

Research Article

Knowledge of and Attitude Towards Epilepsy Among Women in Ile-Ife, Nigeria

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Abstract

Background: Epilepsy is a non-contagious chronic disease with sufferers experiencing embarrassments amidst other challenges. Family caregivers are mainly women with some of them suffering from the disease. This study assessed the knowledge and attitude of women residents in an urban community towards epilepsy.

Materials and methods: This descriptive cross-sectional study recruited 400 randomly selected women in IIe-Ife. The data was collected with the use of a pre-tested interviewer-administered questionnaire on knowledge of and attitude to epilepsy. Data was analysed using descriptive and inferential statistics.

Results: Most respondents (99.3%) were aware of the disease with their main sources of information from their parents, friends, and neighbours. Only 15.3% of respondents had good knowledge of epilepsy, while 35% had positive attitude to epilepsy. Factors associated with good knowledge of epilepsy among respondents include having higher education (OR = 3.154, 95%CI = 1.574–6.323, p = 0.001) and higher income (OR = 3.055, 95%CI = 1.404–6.651, p = 0.005), while factors associated with positive attitude towards epilepsy include older age group (OR = 1.943, 95%CI = 1.281–2.945, p = 0.002) and higher income (OR = 2.932, 95%CI = 1.345–6.386, p = 0.007).

Conclusions: Although the level of awareness is high, respondents' knowledge and attitude were inadequate. There is a need for a community education about epilepsy, targeting women who are major stakeholders with the aim of improving their knowledge and attitude towards the disease.

Keywords: knowledge, attitude, women, urban community, epilepsy

1. Introduction

Epilepsy is a clinical phenomenon resulting from a neurological disorder characterised by recurrent seizures or periods of unusual behaviour, sensations, feelings, and sometimes loss of consciousness [1, 2]. According to the International League Against Epilepsy, it is a brain disorder characterized by abnormal synchronous neuronal

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discharges leading to symptoms and/or signs and the neurobiological, physical, social, and psychological consequences. The disease has existed for thousands of years, but it was only in the last hundred years that a better understanding of the disease condition began to evolve. The major symptom of epilepsy is the epileptic seizure that could be frightening and strange to laymen. Although the disease can begin at any age, majority of the cases occur in childhood with care being provided by women [2, 3]. These women are mostly the mothers of the children with epilepsy with majority reporting that their children experience high level of stigma due to inappropriate beliefs and misconceptions about the disease in the community [4–6]. Also, anxiety and low quality of life have been reported among these women especially those having lower knowledge about epilepsy [2].

Even though sex ratios in the epidemiology of epilepsy are not fully established, a previous study stated that boys are slightly more likely to develop epilepsy than girls [2]. However, a study by Savic et al. (2014) stated that the prevalence of idiopathic generalized epilepsy, childhood absence epilepsy, and juvenile myoclonic epilepsy are more in girls than boys [3]. Approximately 25–30% of people with epilepsy will continue to experience seizures even with best available therapies [4]. Epilepsy affects over 50 million people world-wide [5]; hence, a relatively common condition, with higher prevalence rates in developing countries. The prevalence of active convulsive epilepsy in sub-Saharan Africa ranges from 2.2 to 58 per 1000 with approximately 4.4 million people affected [5]. It is estimated that about 3% of people receive a diagnosis of epilepsy at some point in their lifetime, with 70% achieving remission [6]. About 70% of cases of seizures are idiopathic [7]. Factors that have the potential to cause epilepsy include brain epileptic syndromes, congenital infections, tumours, brain injury, degenerative brain diseases, cerebral hypoxia, stroke, and toxins [7–9]. Most seizures last for 1 to 2 minutes, however, when a seizure stops, people with epilepsy may have post-ictal symptoms like headache, numbness or tingling, confusion, sore muscles, unusual sensations, extreme tiredness, faecal or urinary incontinence [8]. Though, epilepsy is a common disease, it is reported to be associated with a significant social discrimination and stigmatization as a result of misconceptions, limited knowledge, and poor public awareness [9]. Most of the negative attitudes documented in people with epilepsy are in relation to marriage, job employment, education, and social acceptance; hence, the person with epilepsy is most likely to drop out of school, lose his or her job, and find it difficult to make friends [10].

Women are notable caregiver in the community, hence assessing awareness and knowledge about epilepsy among them will provide needed information and improve

the ability to cope successfully with the disease by minimizing the potentially harmful management practices, emotional impact of seizures, and diminish the perceived stigmatization or feelings of social isolation among people suffering from the condition. Study carried out in Kaduna, Nigeria on mothers' perspectives on childhood epilepsy reported that the mothers demonstrated appreciable deficiencies in the knowledge of epilepsy, particularly with regards to its aetiology and outcome, and exhibit a negative attitudinal disposition towards children with epilepsy [11]. Studies with similar poor epilepsy perspectives among adults have been reported from Nigeria and several low- and middle-income countries [8, 12, 13]. Reports about perspectives of adults on epilepsy from Nigeria have consistently demonstrated misconceptions about the aetiology and outcome of epilepsy; some studies suggesting an infectious mode of transmission, spiritual or traditional mode of therapy, varying degrees of abuse, stigma and discrimination against those with the disease [11–13]. Globally, having poor epilepsy perspectives has been associated with rural populations in these countries, poor socioeconomic status, strong cultural beliefs about the aetiology of epilepsy and health systems that are weak in the provision of epilepsy-related health services. These studies also reported that negative attitudes continue to prevail over people with epilepsy in most part of the world especially in resource limited setting such as Nigeria [12-14].

Although, several studies have reported high level of awareness in various population, the reported misconceptions, religious and cultural beliefs about the cause and management of epilepsy and stigma experience of people with epilepsy have made the life of these people miserable indicating urgent need to address these research findings [15–17]. Community-based education is reportedly very useful in correcting these ignorance, misconceptions, negative religious and cultural beliefs about the disease [18, 19]. Health workers with targeted training about such disease will be able to carry out this community health education among community members that include opinion leaders (traditional rulers, religious leaders), the youth or the elderly [20, 21]. This could lead to positive change in the health-seeking behaviour of community members with subsequent improvement in quality of life of people with epilepsy [21, 22].

This study assessed the knowledge of women about epilepsy and their attitude towards people with epilepsy in Ile-Ife, Osun State, Nigeria.

2. Methods

The study employed a descriptive cross-sectional design and the target population were women resident in Ife Central Local Government Area, Ile-Ife, Nigeria. Ile-Ife is the

origin of the Yoruba and an urban town with estimated population of 167,000, consisting mainly the Yoruba and other ethnic groups including Igbo and Hausa. The study was carried out over a period of three months. Those included in the study were consenting women aged 18 years and above, residing in Ile-Ife, Nigeria.

A total of 400 subjects were enrolled in the study after determining the sample size using formula for descriptive studies: $n = Z^2 p(1-p)/d^2$ [23].

A pre-tested semi-structured interviewer-administered questionnaire was used to collect data after the consent was obtained from the participants. The questionnaire has various sections focusing on the socio-demographic characteristics, knowledge about epilepsy with questions on awareness, source of information about epilepsy, signs and symptoms of epilepsy, previous experience of observing somebody convulsed, characteristics of the seizure, relationship with the person, what was done to the person to abort the seizure, family history of epilepsy, its causes, and health-seeking behaviour of people with epilepsy. The questionnaire also assessed attitudes towards epilepsy and people with epilepsy that include disclosure issues, stigma, and discrimination. Face validity of the questionnaire was done by the authors with necessary adjustment made to the questions. The survey instrument was available in English language but translated into Yoruba to accommodate non-English speaking respondents and then back-translated into English language. Respondents were interviewed in the afternoon and evenings by the final-year medical students who were trained in administering the instrument.

Multi-stage sampling was used as the sampling technique to select the participants. In the first stage, one ward was selected by balloting from the electoral wards in Ife Central Local Government Area. In the second stage, one enumeration area was selected by balloting from all the enumeration areas in the selected ward. In the third stage, all households in the selected enumeration area were recruited into the study. In the fourth stage, all eligible women in the selected household were approached to participate in the study till the sample size was achieved.

Data collected were analysed using the Statistical Package for Social Science (SPSS) version 20. Univariate analysis was carried out to determine the socio-demographic distribution of study participants through the use of frequency tables and percentages. The appropriate bivariate analysis was carried out to determine the relevant association. Knowledge and attitude score was computed with '+1' assigned for correct response, while '0' was assigned for incorrect response. The mean score was used as cut-off with score graded as good or poor knowledge, positive and negative attitude. Bivariate chi-square test and multivariate regression analyses were performed on participant

variables and knowledge and attitude to epilepsy. Variables in the bivariate test with p-value < 0.2 were included in the multivariate model. The level of statistical significance was taken to be < 0.05.

Ethical clearance was obtained from the Research and Ethics committee of Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife, Nigeria prior to the commencement of the study. Participation in the study was completely voluntary and the respondents were assured of confidentiality. Data collected were kept in a passwordprotected computer.

3. Results

A total of 400 respondents completed the study and were analysed. The mean age (SD) was 40.5 (14.3) years with a range of 16–80 years. Majority (96.8%) were Yoruba. About 54% of respondents were 35 years and above. Majority of respondents were married, had secondary education, and earned above the minimum wage (Table 1).

Table 2 shows that 99.3% of the respondents are aware of epilepsy, 95.3% were aware through parents, while 0.7% have never heard about it. About 53% of respondents believed it was contagious with only 27% aware of medical treatment for epilepsy while majority (75.8%) of the respondents believed it was caused by spiritual attack. Loss of consciousness was the most common symptoms of epilepsy mentioned by the respondents (84.5%). About 49% of respondents mentioned distancing oneself from epileptic patient as the action to take while an epileptic patient is convulsing. Overall, 84.7% of respondents have poor knowledge of epilepsy while only 15.3% have good knowledge.

According to Table 3, 35% had a positive attitude to epilepsy. About 70% of respondents agreed that persons with epilepsy can get married while 21.3% disagreed; 44% of respondents agreed that employing someone with epilepsy is wrong while 48.8% disagreed; 81% of respondents agreed that person with epilepsy should not drive and 82% of respondents agreed that known epileptic patient should not be a factory worker.

Table 4 reports that about 26% of respondents who attended tertiary institution have good knowledge compared to 14.1% and 10.1% who attended secondary and primary schools, respectively, and the association is significant; 18% of respondents who were Christians have a good knowledge of epilepsy compared to 7.3% of their Muslim counterparts. About 19% of those with high income have good knowledge compared to 7.0% of those with low income (p = 0.003).

Variables	Frequency (n = 400)	Percentage (%)
Age in years		
< 35	183	45.8
35 and above	217	54.2
Level of Education		
None	57	14.2
Primary	102	25.5
Secondary	149	37.3
Tertiary	92	23
Marital Status		
Single	75	18.8
Married	276	69
Divorced	6	1.5
Widowed	43	10.7
Religion		
Christianity	304	76
Islamic	96	24
Ethnicity		
Yoruba	387	96.8
lgbo	10	2.5
Hausa	3	0.7
Income per month (Naira)		
<18000 (≈50 US dollars)	112	28
≥18000 (≈50 US dollars)	288	72

TABLE 1: Socio-demographic characteristics of respondents.

Table 5 reports that 43.2% of respondents who were less than 35 years had a positive attitude to epilepsy compared to 28.1% of those who were 35 years and above and the association was significant. Over 31% of respondents who were Muslims had positive attitude compared to 36.4% of the Christians, but the statistical association was not significant. About 18% of those with high income had positive attitude compared with 7.1% of those with low income (p = 0.005).

Factors associated with good knowledge of epilepsy among respondents include having higher education (OR = 3.154, 95%Cl = 1.574-6.323, p = 0.001) and higher income (OR = 3.055, 95%Cl = 1.404-6.651, p = 0.005), while factors associated with positive attitude towards epilepsy include older age group (OR = 1.943, 95%Cl = 1.281-2.945, p = 0.002) and higher income (OR = 2.932, 95%Cl = 1.345-6.386, p = 0.007) (Table 6).

Variables	Frequency (n = 400)	%
Ever heard of Epilepsy		
Yes	397	99.3
No	3	0.7
*Source of information		
Parents	381	95.3
Media	116	29
Health Worker	57	14.3
ls epilepsy contagious		
Yes	211	52.7
No	189	47.3
Medical treatment for Epilepsy		
Yes		
No	107	26.7
	293	73.3
*Causes of epilepsy		
Spiritual attack	303	75.8
Lizard	196	49
Brain injury/birth trauma	162	40.5
Inherited	170	42.6
*Symptoms of Epilepsy		
Loss of Consciousness	338	84.5
Foaming from the month	329	82.3
Falling to the ground	312	78
*Actions taken to help convulsing individual		
Distance yourself	194	48.5
Putting legs on fire	187	46.8
Pour water	154	38.5
Take off dangerous object	136	34
Take to hospital	78	19.5
Knowledge score		
Good	61	15.3
Poor	339	84.7
Note: *Multiple response		

TABLE 2: Respondents' knowledge about Epilepsy.

4. Discussion

This study reported high awareness about epilepsy among the respondents. This report was similar to findings of a community-based study in Turkey in which awareness was 81% [14]. This also corroborated findings of local studies that reported high awareness

Variables	Frequency (n = 400)	%
Attitude score		
Positive	140	35
Negative	260	65
Person suffering from epilepsy should freely disclose it		
Agree	172	43
Disagree	204	51
Indifferent	24	6
Persons with epilepsy can get married		
Agree	278	69.5
Disagree	85	21.3
Indifferent	37	9.2
Marriage to a known epileptic should lead to divorce		
Agree	107	26.8
Disagree	226	56.5
Indifferent	67	16.7
Employing someone with epilepsy is wrong		
Agree	176	44
Disagree	195	48.8
Indifferent	29	7.2
Children with epilepsy should be allowed to play with other children		
Agree	204	51
Disagree	171	42.8
Indifferent	25	6.2
Someone with epilepsy should attend social gathering		
Agree	143	35.8
Disagree	230	57.5
Indifferent	27	6.7
Person with epilepsy should not drive		
Agree	325	81.3
Disagree	57	14.3
Indifferent	18	4.4
Persons with epilepsy should not be factory workers		
Agree	326	81.5
Disagree	55	13.7
Indifferent	19	4.8

TABLE 3: Respondents' attitude towards epilepsy.

of the disease [12, 16]. However, the major source of information about epilepsy in this

Variable	Knowledge		Total	Statistical indices
	Poor (<i>n</i> = 339)	Good (<i>n</i> = 61)		
Age group (years)				$\chi^2 = 0.745$
< 35	152 (83.1)	31(16.9)	183(100)	p = 0.388
≥ 35	187(86.2)	30(13.8)	217(100)	df =1
Level of education				
None/primary	143(89.9)	16(10.1)	159(100)	$\chi^2 = 11.82$
Secondary	128(85.9)	21(14.1)	149(100)	<i>p</i> = 0.003
Tertiary	68(73.9)	24(26.1)	92(100)	df = 2
Marital status				$\chi^2 = 0.863$
*Not married	102(82.3)	22(17.7)	124(100)	p = 0.353
Married	237(85.9)	39(14.1)	276(100)	df = 1
Religion				$\chi^2 = 0.781$
Christianity	250(82.2)	54(17.8)	304(100)	p = 0.377
Islam	89(92.7)	7(7.3)	96(100)	df = 1
Income per month				$\chi^2 = 8.590$
< 18000 (≈50 US dollars)	107(93.0)	8(7.0)	112(100)	p = 0.003
≥ 18000 (≈50 US dollars)	232(81.4)	53(18.6)	288(100)	df = 1

TABLE 4: Association between selected socio-demographic characteristics of respondents and their knowledge about Epilepsy.

Note: *single, divorced, widow.

TABLE 5: Association between selected socio-demographic characteristics of respondents and their attitude to Epilepsy.

Variable	Attitude		Total	Statistical Indices
	Negative ($n = 260$)	Positive (<i>n</i> = 140)		
Age group				$\chi^2 = 9.896$
< 35 years	104(56.8)	79(43.2)	183(100)	p = 0.002
≥ 35	156(71.9)	61(28.1)	217(100)	df = 1
Religion				$\chi^2 = 0.781$
Christianity	194(63.6)	110(36.4)	304(100)	p = 0.377
Islam	66(68.8)	30(31.2)	96(100)	df = 1
Knowledge				$\chi^2 = 0.036$
Poor	221(65.2)	118(34.8)	339(100)	p = 0.850
Good	39(63.9)	22(36.1)	61(100)	df = 1
Income per month (Naira)				$\chi^2 = 7.911$
< 18000 (≈50 US dollars)	104 (92.9)	8(7.1)	112(100)	p = 0.005
≥ 18000 (≈50 US dollars)	235(81.6)	53(18.4)	288(100)	df = 1

study included friends, parents, and neighbours, while few respondents heard about

Factors	OR	95%CI	p-value
Knowledge about epilepsy			
Education level			
None/primary (Ref.)			
Secondary	1.466	0.733–2.931	0.279
Tertiary	3.154	1.574–6.323	0.001
Income (Naira)			
< 18,000 (Ref.)			
≥ 18,000	3.055	1.404–6.651	0.005
Attitude towards epilepsy			
Age group (years)			
< 35 (Ref.)			
≥ 35	1.943	1.281–2.945	0.002
Income (Naira)			
< 18000 (Ref.)			
≥ 18000	2.932	1.345–6.386	0.007

TABLE 6: Logistic regression analysis of factors associated with knowledge and attitude to epilepsy.

the disease from health workers. Previous studies have reported similar findings [1, 14]. These sources of information about epilepsy are largely inaccurate and misleading as reported in studies in this environment [11–13].

Despite a high awareness about the disease, the knowledge of causes and clinical features were poor with believes such as spiritual cause, eating lizard, and contagious aetiology prevalent among the respondents. Ezeala-Adikaibe et al. in 2013 reported similar findings with about half of their respondents believing that epilepsy was contagious while more than one-third believed that it was due to spiritual attack [16]. These findings on spiritual and infectious cause of epilepsy however support the inclination of populations in sub-Saharan Africa towards the cultural or religious belief on the origin of epilepsy [11–13]. This belief shows the poor knowledge and misconceptions about epilepsy among this population [11].

Also, most respondents in our study do not know that epilepsy is medically treatable, hence they are likely to seek help elsewhere instead of the hospitals, like traditional healers or herbal medicine practitioners. The findings of this study are similar to the findings of other previous studies in this locality [18–20]. For instance, Frank-Briggs et al. in 2011 reported that 83% of their respondents having various misconceptions about the disease with majority seeking care for their children with epilepsy from spiritual and herbal medicine practitioners [17].

The findings of this study showed that the general attitude towards epilepsy as a disease and people with epilepsy was poor. The fact that over four-fifth of our respondents would choose to distance themselves from somebody with an epileptic attack further indicates the effect of poor knowledge among our respondents. The findings of this study are similar to the previous reports from Kabir et al. in 2005 [13] and Mustapha et al. in 2013 [19]. Majority of our respondents believed that epilepsy is not a disease that should be freely disclosed. This negative non-supporting attitude is traceable to their unreliable source of information about the disease and is well-documented in previous studies [13, 19, 20].

Also, the socio-demographic variables were found to have a significant association with the knowledge and attitude including the higher educational status, higher income, and younger age group. These findings are similar to that of Lim et al [21] and Neni et al. [22]. The poor knowledge and negative attitude seen in older age group may be as a result of age-long and deep-seated socio-cultural beliefs and value systems. This study also found that knowledge did not significantly influence respondents' attitude towards epilepsy. This was contrary to the findings of Neni et al. [22]. This finding may be as a result of high level of stigmatization associated with this disease condition in our environment.

The findings of this study should be interpreted in the light of some limitations. Firstly, this is a cross-sectional study that makes it difficult to establish causality. Also it is based on self-reporting which is subject to bias. Nevertheless, our findings have significant implication for epilepsy and its management in resource-poor countries like Nigeria.

5. Conclusions

In conclusion, although the level of awareness is high, respondents' had poor knowledge of and negative attitude towards epilepsy. There is a need for continuous community education about epilepsy with the aim of improving the knowledge and attitude of members of the community towards the disease. This will ensure early presentation of sufferers to the health facility. Also, healthcare workers need to be trained so that they can anchor the education of community members on epilepsy. This will correct the misconceptions about this disease and reduce significantly the stigma and discrimination suffered by people with epilepsy.

Conflict of Interest

The authors declare no conflict of interest.

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