questions, each question was calculated as follows "the complete correct answer scored as two-degree, incomplete correct answer scored as one degree and the don't know scored as a zero". The total scores of the questionnaire 24 grades. These scores summed and converted into a percent score. It classified into 3 categories:

- **Good** →if the total score of knowledge was ≥ 75% (≥ 18 points).
- **Average**→ if the total score equals 50<75% (12< 18 points).
- **Poor** → if the total score was < 50% (< 12 points).

Part III: Was concerned with mothers' reported practices regarding care of their children with epilepsy and included 8 categories.

Scoring system of practices: -

The mothers reported practices contained of 76 items, each item evaluated as "done" scored as one degree and "not done" will be scored as a zero. The total scores were 76 grades. These scores summed and converted into a percent score. It classified into 2 categories:

-**Satisfactory** → if the total score of reported practices were ≥ 60%. (≥46 points)

-**Unsatisfactory**→ if the total score of reported practices were <60%. (< 46 points).

Tool (II): Was adapted from (**Idris, 2024**), and modified to assess mothers' attitudes regarding epilepsy which include 20 items.

Scoring system:

The scale contained of 20 items, the scale using a 3-point scale that ranges from 3 "agree", 2 "neutral" and 1 "disagree". The total scores of the scale 60 grades. These scores summed and converted into a percent score. It classified into 2 categories:

- **Positive** if score ≥ 60%. (≥36 points).
- **Negative** if score from <60%. (< 36 points).

Tools validity

Content validity of the tool was ascertained by five of Faculty's Staff Nursing Experts from the Community Health Nursing Specialists (five from Faculty of Nursing Benha University) who reviewed the tool for clarity, relevance, comprehensiveness and easiness for implementation and according their opinion minor modifications were done.

Tools Reliability

Reliability of the tools was applied by the investigator for testing internal consistency of the tools, by administration of the same tools to the same subject under similar condition on one or more occasion. The reliability of the tools were done by Cornback's Alpha coefficient test which revealed that each of the two tools consisted of relatively homogeneous items as indicated by the moderate to high reliability of each tool. The internal reliability for knowledge was (0.741), reported practices were (0.832), and attitudes were (0.755).

Ethical consideration

Approval and an informed consent was obtained from Research Ethical Committee at Faculty of Nursing, Benha University to conduct the study with Research code (REC-CHN- M53) and oral or written consent from all study participants was obtained after explaining the purpose of the study to gain their trust and cooperation. Each mother has a choice to continue or withdraw from the study. Privacy and confidentiality were assured. Ethics, values, culture, and beliefs were respected. The data collected was stored in confidential manner.

Pilot study

The pilot study was carried out on 10% (22 mothers) of the studied sample to test the clarity, objectivity, feasibility and applicability of tools, as well as to estimate the time needed for data collection. Based on pilot study, the modification as the tools included rephrasing and rearrangement of some questions. This study was carried out in one month before starting. The pilot study sample included from the study sample.

Field work

Data was collected at a period of 6 months which started from beginning February 2025 to end of July 2025. The investigator introduced herself and explained the aim of the study to each mother, data collection was done through interviewing with the mothers. Data collection was done at Neurology Outpatient Clinic affiliated to Benha University hospital in Benha City and average number of mothers was between 4-5 mothers a day depending on their responses. The average time needed for each tool was around 30-45 minutes. The investigator visited the selected clinics from 9 am to 12 pm, one day/week (Sunday& Thursday) to collect data.

Administrative approval:

Official letter was obtained from Dean of Faculty of Nursing, Benha University to the director of the Neurology Outpatient Clinic affiliated to Benha University Hospital concerned the title, objectives, tools and the study technique were illustrated to gain their cooperation which was needed to allow the investigator to meet mothers of child with epilepsy.

Statistical analysis

The statistical analysis of data was done by using the computer software of Microsoft Excel Program and Statistical Package for Social Science (SPSS) version 25. Data were presented using descriptive statistics in the form of frequencies and percentage for categorical data, the mean (X) and standard deviation (SD) for quantitative data. Chi square test used to assess the association between two variables. Correlation coefficient test (r) was used to test the correlation between studied variables. Reliability of the study tools was done using Cronbach's Alpha.

Degrees of significance of results were considered as follows:
- P-value ≥ 0.05 Not significant (NS).
- P-value < 0.05 Significant (S).
- P-value < 0.01 Highly Significant (HS).

Results

Table (1): Shows that; 42.2% of the studied mothers were in the age group of 30–<40 years, with a mean ± SD age was 33.37 ± 7.45 years. Regarding educational level, 51.8% of the studied mothers had secondary education. As for marital status, 78.9% of them were married. 80.7% of them were housewives and 61.0% of them lived in rural areas. The highest proportion of families, 53.7% were nuclear, and 52.8% of the families consisted of 3-<5 members. 52.8% of the studied mothers reported that their family monthly income was insufficient. Moreover, 58.7% of them had 1–2 children. 85.3% of them didn't have other children with the same disease, while among those who had (n=32) and 93.8% of them had one to two affected children.

Table (2): Shows that; 58.2% of the studied children aged from 1 - <5 years, with a mean ± SD age was 4.40 ± 3.17 years. 63.3% of them were males. As for the child's ranking among siblings, 45.9% of them were the second child, while 39.9% of studied children were not enrolled to nursery.

Figure (1): This figure demonstrates that; 66% of the studied mothers had poor total level of knowledge regarding epilepsy. Also, 23.9% of them had average level. While, 10.1% of them had good total level of knowledge regarding epilepsy.

Figure (2): This figure demonstrates that; 74.8% of the studied mothers had unsatisfactory total reported practices toward care of their children with epilepsy. While

25.2% of them had total satisfactory reported practices toward care of their children with epilepsy.

Figure (3): This figure illustrates that; 59.6% of the studied mothers had negative total attitudes score regarding epilepsy. While, 40.4% of them had positive total attitudes score regarding epilepsy.

Table (3): Illustrates that; there were highly statistically significant relations between the studied mothers' total knowledge level and their socio-demographic characteristics as age, educational level, marital status, family type, family monthly income and history from children with the same disease (P= < 0.01). While, there were no statistically significant relation with occupation and residence (P= > 0.05).

Table (4): Shows that; there were highly statistically significant relations between the studied mothers' total reported practices and their socio-demographic characteristics as age, educational level, marital status, family monthly income and history from children with the same disease (P= < 0.01). Also, there were statistically significant relations with occupation (P= < 0.05). While, there were no statistically significant relation with residence and family type at (P= > 0.05).

Table (5): Shows that, there were highly statistically significant relations between the studied mothers' total attitudes and their socio-demographic characteristics as age, educational level, marital status, family monthly income and history from children with the same disease (P= < 0.01). Also, there were statistically significant relations with residence and family type (P= < 0.05). While, there were no statistically significant relations with occupation (P= > 0.05).

Table (6): Shows that; there were statistically significant positive correlation between the studied mothers' total knowledge, total reported practices, and total attitudes regarding epilepsy (P= < 0.01).

Table (1): Frequency distribution of the studied mothers regarding their socio-demographic characteristics (n=218).

Socio-demographic characteristics of the studied mothers	No.	%
Age (years):		
20 -< 30	72	33.0
30 -< 40	92	**42.2**
40 -< 50	40	18.4
≥ 50	14	6.4
Mean ± SD= (33.37±7.45)		
Educational level:		
Illiterate	15	6.9
Read and write	22	10.1
Basic education	38	17.4
Secondary education	113	**51.8**
University education or above	30	13.8
Marital Status:		
Married	172	**78.9**
Divorced	30	13.8
Widowed	16	7.3
Occupation:		
Work	42	19.3
Not work (Housewife)	176	**80.7**
Place of Residence:		
Rural	133	**61.0**
Urban	85	39.0
Family Type:		
Nuclear family	117	**53.7**
Extended family	101	46.3
Number of family members:		
<3 members	14	6.4
<5 members	115	**52.8**
≥5 members	89	40.8
Monthly Family Income:		
Insufficient	115	**52.8**
Sufficient	89	40.8
Sufficient and saved	14	6.4
Number of Children:		
1-2 children	128	**58.7**
3-4 children	87	39.9
5 children or more	3	1.4
Have other Children with the same disease:		
Yes	32	14.7
No	186	**85.3**
If yes, how many children are affected? (n=32):		
1-2 children	30	**93.8**
3-4 children	2	6.2
More than 4 children	0	0.0

Table (2): Frequency distribution of the studied children with epilepsy regarding their personal data (n=218).

Personal data of studied children	No.	%
Age:		
< 1	30	13.8
1-<5	127	**58.2**
5-<10	46	21.1
10-15	15	6.9
Mean ± SD= (4.40±3.17)		
Gender:		
Male	138	**63.3**
Female	80	36.7
The child's ranking among his siblings:		
First	88	40.4
Second	100	**45.9**
Third	17	7.8
Fourth	13	5.9
Educational level:		
Not enrolled in nursery	87	**39.9**
Nursery school	70	32.1
Elementary school	46	21.1
Preparatory school	15	6.9

Figure (1): Percentage distribution of the studied mothers according to their total knowledge regarding epilepsy (n=218).

Total knowledge score

- 10.1% Good
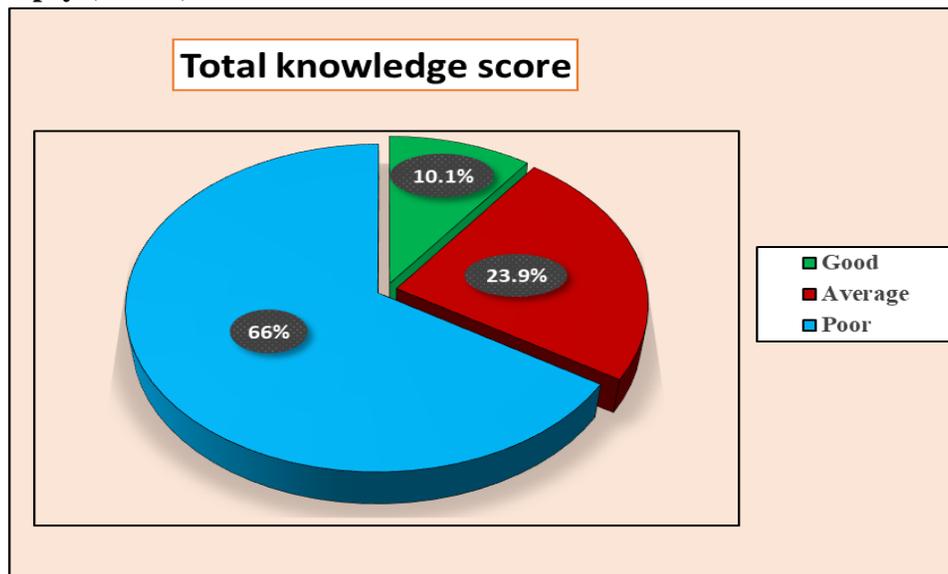- 23.9% Average
- 66% Poor

Figure (2): Percentage distribution of the studied mothers regarding their total reported practices about caring for their children with epilepsy (n=218).
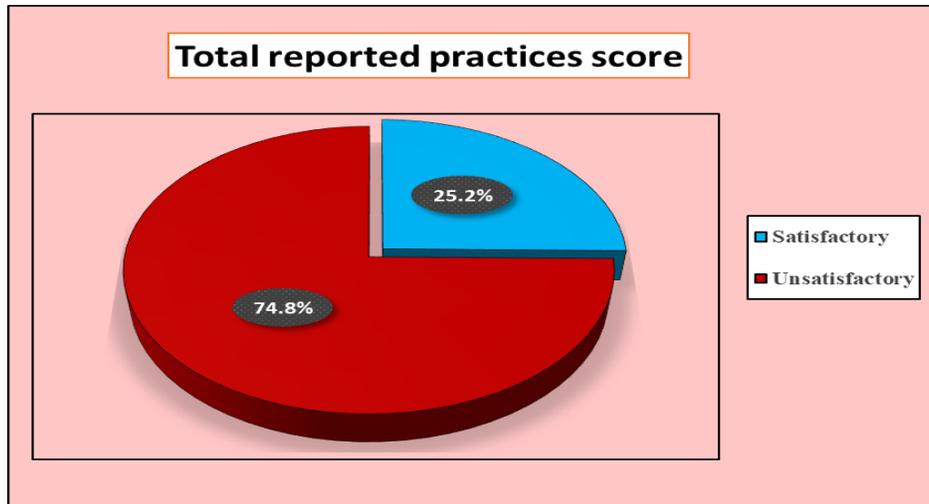
Figure (3): Percentage distribution of the studied mothers regarding their total attitude about epilepsy (n=218).
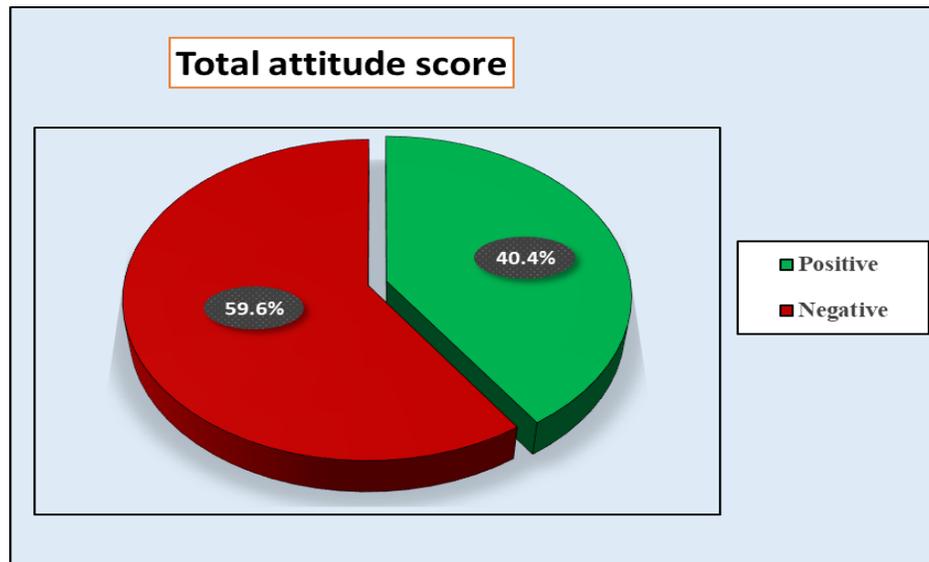

Table (3): Statistically relations between socio-demographic characteristics of the studied mothers and their total knowledge regarding epilepsy (n=218).

Socio-demographic characteristics		Total knowledge score						X^2	P-Value
		Good (n=22)		Average (n=52)		Poor (n=144)			
		No.	%	No.	%	No.	%		
Age (years)	20 -< 30	1	4.5	1	1.9	70	48.6	221.42	0.000**
	30 -< 40	4	18.2	17	32.7	71	49.3		
	40 -< 50	4	18.2	33	63.5	3	2.1		
	≥ 50	13	59.1	1	1.9	0	0.0		

Educational level	Illiterate (don't read and write)	0	0.0	0	0.0	15	10.4	49.62	0.000**
	Read and write	0	0.0	0	0.0	22	15.3		
	Basic education	0	0.0	12	23.1	26	18.0		
	Secondary education	14	63.6	25	4.1	74	51.4		
	University education and above	8	36.4	15	28.8	7	4.9		
Marital status	Married	6	27.3	36	69.2	130	90.3	145.68	0.000**
	Divorced	1	4.5	15	28.9	14	9.7		
	Widowed	15	68.2	1	1.9	0	0.0		
Occupation	Work	6	27.3	8	15.4	28	19.4	1.413	0.493
	Housewife	16	72.7	44	84.6	116	80.6		
Residence	Rural	5	22.7	38	73.1	90	62.5	16.87	0.111
	Urban	17	77.3	14	26.9	54	37.5		
Family type	Nuclear family	21	95.5	21	40.4	75	52.1	19.28	0.000**
	Extended family	1	4.5	31	59.6	69	47.9		
Family monthly income	Insufficient	17	77.3	7	13.5	91	63.2	54.66	0.000**
	Sufficient	5	22.7	34	65.4	50	34.7		
	Sufficient and saved	0	0.0	11	21.1	3	2.1		
Have other children with the same disease	Yes	15	68.2	17	32.7	0	0.0	88.53	0.000**
	No	7	31.8	35	67.3	144	100.0		

Notes: X^2= Chi-square test. No significant at p >0.05. **Highly significant at p ‹ 0.01.

Table (4): Statistically relations between socio-demographic characteristics of the studied mothers and their total reported practices score regarding epilepsy (n=218).

Socio-demographic characteristics		Total reported practices score				X^2	P-Value
		Satisfactory (n=55)		Unsatisfactory (n=163)			
		No.	%	No.	%		
Age (years)	20 -< 30	7	12.7	65	39.9	103.69	0.000**
	30 -< 40	7	12.7	85	52.1		
	40 -< 50	27	49.1	13	8.0		
	≥ 50	14	25.5	0	0.0		
Educational level	Illiterate (don't read and write)	0	0.0	15	9.2	26.28	0.000**
	Read and write	1	1.8	21	12.9		
	Basic education	14	25.5	24	14.7		
	Secondary education	24	43.6	89	54.6		
	University education and above	16	29.1	14	8.6		
Marital status	Married	38	69.1	134	82.2	55.94	0.000**
	Divorced	1	1.8	29	17.8		

	Widowed	16	29.1	0	0.0		
Occupation	Work	16	29.1	26	16.0	4.565	0.033*
	Housewife	39	70.9	137	84.0		
Residence	Rural	34	61.8	99	60.7	0.020	0.887
	Urban	21	38.2	64	39.3		
Family type	Nuclear family	35	63.6	82	50.3	2.939	0.086
	Extended family	20	36.4	81	49.7		
Family monthly income	Insufficient	29	52.7	86	52.8	24.42	0.000**
	Sufficient	15	27.3	74	45.4		
	Sufficient and saved	11	20.0	3	1.8		
Have other children with the same disease	Yes	32	58.2	0	0.0	111.15	0.000**
	No	23	41.8	163	100.0		

Notes: X^2= Chi-square test.　　No significant at p >0.05. ***** Significant at p <0.05.　******Highly significant at p ‹ 0.01.

Table (5): Statistically relations between socio-demographic characteristics of the studied mothers and their total attitudes score regarding epilepsy (n=218).

Socio-demographic characteristics		Total attitude score				X^2	P-Value
		Positive (n=88)		Negative (n=130)			
		No.	%	No.	%		
Age (years)	20 -< 30	9	10.2	63	48.5	58.50	0.000**
	30 -< 40	37	42.0	55	42.3		
	40 -< 50	28	31.8	12	9.2		
	≥ 50	14	15.9	0	0.0		
Educational level	Illiterate (don't read and write)	0	0.0	15	11.5	34.30	0.000**
	Read and write	2	2.3	20	15.4		
	Basic education	13	14.8	25	19.2		
	Secondary education	51	58.0	62	47.7		
	University education and above	22	25.0	8	6.2		
Marital status	Married	55	62.5	117	90.0	31.97	0.000**
	Divorced	17	19.3	13	10.0		
	Widowed	16	18.2	0	0.0		
Occupation	Work	18	20.5	24	18.5	0.134	0.714
	Housewife	70	79.5	106	81.5		
Residence	Rural	45	51.1	88	67.7	6.047	0.014*
	Urban	43	48.9	42	32.3		
Family type	Nuclear family	56	63.6	61	46.9	5.895	0.015*
	Extended family	32	36.4	69	53.1		
Family monthly income	Insufficient	30	34.1	85	65.4	23.95	0.000**
	Sufficient	47	53.4	42	32.3		
	Sufficient and saved	11	12.5	3	2.3		
Have other children with the same disease	Yes	32	36.4	0	0.0	55.40	0.000**
	No	56	63.6	130	100.0		

Notes: X^2= Chi-square test.　　No significant at p >0.05. ***** Significant at p ‹ 0.05.　******Highly significant at p ‹ 0.01.

Table (6): Correlation matrix between total knowledge, total reported practices, and total attitudes of the studied mothers toward care of their children with epilepsy (n=218).

Variables	Total knowledge		Total reported practices	
	r	p-value	r	p-value
Total knowledge			0.772	0.000**
Total attitudes	0.759	0.000**	0.561	0.000**

r=Correlation coefficient test.   ******Highly significant at p ‹ 0.01.

Discussion

Regarding socio-demographic characteristics of the studied mothers, the present study findings showed that more than two fifths of the studied mothers were in the age group of 30–<40 years, with a mean ± SD age was (33.37 ± 7.45) years (Table1). This finding was aligned with the study performed by *Batibay & Muslu (2025)*, who studied " Evaluation of the Attitudes of Mothers with Children with Epilepsy toward Rational Drug Use, in Turkey", (n=200), and found that more than two fifths (49 %) of the studied mothers' age were between 30-39 years old. Moreover, this finding objected to the study performed by *Agarwal et al. (2025)*, who studied " Parental Knowledge and Perceptions of the First Episode of Seizure in Children: A Single-Center Cross-Sectional Study, in India", (n=100), and found that; more than two thirds (71%) of the studied mothers' age was between 25-35 years old.

Regarding studied mothers' educational level and marital status, the present study findings showed that more than half of the studied mothers had secondary education and more than three quarters of them were married (Table1). These findings were consistent with the study performed by

Ibrahim et al. (2025), who studied " Mindfulness Based Program Effectiveness for Mothers of Children with Epileptic Fits, in Egypt", (n=120), and found that more than half (51.7 %) of their participants had secondary education and more than three quarters of them (76.3%) were married.

Concerning occupation of the studied mothers, the present study findings showed that the majority of them were housewives (Table1). This finding disagreed with the study performed by *Abu-Eleneen et al. (2025)*, who studied " Effect of Simulation-Based Education Intervention on Seizure Care and Maintaining Safety among Mothers of Epileptic Children, in Egypt", (n=53), and found that; two thirds (66%) of their studied mothers were worked.

According to place of residence, the present study findings showed that slightly more than three fifths of the studied mothers lived in rural areas (Table1). This finding agreed with the study performed by *Fawi et al. (2023)*, who studied " Prevalence of Idiopathic Epilepsy among Primary School Children in Qena City, Qena governorate, Egypt", (n=80), and found that less than two thirds (64.5 %) of them were living in rural areas with low social

class. On the other hand, this finding was in opposition to the study performed by Hassan et al. (2023), who found that; less than three quarters (73.8%) of their studied mothers were living in urban areas.

Regarding type of family, the present study findings showed that more than half of families were nuclear (Table1). This finding was in the same line with the study performed by *ELsayed et al. (2022)*, who studied " Parent`s Awareness Regarding their Epileptic Children in Minia University Maternal and Children Hospital, in Egypt ", (n=250), and found that; more than half (56.4%) of their families were nuclear.

Regarding family monthly income, the present study findings showed that more than half of the studied mothers reported that their income was insufficient (Table1). This finding agreed with the study performed by *Hassan et al. (2023)*, who studied " Effect of Maternal Practices Educational Program on Quality of Life for Their Epileptic Children, in Egypt", (n=80), and found that more than half (55%) of their studied mothers had not enough monthly income. While, these findings disagreed with the study performed by *Alburaidi et al. (2024)*, who studied " Knowledge, Attitudes, and Traditional Practices Towards Epilepsy among Relatives of Patients with Epilepsy, in Saudi Arabia", (n=180), and found that almost two thirds (64.8) of them had sufficient and saved monthly income.

Regarding age and gender of the studied children with epilepsy the present study findings showed that slightly less than three fifths of the studied children aged between 1-<5 years, with a mean ± SD age was (4.40 ± 3.17) years and more than three fifths of them were males (Table 2). These findings were in opposition to the study performed by *Amer et al. (2025)*, who studied " Effect of Continuous Care Model on Self-care and Self -efficacy for

Children with Epilepsy, in Egypt", (n=80), and found that less than half (46.3%) of their studied children were in the age group of 12 < 15 years, with mean ±SD= 12.92 ±2.83 years and more than half (53.8%) of them were females. From the investigator's point of view, this might be due to increased exposure to perinatal and early childhood risk factors such as birth complications, infections, or congenital abnormalities, which are commonly associated with epilepsy at younger ages.

As for the child's ranking among siblings, the results of the current study showed that more than two fifths of the studied children were second child (Table 2). This finding was in accordance with the study performed by *Barakat et al. (2024)*, who studied " Effect of Psychological Empowerment Program on Feeling of Burden and Self efficacy among Mothers of Children with Epilepsy, in Egypt", (n=40), and found that less than half (47.5%) of their studied children were the second in their birth order.

According to total knowledge of the studied mothers about epilepsy, the findings of the current study showed that two thirds of the studied mothers had poor total level of knowledge regarding epilepsy. Also, more than one fifth of them had average level. While, tenth of them had good total level of knowledge regarding epilepsy (Figure 1). these results were in the same line with *Alanazi et al. (2024)*, who found that more than three fifths (65%) of the studied mothers had poor total level of knowledge regarding epilepsy. Also, one fifth (20%) of them had average level, while, less than one fifth (15 %) of them had good total level of knowledge. In addition; this study was incongruent with *Abdelgawad et al. (2025[a])*, who studied "Mothers' Perceptions of Potential Threats Associated with Epilepsy in

their Children, in Egypt", (n=120), and they showed that, minority (8.3%) of their studied mothers had poor total level of knowledge regarding epilepsy. Also, more than half (55%) of them had average level. While, more than one third (36.7 %) of them had good total level of knowledge. From the investigator's point of view, this might be due to inadequate access to accurate information or lack of structured training initiatives and limited awareness campaigns in the community.

According to the studied mothers' total reported practices level regarding care of their children with epilepsy, the findings of the current study found that; slightly less than three quarters of the studied mothers had unsatisfactory total reported practices, while more than one quarter of them had satisfactory total reported practices (Figure 2). These findings were incongruent with *Abdelgawad et al. (2025[b])*, who studied "The Impact of Nursing Intervention on the Care Burden Experienced by Mothers of Children with Epilepsy, in Egypt", (n=220), and they found that total mothers' reported practices regarding epilepsy, most (98.3%) of the studied mothers had unsatisfactory practices, minority (1.7%) of them had satisfactory practices. As well as, the study finding was incompatible with *Amer et al. (2025)*, who found that most (90%) of them had unsatisfactory practices regarding care of their children with epilepsy. While tenth (10%) of them had satisfactory practices. From the investigator's point of view; this might be due to gaps in formal education and training, combined with the challenges of balancing child care and household responsibilities.

According to total attitudes of the studied mothers regarding epilepsy, the findings of the current study showed that more than half of the studied mothers had negative total attitudes regarding epilepsy, while, two fifths of them had positive total attitudes regarding epilepsy (Figure 3). These findings

were symmetrical with the study performed by *Elmahey et al. (2024)*, who studied " Mother's Awareness regarding Epileptic Children, in Egypt", (n=440), and found that more than half (51%) of the studied mothers had negative attitudes regarding epilepsy. While, less than half (49%) of them had positive attitudes regarding epilepsy.

Also, these results disagreed with *Mohammed et al. (2024)*, who studied "Knowledge, Attitudes, and Practices of Parents Regarding Febrile Seizures in Al-Baha Region, Saudi Arabia: Across sectional study", (n=355) and they found that total score of attitudes had a mean of 17.55 ± 5.69. Overall, less than one fifth (17.5%) of the studied mothers had negative total attitudes toward seizures, while more than three fifths (62.2%) had total neutral one, and one fifth (20.3%) showed positive total attitudes. From the investigator's point of view, this result could be explained by insufficient counseling and follow-up provided by healthcare professionals, resulting in poor emotional support and limited opportunities for mothers to address their concerns and misconceptions. Also, negative maternal attitudes toward epilepsy might be influenced by prevailing social stigma and cultural misconceptions surrounding epilepsy, leading to fear, shame, and misunderstanding of the condition.

Regarding to relations between the mother`s socio-demographic characteristics and their total knowledge regarding epilepsy, the findings of the current study found that there were highly statistically significant relations between mothers' knowledge and their age, education level, marital status, family type, family monthly income and history from children with the same disease (P= < 0.01), while, there were no statistically significant relations with occupation and residence (P= > 0.05) (Table 3). These results agreed with *Hussein et al. (2025)*, who studied

"Knowledge and Attitudes of Mothers Regarding Febrile Convulsions among Children under Five – Years at Assiut City, in Egypt", (n=1010), and they showed that Significant associations were found between knowledge and age (P = 0.002), education level (P < 0.001), and previous training (P = 0.003). Additionally, mothers with children who had experienced febrile convulsions were more likely to have better knowledge (P = 0.033). While disagreed in relations with occupation and residence.

Also, these findings agreed with the study performed by *Idris (2024)*, who studied "Assess Awareness and Attitude among care givers of epileptic patients in Najran region, Saudi Arabia", (n=604), who revealed that there were significant associations between age, educational level, family type and family monthly income with the total level of knowledge among the studied sample where P less than 0.005. From the investigator's point of view, this is due to greater exposure, maturity, and access to information among more educated or experienced mothers. Occupation and residence showed no significant effect (P > 0.05), possibly because these factors do not directly influence access to epilepsy-related knowledge.

Regarding to relations between the studied mother`s socio-demographic characteristics and their total reported practices regarding care of their epileptic children, the findings of the current study found that there were highly statistically significant relations between mothers' total reported practices and their age, educational level, marital status, family monthly income and history from children with the same disease (P= < 0.01). Also, there were statistically significant relations with occupation (Table 4). these findings were supported with the study performed by *Elmahey et al. (2024)*, who found that there were highly statistically

significant relations between the studied mothers' age, marital status, mothers' level of education, occupation, family income and their total practices (p=<0.001). While, these findings were opposed with *Afifi et al. (2025)*, who studied "Effect of Video-assisted Training Program on Seizure Management and Anxiety level for Mothers of Children with Epilepsy, in Egypt", (n=60), and they showed that there were no statistically significant relations between total level of mothers` reported practices before, during and after seizure attack and their age, marital status, occupation and monthly income. From the investigator's point of view, this is due to the fact that older, educated, and experienced mothers with higher income are more capable of applying proper care practices, while occupation provides exposure to knowledge and organizational skills.

Regarding to relations between the studied mother`s socio-demographic characteristics and their reported attitudes towards epilepsy, the findings of the current study found that there were highly statistically significant relation between studied mothers' total attitudes and their education level, residence and family type (P= < 0.05) (Table 5). these findings were in the same line with the study performed by *ELsayed et al. (2022)*, who showed that there were statistically significant relation between mothers attitudes level and their educational level, age, family type and residence p value 0.001, 0.001, and 0.01 respectively. While, these study results opposed with *Hussein et al. (2025)*, who showed that there were statistically significant differences between mothers' total attitudes toward convulsions and education level, residence and family type. From the investigator point of view, this is due to differences in awareness, access to health information, and the influence of family and community context on caregiving beliefs.

Regarding to correlation between total knowledge, total reported practices and total attitudes of the studied mothers regarding epilepsy, the findings of the current study found that there were statistically significant positive correlation between the studied mother's total knowledge, total reported practices, and total attitudes regarding epilepsy (P= < 0.01) (Table 6). These findings agreed with **Abd Elghfar et al. (2024)**, who studied "Effect of Health Education on Mothers' Knowledge and Practices about Care of Children with Epilepsy and Administration of Antiepileptic Drugs, in Egypt", (n=60), and they displayed that there were statistically significant correlation between mother's knowledge and practices and between mothers' attitudes and practices. On the other hand, these study findings were incompatible with **Nashaat et al. (2022)**, who studied "Effect of Nursing Intervention Program on Mothers' Knowledge, Practices and Attitudes toward Management of their Children with Epilepsy and Intellectual disability, in Egypt", (n=71), and they displayed that there were statistically significance differences between attitudes and knowledge (.842), practices and knowledge (.881). From the investigator's point of view this is due to the reinforcing effect of understanding the disease on mothers' actions and attitudes.

Conclusion

Two thirds of the studied mothers had poor total level of knowledge regarding epilepsy and more than one fifth of them had average level, while, tenth of them had good total level of knowledge regarding epilepsy. In addition, slightly less than three quarters of the studied mothers had unsatisfactory total reported practices toward care of their children with epilepsy, while quarter of them had total satisfactory reported practice toward care of their children with epilepsy. Also; more than

half of the studied mothers had negative total attitude score regarding epilepsy, and two fifth of them had positive total attitude score regarding epilepsy.

Additionally; there were highly statistically significant relations between total knowledge of the studied mothers regarding epilepsy and socio-demographic characteristics as age, education level, marital status, family type, family monthly income and history from children with the same disease (P= < 0.01), there were highly statistically significant relations between the studied mothers' total reported practices and their socio-demographic characteristics as age, education level, marital status, family monthly income and history from children with the same disease (P= < 0.01). Also; there were highly statistically significant relations between the studied mothers' total attitudes and their socio-demographic characteristics as age, education level, marital status, family monthly income and history from children with the same disease (P= < 0.01). Moreover, there were statistically significant positive correlation between the studied mothers, total knowledge, total reported practices, and total attitude regarding epilepsy (P= < 0.01).

Recommendations
- Health educational program for mothers should be conducted in different grades with emphasis primary health care services especially for epileptic children care to improve the mothers' knowledge and attitude.
- Booklets should be available and distributed in all Neurology Clinic of Hospitals to all mothers about epilepsy and health-related practices.
- Establishing an integrated system to empower children with epilepsy by

providing specialists, treatments and necessary examinations.

➕ Further studies would be recommended to assess the impact of the educational program on self-efficacy and coping strategies among mothers of children with epilepsy and should be implemented on a large sample to ensure the generalizability of result.

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