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Mothers' Health Practices Regarding Care of their Epileptic Children during Restriction of COVID-19 Outbreak

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ABSTRACT

Background: Currently, the COVID-19 is considered one of the most severe health problems in the world. One of the most important chronic diseases common among children that need treatment for a long time is epilepsy, whose provision of appropriate medical treatment at the time of Corona has become one of the most considerable difficulties facing society during the pandemic outbreak. **The aim** is to assess the health practices of the mothers regarding caring for their children with epilepsy during the COVID-19 outbreak. **The design**: A descriptive design was utilized to perform the study. **The Setting:** The present study has performed the outpatient at the Psychological hospital, and Al-Naser Specialized Hospital for children in Port Said city, Egypt. **Sample:** A convenient sample of 80 mothers had epileptic children. **Tools:** Three tools were used to collect data, the first characteristics of mothers & children and the seizure severity scale. The second mother reported a practices checklist about caring for their epileptic children, and the third Change management of children's epilepsy during the COVID-19 outbreaks restrictions questionnaire. **Results:** revealed that about 57.5% of epileptic children have a moderate degree of epilepsy according to the epileptic scale, which also demonstrates that 55.0% of mothers had fair practice about epilepsy. In comparison, 41.2% of mothers had poor practice, and only 3.8% of mothers had a good practice. **Conclusion:** Negative change management child epilepsy during COVID-19 outbreaks restrictions pandemic. Perceived increases in seizures, reluctance to go to hospital and changes in routine care (sleep-physical activity) are likely to impact epilepsy management, and most mothers have fair practice about epilepsy. **Recommendation**: Further implementation of efficient telemedicine programs to epilepsy care and postpone routine follow-up to improve the care of children with epilepsy during the pandemic. Improve practices of mothers and epileptic children through visual aids, posters via phone or e-mail, clear language booklets, and group health education in hospital outpatient clinics.

Keywords: Children, COVID-19, Epilepsy, Health practice, Restrictions

Introduction

One of the most important chronic diseases common among children that need treatment for a long time is epilepsy; the risk of death is approximately 50% in children with epilepsy due to the associated symptoms. The increased risk of injuries and diseases related to growth and the increased risk of sudden death in adulthood leads to an increase in morbidity and mortality. It was found that the overall risk of recurring epileptic seizures is 50%, although children reach the remission stage. ***(Puka et al., 2018 & Shorvon et al ., 2012)***.

Children who suffer from epilepsy may be worried about whether they are at a higher risk of the COVID-19 and, so, should follow rigorous quarantine. They should be promised to keep isolated from others and symptomatic persons as much as possible without risk factors. ***(Jacqueline et al., 2020).***

The causes of epilepsy are unknown to most affected children. Sometimes genes play a role in epilepsy so that it can run in families. Sometimes epilepsy results from a stroke, severe head injury, or brain infection. Sometimes it results from a benign tumour or abnormalities in the brain, which can be present since birth. ***(David &Amy, 2016& Tsai et al., 2018).***

In the United States, about 150,000 new cases are diagnosed with epilepsy, and about 300,000 children with epilepsy are under the age of 14 years. About fifty per cent of epilepsy cases begin in childhood or adolescence in Egypt. The prevalence rate is about 12.9 per thousand and in the children is 4-6 per thousand. ***(Abd El-Mouty & Salem, 2019; Alshahawy et al., 2018& Rabie et al 2016).***

People in the United States; about 150,000 new cases are diagnosed with epilepsy each year, and about 300childrenchild with epilepsy are under the age of 14 years. In Egypt, approximately 50% of cases of epilepsy begin in childhood or adolescence, and the prevalence rate is 12.9 per 1000 and in the children is 4-6 per 10childrenild (***Abd El-Mouty & Salem, 2019& Alshahaet et al., 218).***

Epileptic seizures affect the child's physical aspect and the social and psychological status of the child, the family and society. The occurrence of epileptic seizures without warning with the inability to predict them leads to severe physical risks. The cases of isolation among children with epilepsy also increase due to social exclusion and the negative attitude of children with epilepsy. ***(Jonsson et., 2014&Riechmann et al., 2019).***

The WHO declared novel coronavirus disease 2019 (COVID-19) a pandemic on March 11, 2020. At present, COVID-19 is still spreading rapidly worldwide. COVID-19 has various manifestations ranging from asymptomatic to mild to severe clinical presentations with or without pneumonia ***(Li et al., 2020).*** The pandemic affects people as an infectious disease and the resulting state of panic and the precautionary measures implemented in people's mental health ***(Kurod, 2020).***

The COVID-19 pandemic has also affected the medical follow-up of epilepsy children, as all routine follow-up was halted. Moreover, COVID-19 follows a more severe course in children with chronic diseases. It is believed that epilepsy patients and their families might have increased anxiety during the pandemic, which may affect their daily functioning ***(Zhang et al.,2020)***.

Management of epilepsy is partitioned into pharmacological medications and non-pharmacological medicines. Epilepsy is at first treated with pharmacological solutions. It is conceivable for up to 70% of individuals to induce total seizure control with negligible side impacts. Non-pharmacological choices incorporate epilepsy surgery that can offer a too little patient a chance to be seizure-free or diminish the number of seizures. As it were, certain sorts of epilepsy are reasonable for surgery ***(Alberti e et al. 16& National Institute for Health and Care Excellence, 2015).***

Therefore, nursing management of epilepsy focuses on preventing injury during seizures, administrating appropriate medication and treatments to prevent or reduce seizures and monitoring neurologic status closely. In addition, the nurse should provide education and support to the child and family to help them cope with living with chronic epilepsy disorder ***(Abd El-Mouty & Salem, 2019).*** Parents, especially mothers, play a significant role in the management of epilepsy, especially the management of epileptic fits in terms of home management. Raising mindfulness around epilepsy and its care will increment the information and progress to the station of wards epileptic children ***(Mbuba., 2011).***

Significance of the study:

Children with epilepsy are generally not considered more likely to contract COVID-19 or necessarily develop a more significant illness in case of infection; the indirect consequences of the pandemic Outbreak restriction could, however, impair their health and well-being in numerous ways ***(Kurod, 2020).*** Stressors, including decreased physical activity, electronic gam worse sleep, and Disruption to self-management practices, such as adherence to anti-seizure medications (ASMs), and a lack of access to healthcare could increase seizures ***(Zhu et al ., 2020).***

I. The management of children with epilepsy has become more challenging during this outbreak due to the prevention measures that are being taken. Although children with controlled seizures can be managed at home, it is challenging for pediatricians when it comes to cases with uncontrolled seizures/severe cases. To this end, we provide recommendations for managing epileptic children at home, in Outpatient and in inpatients. The setting of the current study was to assess mothers' health practices regarding the care of their epileptic children during restriction of the COVID-19 outbreak to prevent or reduce complications that may be happened as a result of illness.

II. **Aim of the study**

The study aims to assess mothers' health practices regarding the care of their epileptic children during the restriction of the COVID-19 outbreak.

Research question:

What are mothers' health practices regarding the care of their epileptic children during the COVID-19 outbreak?

Subjects and Method

Research design:

A descriptive design was utilized to perform the study.

Setting:

The present study was carried out in outpatient clinics department at the following hospitals: Psychological hospital and Al-Naser Specialized Hospital for children in cooperation with Hospitals Group in port said city, Egypt, which was selected according to the mothers' follow-up plan.

Subjects:

Eighty mothers had epileptic children aged from 4- to 12 years old, both genders with confirmed epilepsy diagnosis as a convenient sample.

Tools of data collection:

Tree tools were used for data collection:

Tool 1: A constructed interviewing questionnaire: it consists of two parts:

Part I: Characteristics of studied mothers and children seizure. It included mother & child age, child gender, mothers level of education, etc.

Part II: Seizures severity scale: Seizures were assessed using the seizures severity scale developed by ***Hans et al. (1996).*** It is comprised of 13 items that represent the following area of content, consciousness (4 questions), motor symptoms (2 points), incontinence (1 point), injuries/pain (3 points), and overall seizures severity (3 points). The total score was from 0-to 39 grades. The seizures severity was categorized as:

No seizures = zero grade

Mild seizures = 1-13 grads

Moderate seizures= 14-26 grades

Sever seizures = 27-39 grades

Tool II: Mothers reported practices checklist

This tool adopted from ***El Shiekh et al. (2016)*** assesses mothers' reported practices about caring for their epileptic children about how to prevent fits and practice before, during, and after the attack.

The mothers were asked about

A: practices before the epileptic attack, it includes

-Seizure prevention

-Practices at the beginning of the attack

B: practices during the epileptic attack.

C: practices after the epileptic attack.

Scoring system for practices

The researcher created it to survey mothers' hone in caring for their children some time recently, amid and after the assault. This portion included four questions about mothers' hones around how to anticipate assault amid and after the attack. The add-up to the score of mothers' hones in caring for their epileptic children totaled 25 grades and was collected as takes after: The responses were scored on the bases of "Done" scored (1), or "Not done", scored (0). Cares before an attack include safety precaution (prevent attack) (3 points), care at the beginning of attack (4 points), care during epileptic (11 points)Care after the epileptic attack (7 points). Practices were considered

Good if the per cent score was 66% or more.

Fair For those who had a score of 34-66%.

Poor if less than 34%.

Tool III: **Change management of children's epilepsy during COVID-19 outbreaks restrictions Questionnaire**

Change management of children's epilepsy during COVID-19 outbreaks restrictions reported by mothers' questionnaire developed by ***Góes et al. (2020) &Huang et al. (2020)*** and modified by the researcher after reviewing the literature. It included three subscales as a following:

1. Change No, of child epilepsy seizure frequency (0= no change , 1=decrease & 2=increase)
2. Change in medical management children's difficulties accessing medicine, epilepsy health care and cancellations of medical appointments associated with restrictions during a pandemic and reluctance to go hospital cancelled by the hospital, cancelled by patient difficulty giving the medicines to your child on time because of loss of daily routine during COVID-19 pandemic.
3. Child change in daily routine (Sleep, Physical Activity, time TV and Electronic gam).

Scoring system for these tools, items were scored 0, 1, and 2 for the responses never, sometimes, and always, respectively. For each one, the scores of items were summed-up, and the total was divided by the number of the items giving a mean score for the part.

These scores were converted into a per cent score. The mothers were considered to be faced high negative management change if the percentage score was 60% or more and a positive impact if the percentage score was less than 60%.

The validity of tools:

The tools' validity was tested for clarity, comprehensiveness, and appropriateness and reviewed by five experts in the pediatric nursing field and psychiatric health nursing field. Modifications were done according to the panel ruling to ensure the fitness and clarity of the content.

Reliability of the tools:

The reliability of the tools was assessed through Cronbach's alpha test $\alpha =$ 0.85 for the first tool (Seizures severity scale), 0.82 for the second tool and the third tool was 0.86.

Pilot study:

A pilot study was carried out on 10% of the whole sample to check the study's feasibility, the tools' applicability, and content validity. The modifications were done accordingly. Subjects who shared within the pilot study were not included.

Data collection procedure:

The ethical endorsement was acquired from the Faculty of Nursing-Port said University. An official authorization was acquired by the accommodation of an official letter to the hospital director to conduct the study after explaining and clarifying the aim of the study.

Oral consent was obtained from mothers after explaining the aim of the study. Secrecy of information and namelessness was assured. The researchers assessed the mothers' practice and Change management during COVID-19 outbreaks and restrictions about epilepsy by using self-administered questionnaire and practice checklist.

Mothers with children with epilepsy reported practices about epileptic seizures interview checklist and true/false questions to provide more reflection on mothers' reported practices. The researchers have begun information collection for two days per week. Each mother was interviewed individually, and the researcher was presented herself to the mothers; at that point, clear the reason of the think about to the mothers to pick up their participation, the questionnaires were read and explained, and the answers to the questionnaire were recorded by the researchers, and the time consumed to answer each sheet ranged from 35 to 45 minutes. While collecting the data, the researchers provided health education for the mothers' weaknesses in caring for their epileptic children. Data collection for this study
was completed after seven months, from June 2021 to November 2021.

Statistical analysis

Data entry and statistical analysis were done using SPSS 16.0 statistical software package. Data were displayed as recurrence and percentages (Qualitative factors) and mean± SD (Quantitative persistent factors). Chi-square(X2) was used to compare categorical factors, and one ANOVA (f) test was used to compare more than two bunches for continuous quantitative variables. A person's relationship coefficient was utilized to assess the s relationship between two continuous quantitative variables. The distinction was considered critical at $p \leq 0.05$.

Results

Table (1): This shows the distribution of the study sample according to the mother's socio-demographic characteristics. The table revealed that 48.8% of mothers of epileptic children were in the age group between 35 and more years old. Regarding mothers' residence, 86.2% of mothers lived in an urban area, with 88.8% of them being married**.** Regarding mothers' education level, more than half (55%) had secondary school, while 20% graduated from university, and 52.5% were not working. Finally, 82.5% of the studied mothers had not enough income monthly.

Socio-demographic characteristics of the studied children showed in the **table (2).** It is proven that more than two-fifths (43.8%) of studied children their age is from 10 to 13 years, with 60% Boys and 40%girls. Regarding childbirth order, 41.2% of them were the first, with 43.8% having one sibling number.

Figure (1): Indicates children's classification according to the severity of epilepsy. The table revealed that about 57.5% of epileptic children have a moderate degree of epilepsy according to the epileptic scale**,** 37.5% have mild epilepsy, and only 5.0% of them have sever**e.**

Table (3): shows the frequency &percentage of the mothers' reported practices for their epileptic children. Concerning preventing fits, most caregivers (97.5%) administer the medication regularly, while practices regarding avoiding stimulus and regular follow-up were not done (87.5% and 56.2 %, respectively). Concerning

practice, at the beginning of fit, most studied mothers (86.2%) reported their presence near the child. However, practices regarding keeping dangerous things far, keeping calm and avoiding outdoors and sitting in well-ventilated areas were not done as reported by the mothers (81.2%, 70.0%and 67.5%, respectively). Mothers reported practice during fits were also illustrated in this table as it reveals that more than half of studied (61.2 %and 55.0% prospectively) mothers were done practices related to waiting with the child and keeping the child on his side with head extended on one side.

On the other hand, most caregivers reported other practices not being done during the fit. Finally, mothers' practice after fits was also reported, as less than two-thirds of mothers (61.2% and 58.8% prospectively) reported practices such as observing breathing and general condition and cleaning the child's mouth. While majority sector of them reported other practices not being done post fits.

Figure (2): Shows the level of mothers reported practice for their epileptic children**.** It demonstrates that 55.0% of mothers had fair practice about epilepsy, 41.2% of mothers had poor practice, and only 3.8% of givers had a good practice.

Table (4): Show the relation between socio-demographic characteristics of the mothers and their total reported practical score. There was no statistical significance between socio-demographic characteristics of the caregiver and their reported practical score except for educational level (p-value**≤0.05)**

Figure (3) shows a change in the number of child epilepsy seizures during COVID-19 outbreak restrictions. It demonstrates that half of the mothers reported that the number of child seizures increased during COVID-19 outbreaks restrictions while a 10.13% decrease.

Table (5): Relation between total reported practice scores and change in the number of child epilepsy seizures during COVID-19 outbreaks restrictions as reported by mothers. The table reveals statistically significant differences between total reported practice scores and severity (p-value≤0.05).

Table (6): Regarding changing care of epileptic children during the COVID-19 pandemic restriction reveals that the majority of the mothers (93.75%) reported difficulties obtaining monthly medicine in hospital-associated restrictions and all of them (100%) Cancellations of follow-up associated restrictions during pandemic and reluctance to go the hospital. In comparison, two-thirds (62.5%) of them reported difficulties with epilepsy health care professionals associated with restrictions and difficulty giving the medicines to your child on time because of loss of daily routine during the COVID-19 pandemic. On the other hand, three-quarters (75 %) of mothers reported that their child has the worst physical activity and routine sleep.

Table (7): This table demonstrates that a high statistical significant negative correlation was found between the overall score of change in total score routine time (sleep, physical activity, time TV and electronic game), change in medical management

and change in seizure frequency scores reported by

mothers (P≤0.002).

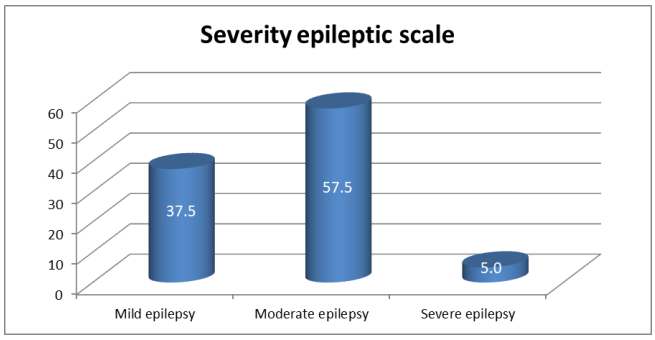
Table (1): Distribution of Study Sample According to Mothers' Socio-demographic Characteristics (no=80)

Items	NO	%
Age		
Less than 25 years	8	10.0
25-less than 35 years	33	41.2
35 or more	39	48.8
Residence		
Rural	11	13.8
Urban	69	86.2
Marital status		
Married	71	88.8
Widow	6	7.5
Divorced	3	3.8
Education		
cannot read and write	4	5.0
Read and write	7	8.8
primary	2	2.5
Preparatory	7	8.8
Secondary	44	55.0
High education	16	20.0
Occupation		
Working	38	47.5
Not working	42	52.5
Income		
Enough	14	17.5
Not enough	66	82.5

Table (2): Socio-demographic Characteristics of Studied Children (no=80)

	NO	%
Age(in years)		
4-less than7years	24	30.0
7-less than ten years	21	26.2
10-12 years	35	43.8
Gender		
Male	48	60
Female	32	40
Birth order		

First	33	41.2
Second	24	30
Third	16	20
Fourth	7	8.8
Sibling number		
No sibling	2	2.5
One	35	43.8
Two	28	35.0
Three+	15	18.7



Figure(1): Severity of Children's Epilepsy According to Severity Epileptic Scale (n=80)

Table (3): Frequency & Percentage of the Mothers Reported Practice for their Epileptic Child during COVID-19 Outbreaks Restrictions (n=80)

Items of knowledge	**Done**		**Not done**	
	NO	**%**	**NO**	**%**
Practice to prevent fits				
Regular drug administration	78	97.5	2	2.5
Regular follow-up	35	43.8	45	56.2
Avoid stimulus	10	12.5	70	87.5
Practice at the beginning of fits				
Keep calm	24	30.0	56	70.0
Avoid outdoors and sit in a well-ventilated area	26	32.5	54	67.5
Present near child	69	86.2	11	13.8
Keep dangerous things far	15	18.8	65	81.2
Practice during fits				
Keep calm	25	31.2	55	68.8
Count onset	10	12.5	70	87.5
Keep child safety	8	10	72	90
Undress child	17	21.2	63	78.8
Keep head safety	12	15.0	68	85.0

Keep the child on his side with his head extended on one side	44	55.0	36	45.0
Restrain	2	1.2	78	98.8
Put water on the child's face	3	3.8	77	96.2
Try to give the child any drug orally	29	36.2	51	63.8
Avoid putting anything between teeth	39	48.8	41	51.2
Wait with the child	49	61.2	31	38.8
Practice after fits				
Clean child mouth	47	58.8	33	41.2
Supine or lateral position	22	27.5	58	72.5
Observe breathing and general condition	49	61.2	31	38.8
Observe conscious level	38	47.5	42	52.5
Observe extremities movement	14	16.2	66	52.5
Observe the child for any injures	6	7.5	74	92.5
Late food or drink intake	29	36.2	51	63.8
Total practice score				

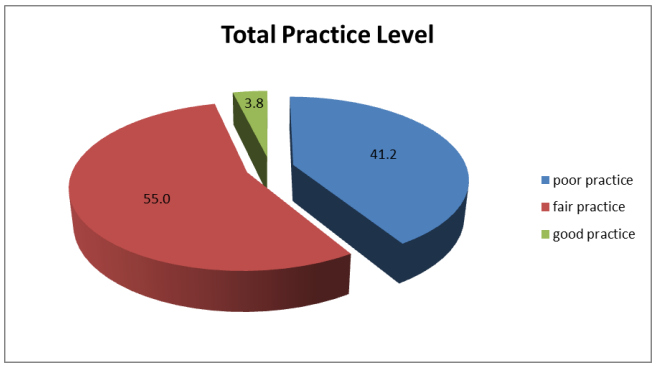


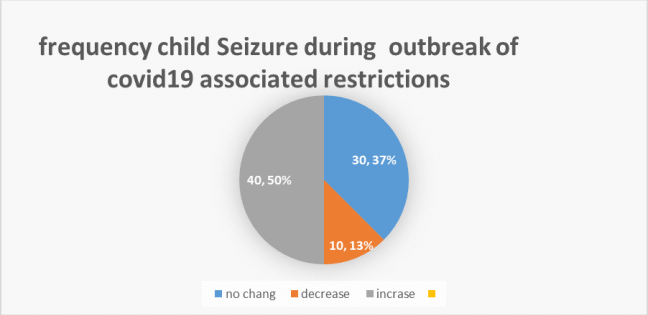
Figure (2): Level of Mothers Reported Practice for their Epileptic Child during COVID-19 Outbreaks Restrictions (n=80)

Table (4): Relation Between Total Reported Practice Scores and Mothers' Socio-Demographic Characteristics during COVID-19 Outbreaks Restrictions (n=80)

Socio-demographic characteristics	Practice		Significance
	n=80	Mean±SD	
Age (years)			
Less than 35	41	10.82 ± 4.75	t= -.264
35 or more	39	10.51 ± 3.33	P=0.759
Residence			
Rural	11	10.80 ± 3.61	t= -.871
Urban	69	11.14 ± 4.36	P=0.386
Educational level			
Cannot read and write	4	7.24 ± 3.75	F=6.182
Basic	16	8.24 ± 3.75	
Secondary	44	10.40 ± 3.52	P=0.001*

High education	16	14.75 ± 4.04	
Marital status			
Widow /divorced Married	9 71	8.92±4.2 8.22±3.0	t=.488 P=0.627
Occupation			
Working Not working	38 42	9.1±3.3 8.5±4.6	t=.585 P=0.560
Income			
Enough Not enough	14 66	9.6±4.1 8.6±4.0	t=0.799 P=0.427

** Statistically significant p-value≤0.05*



Figure(3): Distribution Frequency of Change in Number of Child Epilepsy Seizure during COVID-19 Outbreaks Restrictions as Reported by Mothers (n=80)

Table (5): Relation between Total Reported Practice Scores and Change in Number of Child Epilepsy Seizure During COVID-19 Outbreaks Restrictions Reported by Mothers (n=80)

Frequency seizer change	Practice		Significance
	Mean	SD	
No change	6.0	3.76	F= 5.80 P=0.004*
Decrease	10.0	3.67	
Sever seizer	4.0	1.70	

** Statistically significant p-value≤0.05*

Table (6): Frequency Change Care of Epileptic Children during COVID-19 Pandemic Restriction Reported by Mothers (n=80)

NO	Change in Care of Epileptic Child	Never (0)	Some times(1)	Frequently (2)
1.	Difficulties obtain monthly medicine in hospital-associated restrictions	0%	5(6.25%)	75(93.75 %)
2.	difficulties epilepsy health care professionals associated restrictions	20(25%)	10(12.5%)	50(62.5%)
3.	Cancellations of follow-up associated restrictions during pandemic and reluctance to go to the hospital Cancelled by hospital Cancelled by patient	0%	0%	100% 80 20
4.	Difficulty giving the medicines to your child on time because of loss of daily routine during the COVID-19 pandemic	20(25%)	10(12.5%)	50(62.5%)
. change in daily routine time				
5.	Worse in routine Sleep change	-	20(25%)	60(75%)
6.	Worse in Physical Activity Increase time TV Electronic game	7 20(25) 5(6.25%)	13 20(25) 15(18.75)	60(75%) 40(50) 60(75)

Table (7): Pearson Correlation Analysis between the Children's Change in Total Score Routine Time(Sleep, Physical Activity, Time TV and Electronic Gam), Change in Medical Management and Change Seizure Frequency Scores Reported by Mothers (n=80)

Variable		change in total score routine time(Sleep, Physical Activity, time TV and Electronic gam)	Change in medical management
Children's change seizure frequency scores	R	-.329**	-.346**
	P	.003	.002

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

Discussion

With the COVID-19 pandemic and associated restrictions, children with epilepsy are likely to be a particularly vulnerable group concerning the development of or exacerbation of existing mental health and behavior difficulties. Epilepsy is the foremost common neurological clutter in children and can majorly affect children's advancement ***(Radi et al ., 2020).*** Epilepsy requires specialized comprehensive care. Since numerous children are

youthful to accept fractional or add up to obligations for their care, caregivers, particularly mothers, are the essential care suppliers is who mindful of domestic management. ***(Hockenberry& Wilson, 2015).*** So this study aims to assess mothers' health practices regarding the care of their epileptic children during restriction of COVID-19 outbreak. In the light of the results of the current study concerning mothers' practice, the result reveals that more than half of mothers had fair practice about epilepsy while less than half of mothers had poor practice; this result agrees with ***(El sheikh et al., 2014)*** who detailed that the majority of mothers had destitute practices whereas a minority of them had reasonable hone and as only 1.75% had great hone. Also ***(Hegazy et al., 2012)*** found that all mothers had poor practice in caring for their children with epilepsy. The foremost result detailed that most mothers had destitute to earth in caring for their child with epilepsy. On the opposite side with this ***(Chauhan et., 2016)***, the study revealed that overall management practices of mothers for more than three quarters during seizures were good.

Concerning the practice of preventing fits, a vast majority of mothers administer the medication regularly; this may be because most mothers follow the doctor's order to prevent the attack, and less than half of the mothers reported that irregular medication administration stimulates factors to attack in the current study. This is supported by the idea that the nursing administration of epilepsy is centered on avoiding harm amid seizures, administrating fitting medicine and treatment to avoid or decrease seizures, and checking neurologic status closely ***(Ricci & Kyle, 2009).***

Regarding practice at the beginning of the fits sector, most studied mothers reported their presence near the child. However, practices regarding keeping dangerous things far, keeping calm and avoiding the outdoors, and sitting in a well-ventilated area were not done as reported by the mothers by the majority of studied mothers. However (***Akay et al ., 2011)*** stressed that the mother got to learn how to check for breathing, check the position of the head and tongue, and reposition in case the head is hyper expanded. Teach the mother that if the child is not breathing, call restorative crisis administrations, stay with the child and keep him on the side. She should not grant nourishment or fluids until the child is completely cautious and the gulping reflex has returned.

Mothers reported practice during fits were also illustrated in this study as it reveals that more than half of studied mothers were done practices related to waiting with the child and keeping the child on his side with his head extended on one side. 0n the other hand, most mothers reported other practices to be not done during the fit. This was in agreement with ***(Chauhan et al., 2016***), who found that the vast majority of mothers provided a calm environment during the seizure. All 100 per cent place patients on a firm surface. Sixty per cent put a pillow under the head of the patient if the patient was on the floor just before the seizure occurred. All of the subjects removed sharp objects and wiped out oral secretions. Most mothers waited for the fit to

pass off on its own. Moreover, I avoided restraining the patient.

While mothers' practice after fits was also reported by mothers, as less than two-thirds of mothers reported done practices such as observing breathing and general condition and cleaning the child's mouth. While majority sector of them reported other practices not being done post fits. While in the study by ***Chauhan et al. (2016***) revealed that after a seizure episode, the majority of them usually observe whether the patient breathes normally or not, half of them give a side lying position, and most of them let the patient sleep, and the majority of mothers made child comfortable, and explained that child about his condition like what had happened to him.,

Concerning the connection between practices and socio-demographic characteristics of the mothers. There were no statistically significant between the socio-demographic characteristics of the mother and their reported practical score, except for mothers' education. This study is within the same line and concurs with the foremost think about as ***(Weber& Kelly, 2013),*** who detailed that high-level education has a great score in information and skills. This finding is supported by ***(Badawy, 2015)***, who reported the same finding. This correlation is logical; the higher the education degree, the more excellent the opportunity to improve knowledge and practice as education strategies' programs increase individuals' awareness.

The relation between total reported practice scores and change in the number of child epilepsy seizures during COVID-19 outbreaks is restricted by mothers. The current result revealed that there were statistically significant between total reported practice scores and changes in seizures regarding decreased degree with a mean score10.0+_3.76. This result disagreed with ***(Ghan et al ., 2015)***, who reported no statistically significant relationship between the severity of epilepsy and behaviour problems. This study agrees with the foremost think ***(Badawy, 2015; El sheikh, 2014)***, who detailed that there is no measurable critical connection between mothers' practices and seriousness scores; from the researchers' point of view, the care with mild severity degree may increase as the mother keep care with the child early on the disease to prevent the progress of the disease.

The majority of mothers reported the COVID-19 pandemic and associated restrictions to have negative change care on childhood epilepsy and child wellbeing. However, during COVID-19 pandemic-associated restrictions in the current study, half of the mothers reported an increase in seizures is higher than previous estimates. This is in agreement with ***El Momani; in 2021***, during the lockdown period, seizure frequency was reported to have increased in the minority of them and decreased in less than one-quarter of patients. On the other hand, the seizure was reported in lower prevalence that varied between minority and about one quarter during the COVID-19 pandemic and

associated restrictions (***Assenza et al., 2020& Huang et al., 2020; Trivisano et al., 2020)***.

Many studies supported my result; an Italian study of adults with epilepsy found that about one-quarter reported a seizure increase, whilst only a minority reported an increase in a Chinese study of adults. While in studies from Saudi Arabia and Spain, where respondents were predominantly adults, one-third of epileptic patients reported an increase in seizure frequency ***El Momani, 2021***. The percentage of mothers who reported an increase in seizures in the current study is the higher than previous estimates and could reflect that the current study focuses on children; increases could also be related to the reported increased worse in physical activity, sleep and increased time of watch TV and electronic gam. The COVID-19 pandemic has affected the medical follow-up of epilepsy children, as all routine follow-up was halted (affected). Moreover, COVID-19 follows a more severe course in children with chronic disease as epilepsy patients and their mothers. ***Cao et al. 2020*** In contrast, the effect of the COVID-19 pandemic restriction harmful to the care of epileptic children, more than two third of mothers reported having difficulties obtaining monthly medicine, difficulties with epilepsy health care professionals and all of them reported cancellations noted by some respondents in the current study had been previously reported. This result reflects seizure frequency. This result agrees with ***Reilly, Muggeridge and Cross (2021***), who found that Thirty-five per cent of respondents reported that investigations had been cancelled either by the hospital or by the person with epilepsy/ caregiver.

Finally, a high statistical significant negative correlation was found between the overall score of change in total score routine time (Sleep, Physical Activity, time TV and Electronic), Change in medical management and Children's and change seizure frequency scores ($P \leq 0.002$). This result was explained by the fact that the restriction strongly affects daily life and health systems. This result is congruent with those who reported all seizure frequency. Increases could also be related to increased stress and problems with mood and sleep. This result was supported by **Saleem et al. (2020)**. They reported that more than two-thirds of children with epilepsy with optimal treatment would enter remission if access to medications and regular follow-up were attainable. However, in reality, remission has been challenging to maintain due to the barriers to care during the outbreak. So, providing information and fostering confidence that they can contact their doctor via phone or e-mail when necessary can help alleviate the concerns of children and their mothers (telemedicine). Although the sample size is small, we think our study's results are significant because there are few studies on this issue in children during COVID 19 outbreak.

Conclusion

The study concluded that the general level of mothers reported practice for their epileptic children was fair; negative change management child epilepsy during COVID-19 outbreak restrictions pandemic. Perceived increases in

seizures, reluctance to go to hospital and changes in routine care (sleep-physical activity) are likely to impact epilepsy management, and most mothers have fair practice about epilepsy.

Recommendations

- Assessment of caregivers' practice should be routine as a part of the management.
- Further implementation of efficient telemedicine programs to epilepsy care and postpone routine follow-up to improve the care of children with epilepsy during the pandemic.
- Improve practices of mothers and epileptic children through visual aids, posters via phone or e-mail, clear language booklets, and group health education in hospital outpatient clinics.
- Further research are needed to improve the practice of mothers and caregivers in the pediatric clinic or via mass media & replication of this study on a large sample.
- Providing information and fostering confidence that they can contact their doctor via phone or e-mail when necessary can help alleviate the concerns of children and their mothers

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