Neuropsychiatric Disease and Treatment

Dovepress

open access to scientific and medical research

Open Access Full Text Article

ORIGINAL RESEARCH

Teachers' Knowledge About Epilepsy and Their Attitudes Toward Students with Epilepsy: A Cross-Sectional Survey in the City of Tahoua (Niger)

This article was published in the following Dove Press journal:
Neuropsychiatric Disease and Treatment

Moussa Toudou-Daouda[1]
Abdoul Kadir Ibrahim-Mamadou[2]

[1]Department of Neurology, National Hospital of Niamey, Niamey, Niger; [2]Department of Medicine and Medical Specialties, Regional Hospital Center of Tahoua, Tahoua, Niger

Neuropsychiatric Disease and Treatment downloaded from https://www.dovepress.com/
For personal use only.

Purpose: In this survey, first, we aimed to investigate the views held about epilepsy of primary and secondary school teachers in the city of Tahoua (Niger, a Sub-Saharan African country), and secondarily, how their experience and knowledge about epilepsy influence their attitudes towards school children with epilepsy.

Materials and Methods: A cross-sectional survey was carried out between November and December 2019. We used a self-administered questionnaire survey in French-language comprising sociodemographic part, and knowledge and attitudes about epilepsy part. Composite scores of knowledge and attitudes were calculated, and statistical analyses were performed to assess their association with sociodemographic characteristics.

Results: Two hundred eighty-four (284) school teachers had agreed to answer the questionnaire survey, among which 25% had already witnessed an epileptic seizure in the classroom or the schoolyard. Epilepsy is considered as a chronic brain disease and psychiatric illness in 31% and 32.4% of cases, respectively. In 41.9% of cases, epilepsy is considered as a contagious disease. Significantly, we found that the composite score of knowledge and attitudes was lower in younger school teachers ($p = 0.007$) and those with fewer years of teaching experience ($p = 0.048$). High school teachers had better score composite than those of primary school and college ($p = 0.072$). Regarding the composite score of attitudes, we did not find an association with sociodemographic characteristics.

Conclusion: Teachers' attitudes were not associated with their level of school taught, years of teaching experience, and their religion. It is necessary to integrate educational training courses about epilepsy into the curriculum of teachers' training.

Keywords: epilepsy, school teachers, knowledge and attitudes, child, Tahoua, Niger

Introduction

The most common childhood neurologic condition, epilepsy affects approximately 0.5 to 1% of all children through the age of 16 years, and the median age of seizure onset is between 5 and 6 years,[1] a school-age period during which children begin a critical part of their social and educational development. Epilepsy is a major public health concern associated with strong social stigma and discrimination against people with epilepsy in developing countries,[2,3] especially in the school environment. These social stigma and discrimination against people with epilepsy are often more devastating and harmful than the disease itself. Children with

Correspondence: Moussa Toudou-Daouda
Department of Neurology, National Hospital of Niamey, PO Box 238, Niamey, Niger
Email moussatoudou@gmail.com

submit your manuscript | www.dovepress.com
DovePress
http://doi.org/10.2147/NDT.S276691

© 2020 Toudou-Daouda and Ibrahim-Mamadou. This work is published and licensed by Dove Medical Press Limited. The full terms of this license are available at https://www.dovepress.com/terms.php and incorporate the Creative Commons Attribution – Non Commercial (unported, v3.0) License (http://creativecommons.org/licenses/by-nc/3.0/). By accessing the work you hereby accept the Terms. Non-commercial uses of the work are permitted without any further permission from Dove Medical Press Limited, provided the work is properly attributed. For permission for commercial use of this work, please see paragraphs 4.2 and 5 of our Terms (https://www.dovepress.com/terms.php).

epilepsy commonly experience mental health and educational problems.[4] Negative attitudes towards school children with epilepsy (SCWE) increase the risk of psychosocial and educational problems such as learning disabilities, depression, anxiety, social isolation, poor self-esteem, etc.[5] Negative attitudes towards SCWE come from both their school peers and their school teachers due to their erroneous cultural and religious beliefs about epilepsy such as an incurable and contagious disease.[2,6,7]

As reported previously, reducing the social stigma and discrimination associated with epilepsy can help to improve the quality of life of children with epilepsy.[8] Thus, to reduce the social stigma and discrimination associated with epilepsy, it is necessary to study the general knowledge about epilepsy of the actors of the school environment to identify the factors favoring the social stigma and discrimination towards SCWE. An intervention on the identified factors permits to promote positive attitudes towards SCWE to improve the quality of their life. In Niger, school teachers do not receive any formal instruction on epilepsy during their training, and this means that they have a lack of general knowledge about epilepsy. Only two studies had been conducted in Niger on teachers' attitudes toward and knowledge about epilepsy, including one realized in Niamey (the capital city of Niger)[7] and the other in Sakoira (northeastern of Niger).[9] In the present study, first, we aimed to investigate the views held about epilepsy of primary and secondary school teachers in the city of Tahoua (Niger), and secondarily how their experience and knowledge about epilepsy influence their attitudes towards SCWE.

Materials and Methods

Study Design and Participants

A cross-sectional survey was carried out between November and December 2019 to investigate knowledge about epilepsy of primary and secondary school teachers in the city of Tahoua (Niger, a Sub-Saharan African country). Tahoua, the capital of the Tahoua region, is a town located 550.6 km from northeast of Niamey (capital of Niger) and has two urban communes (Tahoua I and Tahoua II). The Tahoua region had 3,328,365 inhabitants with an annual growth rate of 4.7%, according to the Tahoua regional statistical yearbook 2012–2016. In 2019, the city of Tahoua had 1458 primary school teachers (for 145 primary schools) and 350 secondary school teachers (for 30 colleges and high schools) working either in the public or private sector.

In each school visited and with the assistance of the school administrators, we let questionnaires number equal to that of free school teachers during our passage and who had agreed to answer the questionnaire survey. For each participant, we give him explanations concerning the survey purpose. Each school teacher fills the questionnaire survey alone and anonymously and submits the completed form to his school administrator from whom we collect all the completed questionnaires. We fixed ourselves by hazard the objective to distribute 450 questionnaires in some schools chosen by hazard without particular selection criteria.

Survey Instrument and Data Collection

To conduct the survey, we established, while drawing inspiration on previous studies, a structured questionnaire comprising two parts, sociodemographics, and knowledge and attitudes about epilepsy. In Niger, the official language is the French-language that is used in all education programs. Besides, there are several local languages in Niger, among which the majority have no writings, hence the choice of the official language. Thus, we used a self-administered questionnaire survey in French-language comprising the two above mentioned parts. The sociodemographic part contained 7 items that are listed in Table 1 (results section). The knowledge and attitudes about epilepsy part contained 30 questions that are listed in Table 2 (results section). The 30 questions were simple with preferably "Yes" or "No" responses. For each adapted or correct answer to a question, we award 1 point and 0 points for an incorrect or unsuitable answer. Thus, we used the 30 questions that assessed knowledge and attitudes towards epilepsy to calculate a composite score for each participant with a potential score varying from 0 to 30 with a higher score indicating more knowing about epilepsy. Thus, the participants were classified into three groups according to the knowledge and attitudes composite score: <15, 15–20, and 21–30 indicating low, medium, and high levels of knowledge, respectively. Of the 30 questions, 12 asked about teachers' attitudes towards epilepsy (questions 19 to 30). The responses to these 12 questions were used to establish, for each school teacher, a composite score of attitudes towards SCWE. The composite score of attitudes varies from 0 to 12, with a higher score indicating more positives attitudes towards SCWE. The participants were classified into three groups

Table 1 Sociodemographic Characteristics of the Participants

Items	Number (%)
1. Sex	
Males	109 (38.4)
Females	175 (61.6)
Sex ratio (females/males)	1.6
2. Age (years)*	
Mean ± SD	37.32 ± 8.82
Range	21 and 61
Median (IQR)	37 (30–43)
< 30	58 (20.4)
30–39	119 (41.9)
40–49	71 (25)
≥ 50	31 (10.9)
3. Ethnicity	
Hausa	154 (54.2)
Zarma	53 (18.7)
Songhaï	10 (3.5)
Peulh	23 (8.1)
Touareg	22 (7.7)
Kanouri	9 (3.2)
Other	13 (4.6)
4. Religion[#]	
Islam	274 (96.5)
Christianity	6 (2.1)
5. Marital status[&]	
Single	35 (12.3)
Married	228 (80.3)
Divorced	11 (3.9)
Widow	5 (1.8)
6. Level of school taught[§]	
Primary school	136 (47.9)
College	62 (21.8)
High school	82 (28.9)
7. Years of experience as a school teacher[¶]	
Mean ± SD	12.15 ± 7.95
Range	1 and 40
Median (IQR)	11 (5–17)
< 5	51 (18)
5–9	73 (25.7)
10–14	49 (17.3)
15–19	56 (19.7)
≥ 20	50 (17.6)

Notes: *Five participants had not declared their age. [#]Four participants had not declared their religion. [&]Five participants had not declared their marital status. [§]Four participants had not declared their level of school taught. [¶]Five participants had not declared their number of years of experience as a school teacher.
Abbreviations: SD, standard deviation; IQR, interquartile range.

according to the composite score of attitudes: <6, 6–8, and 9–12 indicating low, medium, and high levels of knowledge, respectively.

Ethics Statement

The study was approved by the local Ethics Committee of the Regional Hospital Center of Tahoua (Niger) and followed the Declaration of Helsinki Ethical Principles for Medical Research Involving Human Subjects. We obtained informed verbal consent for each participant before proposing to him to answer the questionnaire survey. The process for obtaining informed verbal consent was approved by the Ethics Committee of the Regional Hospital Center of Tahoua.

Statistical Analysis

Data were entered into the Excel sheet and then imported into the IBM SPSS statistical software package, version 22.0 (SPSS Inc.; New York, United States) for analysis. In the descriptive analyses, the qualitative variables were expressed as percentages and the quantitative variables as mean ± standard deviation. For assessing the association of the knowledge and attitudes composite score and the composite score of attitudes with categorical sociodemographic variables, we used the Chi-square test of Pearson or Fisher's exact test, and 1-way ANOVA test. The p-values <0.05 were considered statistically significant.

Results

A total of 450 questionnaires were made available to school teachers in some schools of the City of Tahoua. Two hundred and eighty-four (284) completed forms were returned to us with a participation rate of 63.1%.

Sociodemographic Characteristics of the Participants

The sociodemographic characteristics of the participants are detailed in Table 1. The mean age of the participants was 37.32 ± 8.82 years (range: 21 and 61) with a predominance of women (sex ratio at 1.6), married (80.3%), Muslims (96.5%), Hausa (54.2%), and primary school teachers (47.9%). The median teaching experience was 11 years (interquartile range: 5 and 17 years).

Knowledge and Attitudes About Epilepsy of the Participants

Among the 284 participants, 30 of them (10.6%) had had SCWE in their class, and 71 (25%) had already witnessed an epileptic seizure in the classroom or the schoolyard. The mains sources of reliable information reported by the

Table 2 Knowledge and Attitudes About Epilepsy of the Participants

Knowledge Questions	**Adapted or Correct Response, Number (%)**
1. Do you think epilepsy is a chronic brain disease? Correct response "Yes"	88 (31)
2. Do you think head trauma or brain infection can cause epilepsy? Correct response "Yes"	120 (42.3)
3. Do you think epilepsy is a psychiatric illness? Correct response "No"	192 (67.6)
4. Do you think epilepsy is due to witchcraft? Correct response "No"	273 (96.1)
5. Do you think epilepsy is due to demon possession? Correct response "No"	238 (83.8)
6. Do you think convulsions with loss of consciousness are manifestations of epilepsy? Correct response "Yes"	183 (64.4)
7. Do you think that students with epilepsy usually have associated mental retardation? Adapted response "No"	121 (42.6)
8. Do you think a student with epilepsy has a school performance below normal? Adapted response "No"	120 (42.3)
9. Do you think heredity is the main cause of epilepsy? Correct response "No"	246 (86.6)
10. Do you think a student with epilepsy has an intelligence below average? Adapted response "No"	163 (574)
11. Do you think a student with epilepsy has a correct intelligence like any other student? Adapted response "Yes"	54 (19)
12. Do you think a student with epilepsy has a high risk of developing insanity? Adapted response "No"	150 (52.8)
13. Do you think epilepsy is a contagious disease? Adapted response "No"	165 (58.1)
14. Do you think epilepsy is transmitted by physical contact with an epileptic person or their saliva or urine? Correct response "No"	254 (89.4)
15. Do you think epilepsy is transmitted by contact with the place where the person fell during the seizure? Correct response "No"	189 (66.5)
16. Do you think epilepsy is a treatable or controllable disease? Correct response "Yes"	243 (85.6)
17. The treatment of epilepsy is based on modern medicine? Correct response "Yes"	75 (26.4)
18. The treatment of epilepsy is based on traditional medicine? Correct response "No"	246 (86.6)
Questions related to attitudes	**Positives attitudes, Number (%)**
19. Do you think that the practice of sport should be strictly prohibited for children with epilepsy? Positive attitude "No"	161 (56.7)
20. Do you think that a student with epilepsy controlled by medication is like another student with another chronic illness? Positive attitude "Yes"	269 (94.7)
21. Do you think having a student with epilepsy in your classroom can disrupt the education process in the class? Positive attitude "No"	133 (46.8)
22. Do you think having a student with epilepsy in the class can provoke bad psychic effects upon the other students? Positive attitude "No"	243 (85.6)
23. Do you think students with epilepsy should be placed in an adapted class for them? Positive attitude "No"	225 (79.2)
24. Would you allow your child to play or sit in the same classroom with a child with epilepsy? Positive attitude "Yes"	209 (73.6)
25. Would you allow your child to marry someone with epilepsy? Positive attitude "Yes"	76 (26.8)
26. Do you think when someone has an epileptic seizure, it is preferred to put something in his mouth to keep the airway open? Positive attitude "No"	255 (89.8)
27. Do you think when someone has an epileptic seizure, it is preferred to maintain him on the side until the crisis passes? Positive attitude "Yes"	64 (22.5)
28. Do you think that when a child has an epileptic seizure, it is preferred to clear the airways if the child is not breathing well? Positive attitude "Yes"	64 (22.5)
29. Do you think that at the end of the crisis, the child should be sent home? Positive attitude "No"	122 (43)
30. Do you think that at the end of the crisis, the child should be taken to the hospital? Positive attitude "Yes"	112 (39.4)

school teachers were public media (10.6%), health workers (8.7%), and during their teacher training (5.6%).

The 30 questions used to assess the knowledge and attitudes regarding epilepsy of primary and secondary school teachers in the city of Tahoua are listed in Table 2. The percentages presented in Table 2 represent the correct or adapted response rate or positive attitude to each question. The respondents that considered epilepsy as a chronic brain disease represented 31%. On the other hand, 32.4% and 16.2% of the respondents considered epilepsy as a psychiatric illness and demon possession, respectively. 57.4% and 47.2% of the school teacher think that SCWE

usually have associated mental retardation and high risk of developing insanity, respectively. Besides, 41.9% and 14.4% of the respondents considered epilepsy as a contagious disease and untreatable disease, respectively. The respondents think that epilepsy is a contagious disease, transmitted through physical contact and saliva or urine in 10.6%, and with the place where the person fell during the seizure in 33.5%. Respondents who would not allow their children to marry a person with epilepsy represented 73.2%. During an epileptic seizure in the class, 10.2% of the school teachers think it is preferred to put something in the mouth of the child to keep the airway open, and 53% think the child should be sent home at the end of the crisis.

The median composite score of participants' knowledge and attitudes about epilepsy was 18 (interquartile range: 15 and 20), and the mean was 17.70 ± 3.54 (range: 2 and 28). Forty-five respondents (15.8%) had a low level of knowledge and attitudes (composite score <15), 66.2% a medium level (score: 15–20), and 18% a high level (score: 21–30). Significantly, respondents with a composite score <15 were younger (p = 0.007) and had fewer years of teaching experience (p = 0.048) compared to respondents with scores 15–20 and 21–30 (Table 3). Primary school teachers seemed to have more of a composite score <15 while high school teachers seemed to have a score of 21–30, but without significance (p = 0.072). We did not find a relationship between religion and the composite score.

The median composite score of participants' attitudes about epilepsy was 7 (interquartile range: 6 and 8), and the mean was 6.81 ± 1.73 (range: 1 and 12). Sixty one respondents (21.5%) had a low level of positives attitudes (composite score <6), 62% a medium level (score: 6–8), and 16.5% a high level (score: 9–12). We did not find a relationship between the composite score of attitudes and sociodemographic characteristics (Table 4).

Discussion

In this cross-sectional survey, we investigate the views held about epilepsy of primary and secondary school teachers in the city of Tahoua (Niger) to evaluate, using a composite score of knowledge and attitudes, their epilepsy's general knowledge and attitudes. Using this composite score allowed us to assess the knowledge level of the participants accurately. We believe that it is difficult to assess with precision the knowledge of participants based on their answers to questions separately. For example, when we look at the separate responses of the school teachers in this study, we see that 41.9% and 32.4% of them think that epilepsy is a contagious disease and psychiatric illness, respectively, or 57.4% and 47.2% of which think that SCWE usually have associated mental retardation and high risk of developing insanity, respectively. These answers may suppose that the respondents have a low level of knowledge about epilepsy. With the composite score of knowledge and attitudes, we see that only 15.8% of teachers had a low level of knowledge about epilepsy. Despite the right level of general knowledge and attitudes about epilepsy of the participants, when we used attitudes' composite score, we found only 16.5% of the school teacher who had more positives attitudes towards SCWE. The low rate of school teachers with more

Table 3 Sociodemographic Characteristics of the School Teachers by the Composite Score of Knowledge and Attitudes

Sociodemographic Characteristics	Composite Score			*p* value
	< 15 (n=45)	15–20 (n=188)	21–30 (n=51)	
Religion*				
Islam	42 (93.3)	184 (97.9)	48 (94.1)	0.927[¶]
Christianity	2 (4.4)	2 (1.1)	2 (3.9)	
Level of school taught*				
Primary school	27 (60)	90 (47.9)	19 (37.2)	0.072[&]
College	11 (24.4)	42 (22.3)	9 (17.6)	
High school	7 (15.5)	54 (28.7)	21 (41.2)	
Age (years), mean ± SD[#]	34.13 ± 8.10	37.43 ± 8.71	39.80 ± 9.14	0.007[§]
Years of experience as a school teacher, mean ± SD[#]	9.98 ± 6.87	12.18 ± 7.91	14.02 ± 8.69	0.048[§]

Notes: *Missing data in four participants. #Missing data in five participants. [¶]p value was calculated using Fisher's exact test. [&]p value was calculated using the Chi-square test of Pearson. [§]p value was calculated using 1-way ANOVA.
Abbreviation: SD, standard deviation.

Table 4 Sociodemographic Characteristics of the School Teachers by the Composite Score of Attitudes

Sociodemographic Characteristics	Composite Score			*p* value
	< 6 (n=61)	6–8 (n=176)	9–12 (n=47)	
Religion*				
Islam	59 (96.7)	169 (96)	46 (94.1)	0.638¶
Christianity	1 (1.6)	5 (2.8)	0	
Level of school taught*				
Primary school	33 (54.1)	88 (50)	15 (31.9)	0.124&
College	13 (21.3)	39 (22.1)	10 (21.3)	
High school	14 (22.9)	48 (27.3)	20 (42.5)	
Age (years), mean ± SD#	36.17 ± 7.76	37.58 ± 9.28	37.82 ± 8.37	0.518§
Years of experience as a school teacher, mean ± SD#	12.42 ± 7.55	12.11 ± 8.06	11.93 ± 8.22	0.949§

Notes: *Missing data in four participants. #Missing data in five participants. ¶p value was calculated using Fisher's exact test. &p value was calculated using the Chi-square test of Pearson. §p value was calculated using 1-way ANOVA.
Abbreviation: SD, standard deviation.

positives attitudes towards SCWE could be explained by the fact that these teachers did not receive information about epilepsy. When we look at questions 19, 20, 26, 27, 28, 29, and 30 (7 questions out of 12), we notice that a teacher who has not received information about epilepsy can only give answers according to his religious and cultural knowledge. In sub-Saharan Africa, people generally have erroneous cultural and religious beliefs about epilepsy, and this enormously impacts their attitudes towards people with epilepsy.

As reported previously, the composite scores of knowledge and attitudes about epilepsy are significantly associated with more years of teaching experience, a higher level of school taught, and more personal familiarity/experience with epilepsy.[5,10,11] In the present survey, we also found a significant association between the composite score of knowledge and attitudes with more years of teaching experience and older school teachers but a non-significant association with a higher level of school taught. Regarding the composite score of attitudes, we found no association with more years of teaching experience, a higher level of school taught, and older school teachers.

In the present survey, 41.9% of the respondents considered epilepsy as a contagious disease. These findings are similar to those reported in the surveys conducted in Niamey,[7] and Sakoira[9] in 46.2% and 42%, respectively. Findings lower than ours were reported in an Egyptian study at 1.6%,[3] and an Ethiopian study at 1%.[11] Among the respondents of our survey, 26.8% of them could allow their children to marry a person with epilepsy. This rate is high compared to that reported in Ethiopia study at 7.5%.[11] We found a high rate (57.4%) of the school teachers who think that SCWE usually have associated mental retardation. This rate is comparable to that reported in Egypt at 52.9%,[3] but lower than that reported in Ethiopia at 95%.[11] Epilepsy is considered as an incurable disease by 14.4% of the school teachers. This rate is higher than that reported in Niamey at 6.9%,[7] but lower than those reported in Sakoira at 35%,[9] and in Jeddah at 21%.[12] Although 85.6% of respondents think that epilepsy is a treatable or controllable disease, only 26.4% of them think that epilepsy is treated by modern medicine. These findings are similar to those reported in Niamey at 26.2%,[7] but higher than those reported in Burkina Faso at 15%.[2]

The results of the present study recommend the integration of educational training courses about epilepsy into the curriculum of teachers' training to allow them to acquire the know-how towards epilepsy. The results also recommend the organization of public education about epilepsy, using possible avenues such as the mass media (radio and television), and awareness campaigns to change any misconceptions about epilepsy and to promote positive attitudes toward people with epilepsy.

Conclusion

The study revealed that 84.2% of school teachers in the city of Tahoua had a moderate to a high level of general knowledge and attitudes towards epilepsy, but only 16.5% of them had more positives attitudes towards SCWE. Their attitudes were not associated with their level of school taught, years of teaching experience, and their religion. Therefore, it is necessary to integrate educational training

courses about epilepsy into the curriculum of teachers' training, which will allow them to acquire know-how towards epilepsy. For the teachers who are already in their workstation, rapid training courses should be organized to improve their knowledge and attitudes about epilepsy to promote positive attitudes towards SCWE.

Disclosure

The authors declare that they have no competing interests.

References

1. Shinnar S, Pellock JM. Update on the epidemiology and prognosis of pediatric epilepsy. *J Child Neurol*. 2002;17(Suppl 1):S4–S17. doi:10.1177/08830738020170010201
2. Millogo A, Siranyan AS. Knowledge of epilepsy and attitudes towards the condition among school teachers in Bobo-Dioulasso (Burkina Faso). *Epileptic Disord*. 2004;6(1):21–26.
3. Shehata GA, Mahran DG. Knowledge, attitude and practice with respect to epilepsy among school teachers in Assiut city, Egypt. *Epilepsy Res*. 2010;92(2–3):191–200. doi:10.1016/j.eplepsyres.2010.09.007
4. Russ SA, Larson K, Halfon N. A national profile of childhood epilepsy and seizure disorder. *Pediatrics*. 2012;129(2):256–264. doi:10.1542/peds.2010-1371
5. Bishop M, Boag EM. Teachers' knowledge about epilepsy and attitudes toward students with epilepsy: results of a national survey. *Epilepsy Behav*. 2006;8(2):397–405. doi:10.1016/j.yebeh.2005.11.008
6. Milogo A, Traoré ED. Etude des connaissances et des attitudes en matière d'épilepsie en milieu scolaire à Bobo-Dioulasso (Burkina Faso). *Epilepsies*. 2001;13(2):103–108.
7. Assadeck H, Toudou Daouda M, Moussa Konate M, Mamadou Z, Douma Maiga D, Sanoussi S. Knowledge, attitudes, and practices with respect to epilepsy among primary and secondary school teachers in the city of Niamey, Niger. *Brain Behav*. 2020;10(3):e01539. doi:10.1002/brb3.1539
8. Hirfanoglu T, Serdaroglu A, Cansu A, Soysal AS, Derle E, Gucuyener K. Do knowledge of, perception of, and attitudes toward epilepsy affect the quality of life of Turkish children with epilepsy and their parents? *Epilepsy Behav*. 2009;14(1):71–77. doi:10.1016/j.yebeh.2008.08.011
9. Boubacar S, Ben-Adji D, Maiga Y, et al. L'épilepsie en milieu scolaire dans un pays tropical Ouest africain: enquête auprès des enseignants de Sakoira au Niger et revue de la littérature. *North Afr Middle East Epilepsy J*. 2016;5:5–8.
10. Birbeck GL, Chomba E, Atadzhanov M, Mbewe E, Haworth A. Zambian teachers: what do they know about epilepsy and how can we work with them to decrease stigma? *Epilepsy Behav*. 2006;9(2):275–280. doi:10.1016/j.yebeh.2006.06.005
11. Gebrewold MA, Enquselassie F, Teklehaimanot R, Gugssa SA. Ethiopian teachers: their knowledge, attitude and practice towards epilepsy. *BMC Neurol*. 2016;16(1):167. doi:10.1186/s12883-016-0690-4
12. Abulhamail AS, Al-Sulami FE, Alnouri MA, et al. Primary school teacher's knowledge and attitudes toward children with epilepsy. *Seizure*. 2014;23(4):280–283. doi:10.1016/j.seizure.2013.12.010

Neuropsychiatric Disease and Treatment Dovepress

Publish your work in this journal

Neuropsychiatric Disease and Treatment is an international, peer-reviewed journal of clinical therapeutics and pharmacology focusing on concise rapid reporting of clinical or pre-clinical studies on a range of neuropsychiatric and neurological disorders. This journal is indexed on PubMed Central, the 'PsycINFO' database and CAS, and is the official journal of The International Neuropsychiatric Association (INA). The manuscript management system is completely online and includes a very quick and fair peer-review system, which is all easy to use. Visit http://www.dovepress.com/testimonials.php to read real quotes from published authors.

Submit your manuscript here: https://www.dovepress.com/neuropsychiatric-disease-and-treatment-journal