Appraisal of Perception and Attitude of Students in Two Tertiary Educational Institutions in Ilorin to Epilepsy

E. O. Sanya, J.K. Olarinoye, K.W. Wahab, A.F. Mustapha, O.O. Ojo
Department of Medicine, University of Ilorin Teaching Hospital Ilorin, Kwara State.

Abstract
An appraisal of perception and attitude of students in tertiary educational institutions on epilepsy was conducted in Ilorin. Students of two tertiary educational institutions were appraised because epilepsy is commonest among school age persons. It was also to assess the effect of education on their perception and views about epilepsy.
Self administered standardized questionnaires were sent to randomly selected students of Kwara polytechnic and University of Ilorin in various faculties.
Four hundred questionnaires were sent out and 319 returned giving response rate of 80%. The respondents were made of 64% males and 36% females with age range of 15-45 years (mean 23 ±3 years). Two hundred and ninety (91%) respondents had heard or read about epilepsy and 210 (66%) had witnessed at least an event of epileptic fit. About 50% believed epilepsy to be an inheritable condition and only 31% knew that head trauma could result in epilepsy. Apart from recognizing epilepsy as a convulsive shaking, majorities do not know other clinical features by which epilepsy could present. Medical students who appear to be more knowledgeable about the etiologies of epilepsy were as likely as others to discriminate and have negative attitude towards epilepsy. Overall there appears to be no linkage between knowledge and attitude of this group of students to epilepsy.
Level of education and course of study does not seem to affect attitude and bias of students against epilepsy in tertiary institutes. More information materials on epilepsy when provided to the populace might help to reduce and overcome the social stereotyping and prejudices against epilepsy.

Key word- epilepsy, students of tertiary educational institution, awareness, perception, attitudes

Corresponding Author

Dr Emmanuel O. Sanya
Neurology Unit
Department of Medicine
UITH PMB 1459
Ilorin
Kwara State.
Email: emanuelosanya@yahoo.com

Introduction:
Living with stigma and negative attitudinal responses from others have always been two of the greatest challenges of people with epilepsy. Earlier publications have shown that bias against this disease remains high in most countries [1, 2]. Several complex factors are responsible for the stigma attached to epilepsy. Central to these is the lack of adequate knowledge about epilepsy as it determines the negative attitude towards the disease. Attitude of the public to epilepsy reflects the way people understand the condition and it is in turn influenced by the general belief of the society. In the public mind, epilepsy has commonly been associated with mental ailment, cognitive disability and unmarriageable, generalization that negatively affects the life of most epileptics including students[2].
Epilepsy is one of the most common chronic neurologic disorders most prevalent in childhood and adolescent. For students living with epilepsy, school experiences could be very challenging; especially coping with peer discrimination that often follows seizures at school and the side effects of medications. These along with the unfriendly environment could place normal developmental tasks, studying and goal achievement beyond the reach of students with epilepsy.
Reducing stigma associated with epilepsy will improve the quality of life of people living with the disease. In order to develop useful strategies for combating the myths and misconceptions of epilepsy, there is the need to first understand the extent of community's knowledge, perception and attitude towards epilepsy. This study was carried out amongst students of two tertiary educational institutions who represent future generation.

Material and Method
A comparative study that looked at responses of

randomly selected 400 students in Kwara state Polytechnic (100) and University of Ilorin (300) to epilepsy. Respondents were in different academic years in their respective courses. The instrument used was a self-administered standardized questionnaire that was modified and pre-tested [9-11]. The survey questionnaire comprises of three sections: demographic data, knowledge of epilepsy; and attitudes towards epilepsy. These were distributed to willing students in both educational institutions. Frequency distributions of variables were generated using the Statistical Package for Social sciences, version 10.0 computer soft ware package. Independent and dependent variables were cross-tabulated to determine degree of association. Statistical significance of the associations was established using the Chi-square test and values of P <05.

Results

Four hundred (400) questionnaires were distributed to randomly selected students. Of these, 319 were returned, giving a response rate of 80%. The respondents were 64% males and 36% females (Table 1). The age of the respondents ranged between 15 to 35 years (mean of 23 ±2.94 years). One hundred and fifty-four (48%) were medical students, and 164 (52%) none-medical students from different faculties and department. Distribution of respondents by faculties and educational level is as shown in Table 1.

Knowledge

Three questions were related to awareness about epilepsy. The respondents were asked if they had heard or read about epilepsy, witnessed an epileptic seizure, and if they knew someone with epilepsy. Most (91%) respondents had heard of epilepsy, of these 60% knew someone with epilepsy. About 6% claimed that the said person was a close relative and in 20% respondents it was a friend. Close to two-third (66%) of the respondents had witnessed an epileptic event (Table 2). Respondents who had observed an epileptic event were more likely to prevent a close relation from marrying persons suffering from epilepsy (P<0.05). Gender, age and course of study did not influence these responses (Table 3). When asked whether people living with epilepsy have same mental capacity as other students. More than two-third (73%) of the respondents responded favorably.

Close to half of the respondents (48%) said epilepsy was an inheritable condition, while only 31.3% respondents knew that head injury could result in epilepsy. Twenty-three percent of respondents claimed epilepsy is synonymous with mental illness (Table 2). Students' course of study positively influenced their knowledge on causes of epilepsy. Medical students compared to non-medical students knew that head trauma could result in epilepsy (P<0.05). On what the respondents knew epilepsy to be, 62% rightly identified it as convulsive shaking. However, majority could not identify other ways by which epilepsy could manifest (Table 2). Only 37% said it could be associated with loss of consciousness, 16% as episodes of behavioral change, and just 11% new it could manifest as brief memory disturbances.

Few students, 84 (26%) knew that single antiepileptic drug (AED) could bring about good seizure control, while lesser number 72 (23%) indicated that seizure control could only be achieved with multiple AEDs. Only 14.7% of students could associate AEDs with congenital malformations. When asked if AED could be abruptly stopped, only 5% knew that antiepileptic medications should not be withdrawn suddenly. Overall, the awareness of our respondents on AEDs was inadequate and was not influenced by the course of study or previous experience of an epileptic.

Attitude

About a third of the respondents (32%) would object to their relatives or future children associating with a known epileptic patient. This attitude was not influenced by respondent's gender or course of study (P>0.05). Almost equal number of respondents expressed opposing view with regards to close relations marrying an individual suffering from epilepsy; 47.3 % will object compared to 46.7% who would not. Students who had ever witnessed a fit were more likely to have a negative attitude to this question (P <0.05). With regards to employment opportunity, 55% of our respondents were likely to give equal employment opportunity to epileptics as the entire populace. Males compared to Females were more favorably disposed to this attitude, but the difference was statistically insignificant (P>0.05). Students who had witnessed an epileptic fit were more likely to recommend equal employment opportunity to epileptics as the entire populace and the difference was not significance P>0.05.

Discussion

To combat discrimination against any disease

Table 1: Characteristics of respondents

Factors	Number (%)
Gender	
Male	205 (64%)
Female	114 (36%)
Faculty/Course of study	
Health sciences	154 (49%)
Sciences	54 (17%)
Social sciences	61(19%)
Law	13 (4%)
Art	37 (12%)
Total	319
Level/years of study	
Pre-degree	15 (5%)
Year one	31 (10%)
Year two	46 (14%)
Year three	47 (15%)
Year four	99 (31%)
Year five	69 (22%)
Year six	6 (2%)

Table 2: Familiarity, knowledge and attitude towards epilepsy

Questions	Correct responses
Familiarity	
Heard/read about epilepsy	290 (91%)
Knew someone	191 (60%)
Witness an epileptic fit	211 (66%)
Ever fitted	32 (10%)
Etiology	
Inherited disorder	154 (48%)
Brain tumor	132 (43%)
Accidents	100 (31%)
Birth defects	98 (31%)
Insanity	73 (23%)
Stroke	37 (12%)
Don't know	55 (17%)
Manifestations	
Convulsive shaking	197 (62%)
Loss of consciousness	123 (39%)
Behavioral abnormality	50 (16%)
Memory disturbances	36(11%)
Don't know	21 (7%)
Attitude	
Object to close relatives marrying epileptics	160 (50%)
Object to association of children with epileptics	99 (32%)
Epileptics have same mental capacity	233 (73%)
Persons suffering from should have children	281 (88%)
Equal employment opportunity	175 (55%)
Use of antiepileptic drug	
Control seizures adequately	84 (26%)
Best as 2 or more drugs	72 (23%)
Recent advancement in AED	72 (23%)
Causes malformation in babies	47 (15%)
Stopped abruptly	17 (5%)
Don't know	104 (33%)

using behavioral change communication which is a very cheap method; the first step is to measure the level of awareness and understanding of the disease in the community. This cross sectional survey looked at the familiarity, attitude and perception of undergraduate students in Ilorin to epilepsy. The focus on students was based on their day-to day relationships with epilepsy students. It was presumed that their views and attitude could strongly affect how the epileptic students cope with their educational and social challenges. Students of tertiary institution were specifically chosen, as they are the future professionals and potential policy makers who could positively influence the entire community. Different faculties were chosen to look at the influence of education and course of study on these attributes.

The result of this study compared favorably with earlier ones from several countries, developed and less developed[9-15]. Students in United of States of America were more knowledgeable about other chronic diseases such as arthritis, breast cancers, HIV/AIDS and Parkinson's disease [15]. This could have been due to the higher prevalence of epilepsy in developing compared to the developed countries [7], or a reflection of more deeply ingrained bias against the diseases in developing ones, so that it has raised awareness and interest in the disease. The knowledge of our respondents appears patchy and superficial with high frequency of misconceptions. About one quarter (22%) of undergraduate students in this study still opined that epilepsy was synonymous with mental illness. This contrasts with the 9% reported in Canada and Unites States [9,16,17], but much lower than 40% from Malaysia[12], and 90% reported in Tanzania [11]. The proportions of students in this study (48%) who thought that epilepsy is an hereditary disorder is higher than what was reported by Pandian *et al* from India (34%), but similar to 46% by Matuja *et al* in Tanzania[11], 45% by Young *et al* from Canada[9], and lower than 67% reported by Ab Rahman *et al* among Malaysian students[12]. Sad to note that only 26% of our respondents knew that epileptic seizure could be adequately controlled with AED. This contrast 80% found amongst other African students[11], while only 47% college students from India knew that AED are effective in seizure control[14].

There appears to be no association between knowledge and attitude of our respondents of epilepsy. Medical students that showed more

Table 3: Perception and attitude of respondents on epilepsy

Factors	Number (%)	P value	X^2
Epileptic have lower mental capacity			
Medical students	32 (21%)	*0.00001	23.7
Non-medical	77 (24.1%)		
Same as insanity			
Medical students	11 (34%)	*0.0000	38.1
Non-medical	59 (21%)		
Epilepsy are mostly inheritable			
Medical students	76 (49%)	0.96	0.0
Non-medical	72 (48%)		
Relative marrying someone with epilepsy			
Ever witnessed a fit	107 (73.8%)	*0.00002	22.5
Never witnessed a fit	38 (26.2%)		
Should not have children			
Medical students	145 (98%)	*0.0000	32.8
Non-medical	14 (79%)		
Children playing with epileptic child			
Medical students	39 (26%)	0.18	1.7
Non-medical	53 (36%)		
Same employment opportunity			
Witnessed a fit	115 (58%)	0.34	0.9
Never witnessed	48 (48%)		
Can result from severe head injury			
Medical students	88 (57%)	*0.0000	92
Non-medical students	12 (8%)		
AED are effective			
Ever fitted	5 (16%)	0.26	1.2
Never fitted	76(27%)		

*statistical significance

knowledge about epilepsy, were as likely as others to have negative attitude towards epilepsy, especially towards children playing with epileptics and giving same employment opportunity to these individuals. Overall, substantial numbers of the undergraduates in this study opined that people living with epilepsy have lower mental capacity, were not marriageable and should not have children. These wrong views if not urgently corrected might continue to put people living with epilepsy in disadvantageous position. Undergraduate's students from other countries seems to have more positive views of epileptics with regards to issues of work, family life and raising their own children [7,9,11-15].

Public attitude towards epilepsy has been well established to be influenced by the degree of adequate knowledge it has about the condition [16-20]. It is therefore not surprising that with a widespread patchy knowledge of this disease among this cross-section of Nigerian undergraduates, their attitude towards the disease condition is negative. If similar study were to be conducted among the general Nigerian populace with lower level of education, the result is likely to reveal accentuation of these negative responses. It could be agued that since medical student constituted 48% of the respondents, the finding of this study is biased, especially with regards to their knowledge of the disease, but only 75 (23%) respondents were in the senior medical classes (5th and 6th level) where lectures on epilepsy are taught.

A major limitation of this study is the closed-ended nature of the questionnaire. This could have restricted respondents' expression to some questions in manner they otherwise would have loved to.

In conclusion, our finding showed a negative attitude towards epilepsy among Nigerian undergraduates from two educational institutions. This is likely a true reflection of the general opinion, as earlier studies conducted amongst teachers in primary, secondary and tertiary educational institutions in Nigeria had reported negative attitude towards epilepsy [21,22]. Although these groups of students are knowledgeable of epilepsy, there is still room for improvement in their knowledge since what is known is not totally correct. To overcome this social stereotyping and prejudices regular public enlightenment on etiology, treatment options and side effect of AEDs is urgently needed. This will go along way to encourage people living with epilepsy come out of their "shell", relate well in the community and even improve on their quality of life and school performance.

Reference:

1. Commission for the control of epilepsy and its consequences. Plan for nationwide action on epilepsy, Vol II. DHEW publication no. 78-279. Bethesda, MD, 1978.

2. McLin WM, de Boer HM. Public perceptions about epilepsy. Epilepsia 1995;36:957-9.

3. Victor M, Ropper AH. Epilepsy and other seizure disorders. In: Maurice Victor, Allan H,

Ropper, eds. Adams & Victor's Principle of Neurology.7th ed. McGraw-Hill, International edition, 2001:331-65.
4. Osuntokun BO. Neuroepidemiology in Africa. In Rose FC ed. Clinical Neuroepidemiology p.57-86, London, Pitman Medical, 1980.
5. Perucca E. Pharmacological advantages of antiepileptic drug monotherapy. Epilepsia 1997;38:6-8.
6. Patsalos PN, Froscher W, Pisani F, et al. The importance of drug interactions in epilepsy therapy. Epilepsia 2002;43:365-385.
7. Scott RA, Lhatoo SD, Sander JWAS. The treatment of epilepsy in developing countries, where do we go from here? Bull WHO 2001;79:344-5.
8. Pandian JD, Shorvon SD. Epilepsy in developing countries: a review of epidemiological, sociocultural, and treatment aspects. Epilepsia 1988;29:S36-S54.
9. Young BG, Derry P, Hutchinson I, et al. An epilepsy questionnaire of knowledge and attitude in Canadian students. Epilepsia: 2002;43: 652-658.
10. Lowe-Pearce C, Camfield CS. Elementary School Epilepsy Survey (ESES): A new measure of elementary school student's knowledge and attitudes about epilepsy. Epilepsy Behav 2005;7:687-96.
11. Matuja WB, Rwira HT. Knowledge and practice (KAP) towards epilepsy in secondary school students in Tanzania. Cent Afr J Med1994;40:13-8.
12. Ab Rahman AF. Awareness and knowledge of epilepsy among students in a Malaysian University. Seizure 2005;14:593-6.
13. Caixeta J, fernandos PT, Sander JW. Epilepsy perception amongst university student. Arq Neuropsiquiatr 2007;65 (Suppl 1): 43-48.
14. Pandian JD, Santosh D, Kumar ST et al. High school student's knowledge, attitude, and practice with respect to epilepsy in Kerala, Southern Indian. Epilepsy and behav 2006; 9:492-7.
15. Austin JK, Shafer PO, Deering JB. Epilepsy familiarity, knowledge, and perception of stigma: Report from a survey of adolescent in the general population. Epilepsy Behav 2005;7:687-96.
16. Caveness WF, Gallup Gh Jr. A survey of public attitude towards epilepsy in 1979 with an indication of trends over the past thirty years. Epilepsy 1980;21;509-18.
17. LaMarthina JM. Uncovering public misconception about epilepsy. J Epilepsy 1989;2:45-8.
18. Santos IC, Guerreoro MM, Mata A, et al. Public awareness and attitudes towards epilepsy in different social segments of Brazil. Arq Neurolsiquiatr 1998;56:32-8.
19. Chung M-Y, Chang Y-C, Yen-Huei CL, et al. Survey of public awareness, understanding and attitudes towards epilepsy in Taiwan. Epilepsia 1995;36:488-93.
20. Fong CG and Hung A. public awareness, attitude and understanding of epilepsy in Hong Kong special administrative region, China. Epilepsia 2002;43:311-316.
21. Sanya EO, Salami TA, Goodman OO, Buhari OIN, Araoye MO. Perception and attitude to epilepsy among teachers in primary, secondary and tertiary educational institutions in middle belt Nigeria. Trop Doct 2005; 35:153-6.
22. Ojinnaka NC. Teachers' perception of epilepsy in Nigeria: a community-based study. Seizure 2002;11:386-91.