

The Perception, Knowledge and Attitude of Mothers on Childhood Epilepsy in Ado Ekiti, Southwest, Nigeria

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Abstract

Introduction

Epilepsy is a neurological disorder often associated with poor outcomes and varying harmful beliefs in developing countries. Assessing the mothers' knowledge on epilepsy and attitude will help in patient management and treatment outcome.

Objective

To assess the knowledge, attitude and perception of mothers toward children with epilepsy.

Materials and Methods

A structured questionnaire was administered to 400 mothers of patients who attended the Paediatric neurology /outpatient clinic of the Ekiti State University Teaching Hospital (EKSUTH), Ado Ekiti. Mothers' knowledge was assessed on the aetiology, manifestation, treatment and outcome of

epilepsy and attitude was assessed on mothers' disposition toward stigmatization or discrimination against affected children.

Results

Younger parents, low educational status and low social class were significantly associated with the poor knowledge of the mothers ($P < 0.05$). Poor knowledge of the mothers on epilepsy were significantly associated with the poor attitude ($P = 0.001$). Also, poor knowledge of the mothers on epilepsy were significantly associated with discrimination ($P = 0.001$) and stigmatization ($P = 0.002$) towards children with epilepsy

Conclusion

Majority of the mothers was deficient in their knowledge of epilepsy and also has an unwholesome attitude toward affected children which can subsequently affect outcome. Public enlightenment is therefore recommended.

Introduction and Theoretical Literature

Epilepsy is a brain disease characterized by tendency to generate epileptic seizures manifesting in form of motor, psychic, sensory or behavioral disorder [1]. Seizure can be defined as a paroxysmal abnormal, excessive, hyper synchronous discharges from an aggregate of central nervous system neurons [1,2]. Two unprovoked seizures greater than 24 hours apart suggest the presence of an epileptic disorder within the brain that may lead to future recurrences [2]. An epileptic seizure occurs due to abnormal, excessive or synchronous neuronal activity in the brain [3]. Greater percentage of children affected are found in Africa and developing countries where effective treatment is limited and difficult to access [4]. Its incidence rate of 49-215/100000 found in developing countries is higher than 40-70/100000 reported from developed countries of the world [5]. The prevalence rate of epilepsy in child and adolescent populations varied from countries to countries. The prevalence rate of childhood epilepsy in Hong Kong, Turkey, Brazil, India, Cameroun and Nigeria are 4.3/1000, 8.6/1000, 7/1000, 7/1000, (26.1/1000) and 6.4/1000 respectively [6-11]. It was however interesting to note that, the age-specific incidence rate for epilepsy is highest in childhood [12]. High incidence of epilepsy in childhood could be linked to perinatal and postnatal morbidities, and central nervous system infections and infestations such as meningitis, encephalitis and cerebral malaria [13]. Poor adult perspectives on childhood epilepsy have been found to limit access to appropriate therapy [3,5]. In Sub-Saharan Africa, documented reports on perspectives of epilepsy revealed supernatural and infectious source as one of the causes of epilepsy and nonorthodox treatment modalities are preferred [5]. Some studies in underdeveloped countries reported a strong belief of supernatural powers and spiritual forces as the aetiology of epilepsy [14,15]. Successful management of epilepsy in developing countries is influenced by the beliefs and attitudes of the caregivers. In Africa, there is wide spread belief that it was the evil forces that moves at night that was responsible. Some also believed it was two lizards that were running inside the belly of the affected persons that was responsible. There is another belief among Nigerians that epilepsy is infectious and is one of the set back to the care and management of children with epilepsy. Awaritefe reported in his study done in Benin that most Nigerians have the belief that epilepsy is contagious and this

would not allow them to eat, drink, or sleep on the same bed with an affected child, or assist him during his seizure crisis [15]. This view made people to flee in panic from a patient experiencing a seizure attack thereby depriving them of the assistance and care they need. Though the origin and propagation of the belief can be traced to the traditional healers.

Stigmatization and discrimination against children with epilepsy are also prominent [16–21]. Poor perspectives of mothers on epilepsy could worsen quality of life and heighten morbidity and mortality [22,23]. The dependence of management of childhood epilepsy on caregivers and communities that have poor epilepsy perspectives and weak health systems in developing countries leads to poor outcomes [1,5]. Mothers play a pivotal role in the provision of health care services to children [24]. The gap in knowledge in caregiver understanding of the health of children with epilepsy also affects outcome [25]. Hence, bridging the gaps could enhance outcome in childhood epilepsy. Therefore, evaluation of mothers' perspectives towards childhood epilepsy will provide valuable information towards management and outcomes of epilepsy. The aim of this study was to assess the knowledge, attitude and perspectives of mothers towards childhood epilepsy in Ado Ekiti.

Materials and Methods

This prospective study was conducted in outpatient and neurology clinic of Ekiti State University Teaching hospital Ado Ekiti, South western, Nigeria. The paediatric neurologic clinic of the hospital is run once a week and the children outpatient department is run daily. Ekiti State University Teaching hospital Ado Ekiti. Ado Ekiti has population of about 308,621 and is the headquarter of Ado Local Government Area and the capital of Ekiti State [26]. The people in Ado Ekiti are predominantly Yoruba [27]. A structured questionnaire was administered by the authors to mothers who had visited the clinic. The questionnaire was administered in English language and was also back translated in Yoruba language to ensure consistency and validity of the questionnaire. For the purpose of this study, epilepsy was defined as the occurrence of at least two unprovoked seizures occurring greater than 24 hours apart [1,28]. Included in the study were all consenting mothers who had attended the clinics at least twice in the preceding 6 months. Those who did not consent and had not fulfilled the required number of clinic attendance were excluded. Also, seizures that did not conform to definition epilepsy in the study were excluded. Information on age, educational status, knowledge perception and attitude toward childhood epilepsy were obtained from the mothers. Each questionnaire took an average of 10 minutes to administer. Knowledge of childhood epilepsy in this study was assessed from the mothers' response to questions on causes, manifestations, treatment modality, and outcome of epilepsy. The mothers' response to the outcome of epilepsy was categorized as "good, bad or don't know." Attitude of the mothers was based on their disposition toward discrimination and stigmatization against a child with epilepsy. Stigma was indicated as prejudicial feeling expressed while discrimination is a prejudicial act meted out against the child as a result of pre knowledge of epilepsy in a child [29]. Attitude was based on mothers' response to questions such as; (a) whether a mother would allow her child use the same washed eating plate that has been used by a child she knows has epilepsy (discrimination) (b) Whether a mother feels a child with epilepsy could have a normal life (stigmatization) (c) Whether a mother would allow her child to sleep on same bed with a child she knows has epilepsy(stigmatization) (d) Whether a mother would allow her child to make friends with a child she knows has epilepsy (e) Should a child a mother knows has epilepsy be allowed to attend school (stigmatization) (f) Should a child a mother

knows has epilepsy be allowed to get married (stigmatization) (h) In addition, the mothers were asked what they would do if they encounter a child with epilepsy having an epileptic seizure. The study was conducted between July 2016 and October 2016. All mothers who participated were given a post survey health talk on epilepsy and its management by the authors. Informed consent was obtained from the mothers and ethical approval from the research ethics committee of EKSUTH, Ado Ekiti.

Data Analysis

Data were processed using the statistical software package SPSS 20. The mean and standard error of the mean (SEM) values of age of the mothers were determined. Chi-square was used to determine the association between attitude, knowledge, belief perception, outcome and socio demographic factors of the mothers. Fisher's exact test was also used for associations of proportions for cells that had values less than five. The level of significance for the chi square test was taken as $P < 0.05$. The results of reliability and validity of the questionnaire were tested by evaluating the internal consistency using Cronbach's alpha. Cronbach's alpha coefficient of 0.92 was found, which was greater than 0.7. This indicates that the instrument that was used in the study had good internal consistency.

Results

A total of 400 mothers fulfilled the inclusion criteria. About two fifth (37.5%) did not know the cause of epilepsy while about one fifth (23.0%) believed the cause is spiritual. About two third (63.4%) of the mothers believed it was a spiritual afflictions, (26.8%) believed it was contagious and (9.8%) believed two lizards were running in the stomach of the affected children There was a family history of epilepsy in 12 (3%) of the mothers. Among the mothers with a positive family history of epilepsy, 2 (0.5%) had affected parents while in the remaining 10 (2.5%) of those affected were uncles and aunt. Twenty (5%) of the mothers had children with epilepsy. About one third (36%) of the mother got their information on epilepsy from historical source as shown in figure 1. Other sources of information were from the mass media (19.5%), the school (11.5%), health institutions (18%), and (14.5%) had no information. One hundred and sixty eight (42%) mothers chose orthodox medical therapy while 19% of the mothers chose prayer and 16.5% chose traditional approach. However, about a quarter (22.5%) of the mothers did not know any treatment approach. Treatment outcome of epilepsy was described as good by about half (51%) of the mothers and (10%) described as poor while (39%) of the mothers were not sure about the treatment outcome. Two third (67%) of the mothers discriminated against the child with epilepsy by indicating that, if they had prior knowledge of the affected child, they would disallow their child from using same washed eating utensil that had been previously used by affected child.

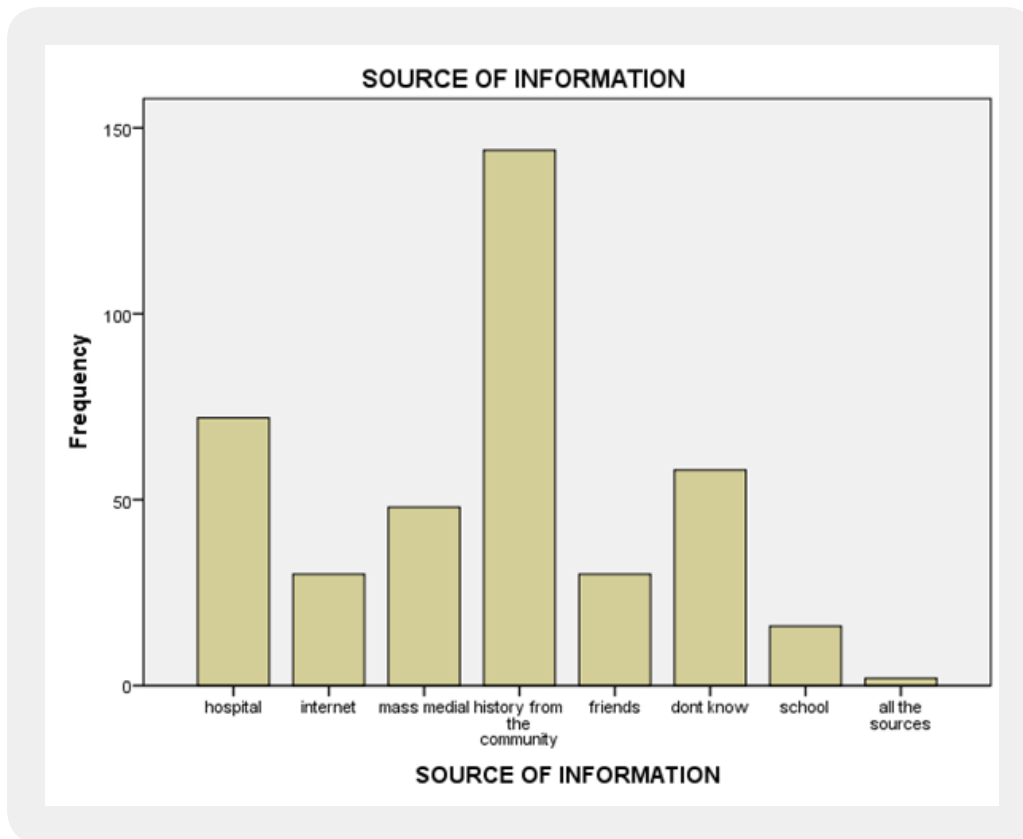


Figure 1: Mothers' source of information on epilepsy

Socio Demography Characteristics of the Mothers

The mothers' age range was 18-70 years (mean 34.5 ± 7.9 years). About two third (63.5%) of the mothers were young adult <36 years old while the remaining one third were middle age and older adult. About two third (70%) of the mothers had tertiary education while about a quarter (24.5%) had a secondary education and below. About two fifth (42.5%) of the mothers were civil servant while about a third (36%) of the mothers were business women [Table 1]. Majority of the respondent were Yoruba and of Christian faith.

Table 1: Distribution of some socio demographic variables of the mothers

VARIABLES	Total (N) =400	%
Age in Years		
18 -35	320	80.0
36 -54	68	17.0
55 -70	12	3.0
Mothers' Occupation		

Full time house wife	58	14.5
Self employed	28	7.0
Business women	144	36.0
Civil servant	170	42.5
Mothers' Formal Education		
No formal education	2.0	0.5
Primary	14	3.5
Secondary	82	20.5
Tertiary	280	70.0
Postgraduate	22	5.5
Social class		
Social class 1	110	27.5
Social class 2	110	27.5
Social class 3	156	39.0
Social class 4	24	6.0
Ethnicity		
Yoruba	372	93.0
Hausa	6	1.5
Igbo	22	5.5
Religion		
Christianity	376	94.0
Islam	24	6.0
others	0	0.0

Mothers' Knowledge of Epilepsy

About half (51.5%) of the mothers had spiritual belief regarding the cause of epilepsy as shown in figure 2. About half (47.5%) of the mother chose "falling" to the ground as the commonest manifestation of epilepsy. (Figure 3). Young mothers, low social status, poor education had statistically significant association with poor knowledge ($p < 0.05$) as shown in table 2.

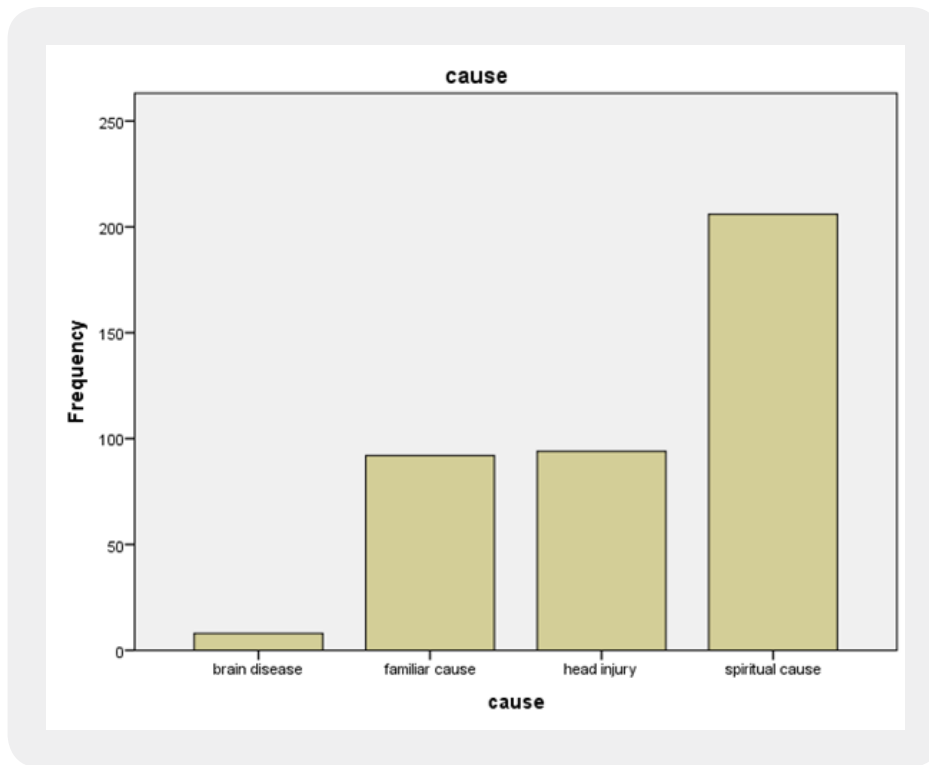


Figure 2: Mothers' knowledge of cause of epilepsy

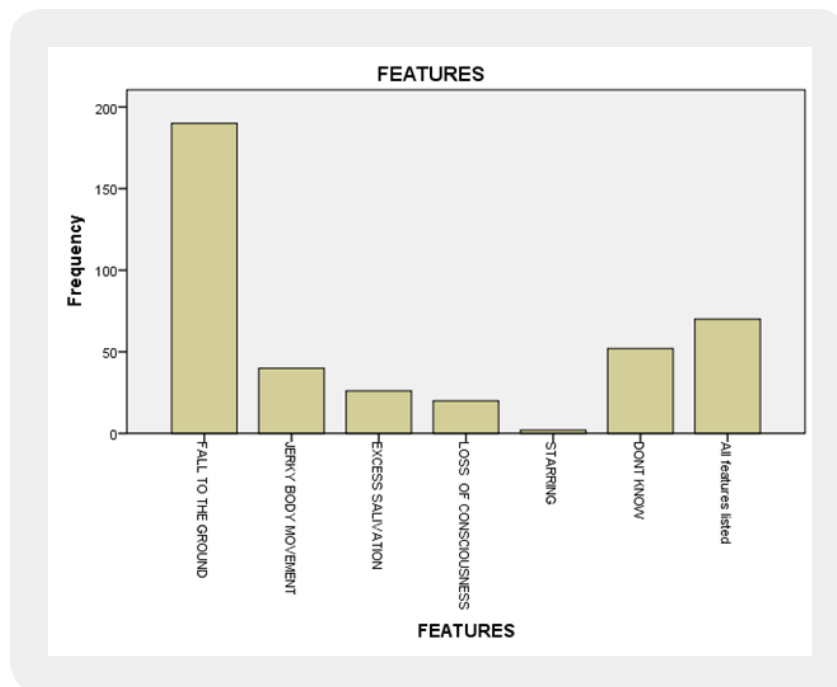


Figure 3: Mothers' knowledge of manifestation/features of epilepsy

Table 2: Relationship between socio demographic factors, and knowledge of the 400 mothers

VARIABLES	Good knowledge N -154 (%)	Poor knowledge N=246 (%)	χ^2	P value
Age in Years			20.949	0.001
18 -35	84(54.6)	170(69.1)		
36 -54	60(39.0)	76(30.9)		
55 -70	10(6.4)	0(0.0)		
Mothers' Occupation			11.949	0.008
Full time house wife	18(11.7)	40(16.3)		
Self employed	8(5.2)	20(8.1)		
Business women	82(53.2)	88(35.8)		
Civil servant	46(29.9)	98(39.8)		
Mothers' Formal Education			23.491	0.001
No formal education	2(1.3)	0(0.0)		
primary	0(0.0)	14(5.7)		
secondary	20(13.0)	62(25.2)		
tertiary	120(77.9)	160(65.0)		
postgraduate	12(7.8)	10(4.1)		
Social class			25.607	0.001
Social class 1	62(40.3)	48(19.5)		
Social class 2	44(28.6)	66(26.8)		
Social class 3	42(27.2)	114(46.4)		
Social class 4	6(3.9)	18(7.3)		
Ethnicity			1.327	0.515
Yoruba	146(94.8)	226(91.9)		
Hausa	2.0(1.3)	4(1.6)		
Igbo	6(3.9)	16(6.5)		

Mothers' Attitude Toward Childhood Epilepsy

Mothers' attitudes towards children with epilepsy were shown in table III. Two (0.7%) of the mothers who had a child with epilepsy were discriminatory in their response while about half (266, 99.3%) of the mothers who did not have a child with epilepsy were discriminatory in their response and this was significant ($P=0.003$). [Table 3] mothers from low social class showed significantly higher stigmatizing and discriminating attitude towards children with epilepsy by stating that they cannot live normal life despite treatment ($P=0.001$). Mothers who were full house wife and self-employed showed significantly higher stigmatizing and discriminating attitude towards children with epilepsy by stating that they cannot live normal despite

treatment ($P = 0.001$), Poor formal education were significantly associated with stigmatization and discrimination ($P = 0.001$) [Table 3]. Mothers with Spiritual belief as a cause of epilepsy were significantly association with discrimination ($P=0.014$).

Table 3: Relationship between Mothers' social statuses, education. Knowledge, belief and discriminatory attitude of the mothers

VARIABLES	Stigmatizing Mothers N= 104 (%)	Non Stigmatizing Mothers N =296 (%)	P value	Discriminatory Mothers N=268 (%)	Non Discriminatory Mothers N=132 (%)	P value
Mothers relationship			0.094			0.001
Having child with epilepsy	2(2.0)	18(6.0)		2(0.7)	18(13.6)	
Having no child with epilepsy	102(98.0)	278(94.0)		266(99.3)	114(86.4)	
Belief			0.100			0.014
Traditional Spiritual belief	100(96.2)	270(91.2)		254(94.8)	116(87.9)	
Non spiritual belief	4(7.8)	26(8.8)		14(5.2)	16(12.3)	
Knowledge			0.001			0.001
Good knowledge	24(23.1)	130(43.9)		80(28.8)	74(56.1)	
Poor knowledge	80(76.9)	166(56.1)		188(71.2)	58(43.9)	
Mothers' Education			0.001			0.001
No formal education	0(0.0)	2(0.7)		2(0.7)	0(0.0)	
primary	14(13.5)	0(0.0)		14(5.3)	0(0.0)	
secondary	30(28.9)	52(17.6)		56(20.9)	26(19.7)	
tertiary	60(57.7)	220(74.3)		190(70.9)	90(68.2)	
postgraduate	0(0.0)	22(7.4)		6(2.2)	16(12.1)	
Social class			0.001			0.013
Social class 1	10(9.6)	100(33.8)		60(22.4)	50(37.9)	
Social class 2	26(25.0)	84(28.4)		78(29.1)	32(24.2)	
Social class 3	52(50.0)	104(35.1)		112(41.8)	44(33.3)	
Social class 4	16(15.4)	8.0(2.7)		18(6.7)	6 (4.6)	

Discussion

In this study, greater percentage of the mothers showed knowledge deficit on aetiology, manifestations treatment and treatment outcome in childhood epilepsy. Studies from Nigeria and several developing countries had reported similar findings in adults [5,16,17]. There was also high level of display of negative attitudes, discrimination and stigmatization against children with epilepsy in this study. Similar reports had also been documented from researches done among adults with epilepsy from Nigeria [16,17,19-21]. In this study, there was significant association between low social class and the level of knowledge deficit and negative attitudinal disposition of the mothers towards children with epilepsy. Notable gaps in the epilepsy knowledge among adult populations with low socio economic status have been reported from Nigeria and Ghana [16,18]. This is because mothers from higher social class with better access to information tend to be more informed about epilepsy and have more positive attitude toward affected children [29]. Despite the fact that this study was carried out in a tertiary health center, significant knowledge deficit on epilepsy were noted among the mothers. There was significant association between low formal educational status and low level of knowledge and negative attitudinal disposition of mothers towards children with epilepsy. The deficit in knowledge was more pronounced among the less educated mothers who may have poor exposure to information. Though knowledge deficit about epilepsy had been reported both among well and less -educated mothers which is contrary to our study populations [29]. This may be because of variability in the standard of education and exposure to information from one place to the other. In this study, 15% of the mothers attributed the etiology of epilepsy to a spiritual cause which was similar to 16.3% found by Kabir *et al.* from Nigeria [16]. This was lower than figure reported by Sanya *et al* and Nyame *et al* from Nigeria and Ghana who reported 27.7% and 27.9% respectively from their respondents [17,18]. Majority of the mothers chose falling to the ground as the commonest manifestations of epilepsy, followed by jerky movements of the body and excessive salivation. This was similar to manifestations of epilepsy indicated in earlier documented studies in Nigeria [16,19,21]. Orthodox medical therapy was the commonest, followed by prayer and traditional /spiritual approach indicated in our study and this was similar to report of Owolabi *et al.* in Ngeria [19]. Kabir *et al* reported spiritual healing as the commonest therapy chosen by respondents in his study from Nigeria which is contrary to the report of our study [16]. This could be that our study was conducted among mothers who patronize the hospital. In this index study, about half of the mothers indicated a good outcome which was contrary to report of Owolabi *et al.* and Frank-Briggs *et al* who reported good outcome among 30% and 17.5% of mothers in their respective studies [19,20]. The variation in outcomes” perspective could be related to exposure and level of education of respondents. In this study, about two thirds of the mothers indicated rushing the child to the hospital as an option and about 10% do not know what to do while the rest indicated actions ranging from running away from the patient (child) as their reaction. This was contrary to report of Frank-Briggs and Alikor who reported that 52.1% of respondents did not know any initial intervention for epileptic seizures [20]. In this study, 42.5% of mothers had negative attitudinal disposition towards children with epilepsy which was similar to 40% reported by Mustapha *et al* in Nigeria [17,19,21]. It was noted in this study, that mothers with children with epilepsy tend to have a better knowledge and attitude toward children with epilepsy which was also similar to report of documented researches [20]. This could be because of the exposure they have to information on epilepsy in the course of seeking treatment for their children in the hospital About one third of the respondents in this study got information about epilepsy from history heard from their parents and very few had through

mass media which was similar to reported studies in Sub-Sahara Africa in which there was paucity of information on epilepsy [5]. A poorly -informed community is liable to poor knowledge and negative hence mass media and internet should be incorporated with the communal approach to disseminate information to people on childhood epilepsy. Health behavior has been reported to have been influenced overtime with mass media at a low cost [30]. Finally, having known there is strong association between epilepsy aetiology and spiritual forces, information on epilepsy should be disseminated to faith based organizations (churches and mosque) and ministry of information should be actively involved in promoting epilepsy care by inundating the populace on epilepsy.

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Limitations of the Study

The perspectives of mothers who brought their children to this tertiary health care center might vary from the perspectives of other mothers at primary and secondary health care levels.

Conclusion

The study revealed a greater proportion of mothers having poor knowledge and bad attitudinal disposition toward children with epilepsy among mothers who brought their children to OPD/neurology clinic of EKSUTH. Low formal education and having a spiritual etiological belief of epilepsy were significant contributory factors to negative attitude in this study. Public enlightenment on childhood epilepsy in the hospitals, schools, market via mass media and internet will help to attenuate negative perspective towards children with epilepsy and enhance better treatment outcome.

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Conflicts of Interest: NIL

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