



Knowledge, Behaviour and Compliance among Parents of Pediatric Population Taking Anti-Epileptic Drug

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ABSTRACT

Introduction:

Epilepsy, a brain disorder characterised by seizures is one of the most common neurological disorders in children. Nearly 12 million among 70 million epileptic children worldwide are expected to reside in India. The aim of the study is to assess knowledge, behaviour and compliance towards epilepsy and antiepileptic drugs among parents of pediatric population. This study is the first hospital-based study in Gujarat to investigate the Knowledge, Behaviour and Compliance among pediatric population.

Methods & Material:

The study was prospective, observational, multicentred and was carried out for the period of 6 months. During the study period, all inpatients and outpatients in pediatric ward diagnosed with epilepsy were screened using a 25-item self-designed questionnaire. A total of 102 participants matching the study criteria were included in the study.

Result:

This study shows that there is a lack of knowledge among parent's/caretaker's regarding epilepsy disease and the disease still remains to be highly stigmatized. Inappropriate first-aid measures are preferred by parents in our study. Positive behaviour is found towards the disease in our study although some negative attitudes towards the disease are also found but minimally. Our study's adherence rate was found to be 59.8% which represents a respectable outcome.

Conclusion:

Lack of knowledge regarding epilepsy was found in our study population. Majority of the respondents were with positive attitude towards the disease and medication but negative attitudes are also found in our study. Adherence rate is high in our study which is a satisfactory result.

Keywords: behaviour, compliance, knowledge, pediatric epilepsy

INTRODUCTION

Epilepsy, a disease of the brain characterised by seizures is among the most common neurological disorders in children. Of the 70 million people with epilepsy worldwide, nearly 12 million are expected to reside in India. Its prevalence is about 1% in our population. In the last few decades many studies investigated knowledge and attitude towards epilepsy among adult population but fewer studies are available for children. It is important to treat epilepsy in children due to various reasons^{[1][2]}. Frequent seizures and untreated epilepsy create social and academic disadvantages to children. Therefore, it is important to treat child with epilepsy to avoid the disease progression and to avoid any complication^{[3][4]}. Children with epilepsy are huge concern to their parents. Knowledge about epilepsy can be important in reducing fear associated with seizures and can improve their child's health. Prior evidence from the various studies conducted showed lack of knowledge among parents and caretakers regarding epilepsy^{[5][6]}. It has been found that not only in India but also in other countries such as Africa and Nigeria people still believe that epilepsy is caused due to an evil spirit^{[7][8]}. Since Hippocrates, Epilepsy was believed to be a sacred disease and linked to evil spirits and in our Indian community epilepsy is still attributed to such possessions. Lack of knowledge has been associated with negative attitudes towards the disease^{[9][10]}. A positive attitude can improve the disease condition and medication management. Behaviour towards the disease is important to cope up with the condition^{[11][12]}. Participation in physical activities and social engagements is important during childhood development. In many studies it was found that children are fully excluded from academics and social gatherings due to their parent's negative attitudes towards disease^{[9][12]}. It is also found that sometimes school authorities also expel the children from the school. Due to this attitude towards the disease the children with epilepsy are at risk of educational under-achievement and social isolation^[13]. Some of the studies has



also shown a positive attitude towards the disease^{[8][14]}. Medication adherence is defined by the WHO as “the degree to which the person’s behaviour corresponds with the agreed recommendations from a health care provider”^[15]. Children with new onset epilepsy may be quite adhered to therapy initially but may lead to poor adherence if seizures are under good control. Poor adherence to Antiepileptic drugs (AEDs) is considered as the primary cause of drug therapy failure in epilepsy. Poor adherence is related to poor outcome, reduced seizure control, increased risk of mortality and higher incidence of emergency department visits. In rural population, majority of the parents of paediatrics with epilepsy seeks for complementary and alternative medicines, although its effectiveness has not been clearly established using scientific methods^{[7][16]}. Medication non-adherence is a serious issue among epilepsy patient due to belief that epilepsy has a spiritual or psychological cause^{[17][18]}. Poor adherence to prescribed medicines also leads to unsuccessful drug treatment. Understanding of the disease is an important factor for parents and their children. Increased level of knowledge shows a positive attitude towards the disease therefore knowledge gap should be decreased among population, if necessary, by some interventional programmes. A proper understanding of the disease along with right medicine can improve the care of epileptic patient^[19].

Aim

To study and evaluate knowledge, behaviour regarding epilepsy among parent’s/caretakers and compliance towards Antiepileptic drugs

Objectives

Primary Objectives

- To study the basic understanding of epilepsy among parents/caretakers of pediatric population.
- To study behaviour of parents towards disease & medication of their child.
- To determine the drug compliance of AEDS in pediatrics.

Secondary Objectives

- To identify the frequency of seizure episodes due to non-compliance.
- To assess the knowledge of epilepsy and AEDS among rural and urban populations
- To identify social issues and stigma towards epilepsy among the parents.

MATERIALS AND METHODS

Methods

The investigational study was prospective, observational study and was carried out for a period of 06 months (November 2019-March 2020) at IPD and OPD department of Pediatric at GMERS Medical College and Hospital, Gandhinagar. The Institutional Ethics Committee of hospital reviewed the protocol and gave ethical approval for the study (GMERS/MCG/IEC/49/2019). A total of 132 patients were approached and screened for the study participation out of which 102 patients fulfilled the inclusion and exclusion criteria and were included in the study. We included respondents whose child’s age is between 1-18 years and include either sex, diagnosed with epilepsy and taking AEDs. Child recently diagnosed with epilepsy and respondents unwilling to participate were excluded from study.

Materials

Patient information sheet was provided to the patient which explains them about the study procedures in brief. An informed consent was signed before entering the patient into the study as a proof of voluntary participation. The 25-itemed questionnaire used in this study is self-designed, the primary version of the questionnaire was developed through extensive literature review in English language and then it was translated into vernacular language Gujarati using standard translating procedures. No earlier attempts were made in our region to design questionnaires in local language (Gujarati). Face, content, convergent validity of the questionnaire was performed by three pediatric experts. Questions were designed that match the common beliefs in our locality. Data collection form is divided into 2 parts:

PART I: It includes demographic details of the patients and respondents which includes; MRD no, age, sex, social status, level of education, relation with respondents, duration of treatment, no. of AEDs prescribed, seizure present/absent during treatment.

PART II: The questionnaire comprised of 25 questions which contains 14 questions on knowledge about disease (4 question), drug (5 question) and lifestyle (5 questions) of epileptic patients, 5 questions on behaviour towards the epileptic child and 6 questions on compliance towards AEDs.

Data collection was done by investigator in a face-to-face interview of Parents/caregiver of pediatric patients. Response to each question was obtained through face-to-face interview and appropriate responses were marked by investigators. Most of the questions employed yes or no options and other questions were with multiple options.

RESULTS

Demographic Details of Patients

A total of 102 patients with epilepsy (59 male and 43 female) were included and their parents/caretakers were interviewed. The demographic data of the patients are shown in Table 1. Most of the cases of epilepsy was among 3-6 years of age and 1-3 years of age, the mean age was 3.36 years. Majority of children received treatment between 1 to 6 months 34(33.33%). Majority of them predominantly were on mono therapy 53(51.96%), followed by 23(22.54%) on two AEDs and 11(10.78%) were getting three AEDs. 44(43.13%) of patients didn't suffer from seizure attack during the treatment period while 55(53.92%) of patients were still suffering from seizure attacks although treatment was on-going. Medicines were easily available to the majority 98(96.07%) of the parents/caretakers whereas 4 (3.92%) of parents/ caretakers found difficulty in obtaining medicines but there were no such responses where medicines were not at all available for the patient.

Knowledge

Out of 102 participants, only 6(5.8%) parents answered correctly and mentioned epilepsy as a brain disorder and majority of the participants 33(32.35%) were found to be less knowledgeable about disease. Regarding cause & triggers of epilepsy majority of the participants were not knowing the exact cause (45.09%) and triggers (43.13%) for epilepsy, misconceptions were that epilepsy is a result of injury at birth, birth defects and contagious disease. Only 12(11.76%) respondents choose correct answer and believed stress, poor sleep, fever and flashing light could trigger epilepsy. More than half of the participant 72(70.58%) mentioned that they are not aware of any alternative medicine system other than AEDs for epilepsy. Majority of the parents 64(62.74%) feels that there is no behavioural change in their child due to medicines, but 35(34.31%) parents feel some behavioural changes in their child due to drugs. 18(17.64%) parents believed to have side effects from AEDs whereas 67(65.68%) did not heard or read about the word side effect. Majority of participants 43(42.15%) believed that seizure attack affected their child's daily routine. 23(22.54%) parents mentioned that their child faced some social problems due to epilepsy such as unable to make friends, unable to go to school while 66(64.68%) believed that a child with epilepsy do not face any problem in social life. Majority of the parents 46(45.08%) felt that it is important to inform teachers or friends about their child's epilepsy condition, but among these only 30(29.40%) parents have informed about their child's epilepsy condition. Regarding quality of life, 38(37.24%) responded that due to their child's epilepsy their quality of life has been neither too good nor too bad while 28(27.44%) parents mentioned that their quality of life was affected due to their child's epilepsy condition.

Behaviour

Parent's/caretakers were asked how do they feel about their child's epilepsy condition, 36 (35.28%) of parents answered that they did not feel shameful, depressed and fearful about it whereas feeling fearful about their child's epilepsy was the highest 48(47.04%) answers we received from the parents. Half of the respondent parent's/caretakers were protective towards their child and were normal with this condition, whereas 23(22.54%) are over-protective for their child. Majority 57(55.86%) do not restrict themselves from taking their child to social gatherings while 24(23.52%) sometimes restrict themselves and 21(20.58%) totally restrict themselves from taking due to fear of seizure attacks.

Parent's/caretakers willingness to participate in teaching/management of an epileptic child was asked in which majority of respondents 90(88.2%) were willing to get involved in teaching/ management of an epileptic child whereas only 12(11.8%) refused to participate. 39(38.22%) of parent's/ caretaker's job and daily routine affected due to their child's seizure attack, 32(31.36%) sometimes get affected while 31(30.58%) daily routine was not affected.

Compliance

Majority of the parent's/caretakers 61(59.78%) does not forgot to give medicines to their child, while 29(28.42%) forget to give medicines to their child which was the second highest response and only few responded that they forgot sometimes. In our study most of parents/caretakers 64(62.72%) do not stop giving medicines to their child as soon as they feel better and continues the medicine, 3(1.71%) have not given treatment to their child whereas 29(28.42%) have not continued giving medicines to their child even if they feel better. 80(78.4%) of parents/ caretakers came regularly for follow-up as advised.

Response to question whether child refuses to take medicine, 74(72.52%) of children does not refuse to take medicines while 14(13.72%) children sometimes refused to take medicines. Out of 14 children refused because 10(9.8%) does not like taste/smell/colour of medicine, 2(1.96%) unable to administer or swallow medicines, for 2(1.96%) frequency of medications are high. Majority 66(64.68%) parents/caretakers do not give medicines only during seizure attack and continues as advised by the physician. 24(22.54%) of respondents give giving medicines only during seizure attack.

Table 1: Demographic details of Patients

Sr.No	Variables	Frequency	%	Sr.No	Variables	Frequency	%
1	Age (in years)						
	01-Mar	20	19.6		12.1-15 years	4	3.92
	3.1-6.0	25	24.5		15.1-18 years	1	0.98
	6.1-9.0	19	18.62		Not taken	12	11.76
	9.1-12.0	14	13.72	5	No.ofAEDsPrescribed		
	12.1-15.0	19	18.62		1	53	51.96
	15.1-18.0	5	4.9		2	23	22.54
2	Gender				3	11	10.78
	Male	43	42.15		4	3	2.94
	Female	59	57.84		5	1	0.98
3	ResidentialArea				0	6	5.88
	Rural	70	68.62		Don't know	5	4.9
	Urban	32	31.37	6	SeizureDuringTreatment		
4	DurationofTreatment				Present	55	53.92
	1-6 months	34	33.33		Absent	44	43.13
	6.1-12 months	11	10.78		Treatment not taken	3	2.94
	1.1-4 years	33	32.35	7	Availabilityofmedicines		
	4.1-6 years	1	0.98		Easy	98	96.07
	6.1-9 years	3	2.94		Difficult	4	3.92
	9.1-12 years	3	2.94		Unavailable	0	0

Table 2: Response of Parent's/Caretaker's knowledge, Behaviour and Compliance towards Epilepsy and Epileptic drug therapy.

No.	Questions	Frequency	Percentage	Mean±SD	P-value
KNOWLEDGE					
1	Which of the following options defines epilepsy?				
	a) a mental disorder	17	16.66	3.13± 1.58	0.0007
	b) a disorder that cause people to shake	31	30.39		
	c) Both a & b	10	9.8		
	d) others	6	5.88		
	e) None	33	32.35		
2	What are the causes of Epilepsy?				
	a) Injury at birth	19	18.62	3.99 ± 1.89	<0.0001
	b) Contagious disease	3	2.94		
	c) Birth defects	18	17.64		
	d) Poisoning or bad blood	3	2.94		
	e) Both a & c	13	12.74		
	f) Others	46	45.09		
3	Which of the following could trigger epilepsy?				
	a) Stress / anxiety	2	1.96	4.35 ± 1.51	<0.0001
	b) Poor sleep	9	8.82		
	c) Flashing light	3	2.94		
	d) Fever/ Illness	32	31.37		
	e) All of the above	12	11.76		
	f) Others	44	43.13		
4	Is epilepsy a curable disease?				
	a) Yes	12	11.76	2.5 ± 0.7	<0.0001
	b) No	8	7.84		

	c) Don't know	82	80.39		
5	Do you know which medicines are to be given during seizures?				
	a) Yes	69	67.64	1.6 ± 0.73	0.0003
	b) No	25	24.5		
	c) Don't know	8	7.84		
6	What first aid measures are to be given during seizure attack?				
	a) Putting solid object into mouth	11	10.78		
	b) Do nothing & wait for convulsion to stop	36	35.29		
	c) Give something to eat or drink	3	2.94	3.76 ± 1.9	<0.0001
	d) Start praying	7	6.86		
	e) Call an ambulance	32	31.37		
	f) Both a & e	1	0.98		
	g) Other	12	11.76		
7	Can you mention any epilepsy treatment options other than drugs?				
	a) Yes	20	19.6	1.93 ± 0.63	<0.0001
	b) No	72	70.58		
	c) Don't know	10	9.8		
8	Do you feel any behavioural changes due to drugs in your child?				
	a) Yes	35	34.31	1.83 ± 0.58	<0.0001
	b) No	64	62.74		
	c) Sometimes	3	2.94		
9	Do you fear any side effects due to AEDs?				
	a) Yes	18	17.64	2.32 ± 0.74	<0.0001
	b) No	17	16.66		
	c) Don't know	67	65.68		
10	Do you feel any change in daily routine of your child?				
	a) Become nervous & terrible	12	11.76		
	b) Feel energetic	4	3.92	3.62 ± 1.68	<0.0001
	c) Feel tired	43	42.15		
	d) Confined to bed	10	9.8		
	e) Difficulty in walking	21	20.58		
	f) Others	3	2.94		
	g) No	9	8.82		
11	Do an epileptic patient suffer from any memory problem?				
	a) Trouble concentrating on reading	13	12.74		
	b) Trouble remembering things people tell you	2	1.96	4.27 ± 1.9	<0.0001
	c) Trouble concentrating on doing one thing at time	4	3.92		
	d) All of the above	16	15.68		
	e) Others	12	11.76		
	f) No	55	53.92		
12	A child with Epilepsy can face problem in social life:				
	a) Unable to make friends	6	5.88		
	b) Unable to go to school	6	5.88	4 ± 1.3	<0.0001
	c) Otherchildren don't play with them	1	0.98		
	d) All of the above	23	22.54		
	e) None of the above	66	64.68		
13	Do you think it is important to tell teachers or friends about what to do during your child suffers from a seizure attack?				
	a) Yes	46	45.08		
	b) No	10	9.8		
	c) Given	30	29.4		
	d) Not given	11	10.78		
	e) Not going	5	4.9		
14	How has the quality of life been during past 4 weeks?				
	a) Very well; could hardly be better	5	4.9	2.95 ± 0.90	<0.0001
	b) Pretty Good	31	30.38		

	c) Good & bad both parts are equal	38	37.24		
	d) Pretty bad	28	27.44		
	e) Very bad; could hardly be worst	0	0		
BEHAVIOUR					
15	What do you feel about your child epilepsy?				
	a) Angry	3	2.94		
	b) Shameful	2	1.96		
	c) Alright	36	35.28	3.7 ± 1.19	<0.0001
	d) Depressed	13	12.74		
	e) Fearful	48	47.04		
16	What kind of care you take of your child?				
	a) Normal	27	26.46	2.01 ±	<0.0001
	b) Protective	52	50.96	0.71	
	c) Over- Protective	23	22.54		
	d) No attention is given	0	0		
17	Do you restrict yourself your child in social gatherings?				
	a) Yes	21	20.58	2.02 ±	<0.0001
	b) No	57	55.86	0.64	
	c) Sometimes	24	23.52		
18	Would you want to be involved in teaching/management of an epileptic child?			1.1 ± 0.4	<0.0001
	a) Yes	90	88.2		
	b) No	12	11.8		
19	Does your job or daily routine work get affected due to your child's seizure attack?			2 ± 0.9	0.2796
	a) Yes	39	38.22		
	b) No	31	30.58		
	c) Sometimes	32	31.36		
COMPLIANCE					
20	Do you ever forgot to give medicines to child?				
	a) Yes	29	28.42	1.92 ±	<0.0001
	b) No	61	59.78	0.63	
	c) Sometimes	9	8.82		
21	When your child feels better do you stop giving medicines?				
	a) Yes	29	28.42	1.87 ±	<0.0001
	b) No	64	62.72	0.63	
	c) Sometimes	6	5.88		
	d) Not taking treatment	3	2.94		
22	Do you regularly come for follow up as advised?				
	a) Yes	80	78.4	1.22 ±	<0.0001
	b) No	19	18.62	0.46	
	c) Treatment not taken	3	2.94		
23	Does your child refuses to take medicines?				
	a) Does not like the taste/ smell/ colour of medicine	10	9.8	4.69 ±	<0.0001
	b) Frequency of medications are high	2	1.96	1.82	
	c) Unable to administer or swallow medicines	2	1.96		
	d) None of the above	0	0		
	e) Sometimes	14	13.72		
24	The cost of medicine is				
	f) No	74	72.52		
	a) Expensive but affordable	10	9.8	3.14 ±	
	b) Expensive but not affordable	6	5.88	1.14	
	c) Inexpensive and affordable	10	9.8		<0.0001

25	d) Available freely from government	76	74.48	1.93 ± 0.61	<0.0001
	Do you give medicines only during seizure attack?				
	a) Yes	24	22.54		
	b) No	66	64.68		
	c) Sometimes	11	10.78		
	d) Treatment not taken	1	0.98		

Table 3- Mean Value and Cronbach's alpha value for Knowledge, Behaviour and Compliance			
SUBSCALE	RANGE	MEAN (SD)	Alpha value
Knowledge towards disease, drug and lifestyle	0-13	3.95 (1.30)	0.046
Behaviour towards disease	0-5	2.61 (1.10)	0.602
Compliance towards AEDs	0-5	3.38 (1.59)	0.728

DISCUSSION

In this study 102 participants were enrolled, among them 59(57.84%) were female and 43(42.15%) were male (Table 1). Most of the epileptic child fall into the age group of 3-6 years (Table 1) and our reports are similar with the previously conducted study by Banerjee et al^[20] and reported that there is an increase incidence of epilepsy among during early childhood and adolescent period. The current study reports that females are more prone to epilepsy; contradictory to epidemiological data of Indian subcontinent^[20]. Number of drugs used to treat the disease is not found to be a factor for non-compliance in our study (Table 1), as found in earlier study that being on mono-therapy was described as a strong predictor of noncompliance, research by Bucket al^[21]. There are several studies associated with knowledge, behaviour, compliance, practice and awareness of epilepsy among children, caretakers, healthcare professionals and other groups in community as well as hospitals. Various KAP studies conducted among children in our Indian subcontinent. The studies were mostly conducted across northern and southern part of India. The current study is first hospital-based study in Gujarat to investigate the knowledge, behaviour and compliance among parents regarding epilepsy and AEDs of their children. A survey was carried among population using Self- designed questionnaire consisting of 25 questions.

Knowledge about Epilepsy

In our study group, among the parent's/caretakers of child with epilepsy knowledge about the epilepsy disease was found to be very minimal (Table 2). Most of the parents, 33(32.35%) were unaware of what epilepsy is and their idea about epilepsy was something that causes shock like symptoms for a period of some length which makes them worrisome and frightened. In our study 17(16.66%) of caretakers believed it to be a mental disorder which was similar to the study of Jansen et al^[22] in Germany where they also stated that patients suffering from epilepsy are more prone to mental problems which could also influence the disease but epilepsy itself is not a mental problem whereas study in central Nepal by Thapa et al^[23] came up with the intervention that 43% (less than half) of the participants believe it to be a mental disease. Also study at Amrita Institute of medical science by Shaju et al^[8] do not support this misconception by receiving 95.93% of denial to this question. Only 6(5.88%) respondents knew epilepsy as a brain disorder which clearly shows lack of knowledge in the participants whereas in the Shaju et al^[8] study 78.86% of respondents agreed that epilepsy is a brain disorder. Study from central Nepal^[23] also got positive response as nearly half of the respondents (45.7%) chose the correct answer; epilepsy as a brain disorder. Supernatural powers as a cause of epilepsy are found in many studies. In our study, 3 parents reported epilepsy as supernatural power. Similarly, four respondents reported epilepsy as a supernatural power in KAP study conducted by Shaju et al, 9% of respondent's answers were received by Long et al^[24] in their study in U.S.A and 27% during a KAP study in Kerala^[8]. Most of the parents were not able to define the epilepsy disease in our study population. In our study, 6 parents never heard or read about this disease whereas our results are contrary to Germany study by Jansen et al^[22] that reported 94% respondents have heard about epilepsy. In our study group 18.62% of the parents mentioned injury at birth as a cause for epilepsy. 2.94% parents believed that epilepsy is caused due to poisoning or bad blood. 2.94% believed it to be contagious (Table 2). Multiple causal explanations for the cause of epilepsy are found in our study; constipation as a cause (1) for epilepsy, 1 parent believed that epilepsy was caused in their child because one of the children in their neighbour had epilepsy. The findings in our study are similar to findings of J.A. Carter et al^[13] Majority of the parents in our study group (80.39%) were not knowing whether epilepsy is curable or not. For first-aid treatment, majority of the parents (36%) in our study preferred to do nothing and wait for convulsion to stop (Table 2). Inappropriate and non-scientific methods were found in our study group. Measures likes rubbing hands and feet of the child during seizure attack(9), put water on face(2), put shoe/onion/vicks on nose(4), pressing the nerves of hand and closing the eyes of patient, wearing a piece of iron in neck (loket) were noted in our study. The number of persons used these non-scientific methods in this study are less as compared to previous study conducted in Bundelkhand region^[7]. Our study results are similar with the KAP study conducted in Delhi^[28], Uttarakhand^[29] and South India^[11]. Most of the respondent in our study believed that epilepsy can be treated with modern effective medicine. In our study there were

18 parents from rural area (illiterate) and preferred to use both traditional methods and modern medicines for their child to cure the disease faster (Table 1). Strong emphasis is given on religious practices mostly among Hindus; faith healers/tantric.

Behaviour towards Epilepsy

A positive behaviour towards the disease plays an important role in the well-being of child with epilepsy as well as overall success of therapy. In our study conducted majority of the parents were with positive behaviour towards the disease. It is found that only 16 parents were with negative behaviour for the epilepsy disease (Table 2). Due to their negative behaviour, they were not allowing their child to go to school due to fear of seizure attack at school. Many studies reported patients were worried about side effects of medication. In our study, 48% participants didn't hear about the word adverse effects. Only 1 parent of child with epilepsy worried about side effect (weight gain and hair loss). The result in our study was contrary with study conducted by Dawkins et al^[25].

Compliance towards Aeds

In our study, 59.78% adherence rate has been found towards AEDs (Table 2). Drug compliance was found to be satisfactory in almost of patient with epilepsy in current study. Nonadherence rate in our study was 28.42% and results are similar to study conducted by Modi et al (2011)^[26] who reported that non-adherence in pediatric with epilepsy are between 12% to 35%. In our study, only 29 parents forget to give medicine to their child. The findings in our current study were similar to study conducted by Nazziwal^[27] who reported lower percentage (29.7%) of forgetfulness among population.

Knowledge, Behaviour and Compliance Score among Respondents

Mean value of knowledge, behaviour and compliance among respondents were found in our study. Knowledge score among female respondents was found to be higher. Behaviour and compliance score was found to be higher in male respondents as compared to female respondents (Table 3).

Cronbach's alpha is implemented in our study to measure the internal consistency of questionnaire. Acceptable values of Cronbach's alpha are 0.7 or more which is considered to be good, 0.8 to be better and 0.9 to be the best. In our study overall alpha of the elements is 0.40 (Table 3) which falls in category of non-satisfactory hence some items in the questionnaire should be revised or discarded.

CONCLUSION

Lack of knowledge in terms of basic understanding about epilepsy, triggers of epilepsy, safety measures, social issues, preferring traditional treatment options were apparent among parents/ caretakers in our study. Imparting basic knowledge about disease, drugs and with the help of physicians, nurses and other healthcare professionals is very crucial to reduce the gap of knowledge. Positive behaviour towards the disease and medications of their child was significant in our study. Negative behaviour towards the disease was also found but with a lower rate. Parent's/caretaker's negative behaviour towards the disease affects the social and academic life of child with epilepsy therefore some interventional studies should be done to improve this type of behaviours of parents towards the disease. Adherence rate was high in our study which is a satisfactory result. Knowledge score is found to be higher among female than male respondents. Behaviour and compliance score is found to be highest in male respondents as compared to female respondents. Appropriate interventions are needed to reduce such problems among the parents of child with epilepsy to increase the quality of life of epileptic child.

Abbreviation- Antiepileptic drugs (AEDs)

REFERENCES

- [1]. Alldredge BK, Corelli RL, Ernst ME, Guglielmo BJ, Jacobson PA, Kradjan WA et al. Koda-Kimble and Young's applied therapeutics: The clinical use of drugs. Wolters Kluwer Health Adis (ESP), 2013.
- [2]. Satishchandra P, Santhosh N, Sinha S. Epilepsy: Indian perspective. Annals of Indian Academy of Neurology. 2014;17(5):3.
- [3]. Al-aqeel S, Gershuni O, Al-sabhan J, Hiligsmann M. Strategies for improving adherence to antiepileptic drug treatment in people with epilepsy. Cochrane Database of Systematic Reviews. 2017;
- [4]. Dipiro J. Pharmacotherapy. 7th ed. McGraw-Hill Medical Publishing Division; 2014.
- [5]. Sander JW (1993) Some aspect of prognosis in the epilepsies: A review. Epilepsy 34(6): 1007-16.
- [6]. Wolf MS, Gazmararian JA, Baker DW. Health literacy functional health status among older adults. Arch Intern Med 2005; 165:1946-52. PMID: 16186463

- [7]. Kankane AK, Kankane A, Siddiqui MZ, Mishra P. Knowledge, attitude and practice of epilepsy among persons attending tertiary care hospital of Bundelkhand region, Central India. *Indian J Comm Health*. 2015; 27, 2: 281285.
- [8]. Minumaria S, Kollencheri P, Suja A. Knowledge, attitude and practice of parents regarding pediatric antiepileptic drug therapy. *International journal of epilepsy*: 2014: 52-63.
- [9]. Niriayo Y, Mamo A, Gidey K, Demoz G. Medication Belief and Adherence among Patients with Epilepsy. *Behavioural Neurology*. 2019; 2019:1-7.
- [10]. Selamat N, Ahmad L, Sok W, Pei L. Awareness, knowledge and attitudes towards epilepsy among rural populations in east coast peninsular Malaysia: A preliminary exploration. *Seizure*: 2010(19): 280-290.
- [11]. Avington G, Underdahl L. Antiepileptic Drug Adherence and Psychosocial Factors in Children: Is There a Connection. *Journal of Child Science*. 2019;09(01): e11-e16.
- [12]. Krishnaiah B, Alwar SP, Ranganathan LN. Knowledge, attitude, and practice of people toward epilepsy in a South Indian village. *J Neurosci Rural Pract* 2016; 7:3.39-40.
- [13]. Carter J, Molyneux C, Mbuba C, Jenkins J, Newton C, Hartley S. The reasons for the epilepsy treatment gap in Kilifi, Kenya: Using formative research to identify interventions to improve adherence to antiepileptic drugs. *Epilepsy & Behaviour*. 2012;25(4):614-621.
- [14]. Stacy Kuriakose, Emmanuel James, Anand Kumar. Assessment of knowledge of epilepsy in epileptic patients attending a tertiary care centre in Kerala, India. *International journal of pharmacy and pharmaceutical sciences*: 2014; 6(7): 64-67.
- [15]. Jinil AL, Bharathi DR, Nataraj GR et.al. Impact of counseling on patient caretaker's knowledge and medication adherence to paediatric antiepileptic drug therapy. *International Journal of Science & Healthcare Research*. 2018; 3(4): 158-165.
- [16]. Kholoud Z. Qoul, Diana A. Qasem, Ola H. Samavi, Lana N. Matter, Shatha I. Abo-tineh, Mohamed Abo-olem. Antiepileptic Medication Adherence in Children With Epilepsy At Queen Rania AL-Abdulla Children Hospital: *Indian journal of medical research and pharmaceutical sciences*: 2015;2(10)
- [17]. Farrukh M, Makmor Bakry M, Hatah E, Jan T. Use of complementary and alternative medicine and adherence to antiepileptic drug therapy among epilepsy patients: a systematic review. *Patient Preference and Adherence*. 2018; Volume 12:2111-2121
- [18]. Radieah MN, Normaliza AM, Amirah MG, Azmi AHM. Impact Assessment of a Programme on Medication-taking Behaviour and Health Awareness Among Low-income Community in the State of Penang, Malaysia. *J Pharm Pract Community Med*. 2018;4(2):113
- [19]. Shope J. Intervention to improve compliance with pediatric anticonvulsant therapy. *Patient Counselling and Health Education*. 1980;2(3):135-141
- [20]. Banerjee TK, Hazra A, Biswas A, Ray J, Roy T, Raut DK, et al. Neurological disorders in children and adolescents. *Indian Journal of Pediatrics* 2009; 76:139-46.
- [21]. Buck D, Jacoby A, Baker G, Chadwick D. Factors affecting compliance with antiepileptic drug regimens. *Seizure*: 1997;6: 87-93.
- [22]. Paula J, Martina N, Matthias B, Wieland K, Thilo B. Knowledge and attitudes about epilepsy: A survey of high school students in Germany. *Seizure*: 2017(51): 139-144.
- [23]. Lekhjung T, Tirtha B, Shakti S, Ramesh P. Knowledge, beliefs and practices on epilepsy among high school students of central Nepal. *Epilepsy research and treatment*. 2017.
- [24]. Long L, Reeves A, Moore J, Roach J, Pickering C. An Assessment of Epilepsy Patients' Knowledge of Their Disorder. *Epilepsia*. 2000;41(6):727-731.
- [25]. Dawkins JL, Crawford PM, Stammers TG. Epilepsy: a general practice study of knowledge and attitudes among sufferers and non-sufferers. *Br J Gen Pract* 1993; 43:453-457
- [26]. Modi A, Rausch J, Glauser T. Patterns of Nonadherence to Antiepileptic Drug Therapy in Children with Newly Diagnosed Epilepsy. *JAMA*. 2011;305(16):1669.
- [27]. Nazziwa R, Mwesige A, Obua C, Ssenkusu J, Mworozi E. Adherence to antiepileptic drugs among children attending a tertiary health unit in a low resource setting. *Pan African Medical Journal*. 2014;17.
- [28]. Verma N, Tripathi S, Sharma S. Drug compliance in children with epilepsy; Cross-sectional study, New Delhi. *Indian J Child Health*. 2016; 3(4):311-313.
- [29]. Goel D, Dhanai JS, Agarwal A, Malhotra V, Saxena. Knowledge, attitude and practice of epilepsy in Uttarakhand, India. *Ann Indian Acad Neurol*. 2011 Apr;14(2):116-9.
- [30].