ORIGINAL ARTICLE

Childhood Epilepsy: Knowledge And Attitude Of Primary School Teachers In Port Harcourt, Nigeria

* E. A. D. Alikor MSc, FWACP, ** A. A. Essien FMCPsych

Departments of * Paediatrics and ** Psychiatry, University of Port Harcourt Teaching Hospital, Port Harcourt, Nigeria.

ABSTRACT

Background: *This study was conducted to determine the knowledge of primary school teachers in Port Harcourt metropolis of epilepsy, their knowledge of the management of an attack of epilepsy and the attitude of these teachers towards epilepsy in children.*

Methods: *This is a questionnaire-based, cross-sectional study of 118 school teachers from five randomly selected primary schools in Port Harcourt metropolis, Nigeria.*

Results: *Ten percent (12) of the 118 teachers were graded "Good", 45% (54) "Fair" and 43% (52) "Poor" in overall knowledge score. Sixty six teachers (56%) accept applying crude oil on the body as useful in stopping epileptic attacks in children. There was no significant association between overall knowledge score and sex, year of experience as a teacher and experience with a child with epilepsy. Only 10% of the teachers studied were classified as having overall good knowledge of epilepsy. Sixty nine teachers (58.5%) were graded as having good knowledge of cause of epilepsy. Only 38 (32%) disagree that the saliva drooled during an epileptic attack is contagious; one hundred (84.8%) and 65 (55.1%) agree that some childhood illnesses can cause epilepsy and that it runs in families respectively. Overall, 54 teachers (45.8%) had a cumulative score of negative attitude towards epilepsy. Eighty three teachers (73.3%) would want all children with epilepsy put in a special school whilst 57 (48%) agree that children with epilepsy should be withdrawn from schools. The longer the teacher's professional experience, the more the likelihood of positive attitude towards epilepsy but the association did not reach statistically significant level (p= 0.076). Attitude was not statistically associated with sex and educational qualification.*

Conclusions: *The overall knowledge of primary school teachers in Port Harcourt metropolis of epilepsy and the first-aid management of an epileptic attack is poor. The attitude of these teachers towards epilepsy is negative. Education of the primary school teacher and general public on epilepsy is recommended.*

KEYWORDS: *Epilepsy; Children; Knowledge; Attitude; School teachers.*

Paper accepted for publication 1st June 2005.

INTRODUCTION

World-wide, the prevalence of epilepsy is estimated to be between 4-10 cases per 1000 persons and the incidence 20-70 cases per 100,000 persons per year[1]. These rates are higher in developing countries than in developed countries[1]. Epilepsy is a common paediatric problem, the condition having its highest incidence in children. Most new cases occur during the childhood years[2]. Epilepsy has also been shown to be a common disorder in the paediatric neurology clinic of some of the tertiary health institutions in Nigeria[3-5].

Children with epilepsy are burdened by the limitations that the condition itself imposes on them such as psychological stress (especially when they have seizures in school), loss of school hours and possible effect of the seizure itself on cognitive function.

There is a belief amongst the population in many developing countries, including Nigeria, that epilepsy is contagious and that it is a manifestation of possession by evil spirits[6,7].

Experience from the Paediatric Neurology Clinic of the University of Port Harcourt Teaching Hospital shows that many parents have been requested, or encouraged by school teachers/headmasters to withdraw their epileptic children from school. Many parents either have their children transferred from one school to another, or completely withdraw them from school as a result of the attitude of some teachers towards these children.

In Lagos metropolis, Danesi[8] reported that only 25% of 148 pupils who had seizures in school were attended to by their teachers, whilst the rest had no form of assistance. Only 20% of teachers studied in India were confident in dealing with the epileptic child[9]. The questions are: to what extent is the primary school teacher equipped to assist epileptic children during an epileptic attack in school, and counsel the epileptic child and parents so as to reduce the psychological stress of the illness on the child, through education of the other pupils at school? Some reports in Africa and other developing countries gave differing results in this regard[9-11].

It was in order to answer some of these questions that this study was conducted with the the general objective of collecting baseline data on the

Correspondence to: Dr. E. A. D. Alikor

knowledge and attitude of primary school teachers towards epilepsy in school children. Specifically, the study aimed to determine the knowledge of primary school teachers in Port Harcourt metropolis of epilepsy in general, of the cause of epilepsy and the care of the epileptic child during an attack. It also sought to determine the attitude of these teachers towards childhood epilepsy.

METHODOLOGY

This was a cross-sectional study conducted in 5 primary schools in Port Harcourt metropolis with the 118 school teachers as subjects. The primary schools were selected by simple random sampling from sample frames of government-owned and private-owned schools. One private school and 4 government schools were selected from each of these frames respectively. The ratio reflects the relative numbers of these two types of schools in the main Port Harcourt town, the private schools constituting 26 of the 107 primary schools in this area. All the teachers in the 5 selected primary schools were subjects of the study. There are about 2600 primary school teachers in the main Port Harcourt town.

The sample size was calculated to be able to determine a prevalence of good knowledge of epilepsy of 50% with an absolute precision of 8.5% with 95% confidence. Informed consent of the school authority and the individual teachers was obtained in each school.

Structured questionnaires were administered to these subjects who completed them on-the-spot. The questionnaire was structured to elicit demographic information and qualifications of the teacher, and to test the knowledge of the teachers of the cause of epilepsy, the first-aid management of an epileptic attack and the attitude towards the child with epilepsy.

The data collected were checked and descriptive statistics obtained of relevant variables. To determine the grade of knowledge of the teachers, a point is given for each correct answer and no point is given for a wrong answer.

Ten questions (6-8, 11-13, 29, 30, 33 and 36) were used to group the subjects according to their knowledge of epilepsy. A score of ≥ 7, 4 to 6 and ≤ 3 is graded as 'Good', 'Fair' and 'Poor' knowledge about epilepsy respectively. Six questions (Quest 5 to 10) were used for the determination of knowledge of cause of epilepsy. A score of ≥ 4 is graded as 'Good' while a score of ≤ 3 is graded as 'Poor'. A subject was graded as having 'Positive' attitude if he/she scores ≥ 3 in the 4 questions (14, 20-22). Less than 3 score is graded 'Negative' attitude.

RESULTS

One hundred and nineteen primary school teachers from 5 primary schools in Port Harcourt metropolis participated in the study. The results from 118 were analysed. There were 29 males and 89 females (male/female ratio = 1:3). The schools consisted of one private school with 25 teachers participating in the study. The other 93 teachers were from 4 public schools. There were 105 Nigerians and 13 Ghanaians. The mean years of experience as professional teachers of the study group was 8.01 years, with a range of 1 to 28 years. All the teachers had post-secondary education. Their formal educational qualifications range from Advance Level (one teacher) to Masters in Education (one teacher). Thirteen teachers had first university degree or its equivalent whilst 97 had various post-secondary teachers training certificates.

Twelve (10%) of the 118 teachers were graded "Good", 54 (45%) "Fair" and 52 (43%) "Poor" in overall knowledge score. There was no significant association between overall knowledge score and sex, year of experience as a teacher, experience with a child with epilepsy and academic qualification (Table I).

Sixty nine teachers (58.5%) were graded as having good knowledge of cause of epilepsy. Only 38 (32%) disagree that the saliva drooled during an epileptic attack is contagious; one hundred (84.8%) and 65 (55.1%) agree that some childhood illnesses can cause epilepsy and that it runs in families respectively. Knowledge of the cause of epilepsy is not statistically associated with sex, year of experience as a teacher, experience with a child with epilepsy and academic qualification (Tables II and III).

Table IV shows the responses of the study group to questions relating to management of a child during an attack of convulsions. Sixty six (56%) of the teachers studied would apply crude oil on the body and eyes is useful in stopping convulsions in children. Only 8 of 115 (7%) respondents would not apply spoon or other object into the mouth to prevent biting of tongue, and only 14 of 113 (12%) know the correct positioning of a convulsing child.

Overall, 54 (45.8%) of the respondents manifested negative attitude towards the epileptic child. Eighty three (73.3%) and 57 (48%) of the respondents would want the child with epilepsy sent to a special school or withdrawn from school respectively. Positive attitude towards epilepsy, as

in Table V, is significantly associated with teachers' experience with epileptic children (χ^2= 6.02, p=0.014, df =2). There is an association between long years of teaching experience and positive attitude to the epileptic child, but this did not reach statistically significant level. Sex of teacher, academic qualification, having a child or ward at home with recurrent convulsions, and seeing a child convulse in class or school are not statistically associated with attitude toward epilepsy.

Table I. The Relationship between Knowledge Score and Some Factors in the Study Group.

Sub-group	Group	Knowledge Score Group				χ^2	p
		No	Good	Fair	Poor		
Sex	M	29	3	17	9	2.69	0.26
	F	88	9	37	42		
Years of teaching experience	20-29	10	1	15	10		
	10-19	71	8	33	30		
	<9	17	3	5	9		
Had ever seen a child having convulsions in class or school	Yes	64	7	33	24	2.82	0.24
	No	53	5	20	28		
Know any child in class with recurrent convulsion.	Yes	20	1	9	10	0.85	0.65
	No	94	11	42	41		
Has child or ward at home with recurrent convulsions	Yes	14	2	9	3	3.11	0.21
	No	103	10	45	48		
Academic qualification	≥ 1st deg	14	1	6	7	0.43	0.81
	< 1st deg	97	10	47	40		

Table III. The Relationship between Knowledge of Cause of Epilepsy and Some Factors in the Study Group.

Sub-group	Groups	Knowledge of Cause			χ^2	p
		No	Good	Poor		
Sex	M	29	17	12	0.00	0.95
	F	88	51	37		
Years of teaching experience	20-29	26	13	13		
	10-19	71	43	38	0.08	0.96
	<9	17	9	8		
Had ever seen a child having convulsions in class or school	Yes	64	38	26	0.09	0.76
	No	53	30	23		
Know any child in class with recurrent convulsion.	Yes	20	12	8	0.09	0.76
	No	94	53	41		
Has child or ward at home with recurrent convulsions	Yes	14	10	4	0.52	0.47
	No	103	59	44		
Academic qualification	≥ 1st deg	14	8	6	0.03	0.86
	< 1st deg	97	57	40		

Table II. Response of Study Group to Some Questions relating Knowledge and Attitude

	Total	Correct No	Incorrect No	Do not know No
Transfer from person to person	118	24	83	11
Caused by evil spirit	117	17	71	29
Caused by some childhood illnesses	118	100	6	12
Related to the childs food	118	4	92	22
Runs in family	116	65	36	15
Too much sun can cause it	115	15	57	43
Foam from mouth during attack is contagious	117	56	38	23
Always of lower intelligence	116	65	33	18
Death during attack is common	117	61	41	15
Children with epilepsy die young	108	42	65	1
Epilepsy is best cured spiritually	106	21	84	1
Should be sent to special school	118	83	30	5
Should be withdrawn from school to reassure other parents	116	57	53	6

Table IV. Response of Study Group to Appropriate Measures to be taken during attack of Convulsions

Measures	Total	Responses Yes	No	Do not know
Cold water poured on child	116	28	58	30
Feet put in hot water or fire	114	21	65	28
Put in car and taken to nearest hospital	116	86	26	4
Spoon or other object put into mouth to prevent biting of tongue	115	102	8	5
Cows urine given to drink	116	29	46	41
Crude oil applied to body and eyes	116	66	24	26
Kernel oil, balm, etc applied to body	116	80	24	12
Hold child firmly to reduce convulsion	116	48	52	16
Lie on one side with head held slightly backwards	113	14	53	46
Lie child on back	115	48	35	32

Table V. The Relationship between Attitude and Some Factors the Study Group.

Sub-group	Groups	Attitude Group			χ^2	p
		No	Positive	Negative		
Sex	M	27	15	12		
	F	87	45	42		
Years of teaching experience (yrs)	20-29	25	17	8		
	10-19	69	35	34	3.36	0.19
	<9	17	7	10		
Had ever seen a child having convulsions in class or school	Yes	64	35	29	0.16	0.69
	No	51	26	25		
Know any child in class with recurrent convulsion.	Yes	20	16	4	6.02	0.014
	No	92	43	49		
Has child or ward at home with recurrent convulsions	Yes	13	7	6	0.04	0.84
	No	101	53	48		
Academic qualification	≥1st deg	14	9	5	0.61	0.44
	< 1st deg	97	50	44		

DISCUSSION

The poor overall knowledge and knowledge of the cause of epilepsy shown by the primary school teachers in his study is similar to previous reports on teachers in Thailand[8] and India[5] and literate urban

population in Ghana[12]. Thirty eight percent of the teachers studied in Thailand had not heard or read about epilepsy. In Tanzania, 60% of the respondents considered the saliva and breath from an epileptic during an attack as contagious[13]. In contrast, better knowledge of epilepsy was reported from Zimbabwean teachers[10] where about 90% of Zimbabwe school teachers know about epilepsy and only 0.6% would attribute epilepsy to evil spirit.

The high proportion of teachers in our study who would apply harmful methods in the management of the convulsing child is similar to the report from Thailand[11]where half of the teachers studied would apply harmful means in this situation.

The attitude manifested by the teachers in this study towards the child with epilepsy is generally poor with almost half of the teachers studied showing a negative attitude. Forty percent of the persons surveyed in India[14] felt that children with epilepsy should not be sent to school. In another study in India[9], only 50% of the teachers surveyed favoured normal school for children with epilepsy. Majority of the teachers surveyed in Zimbabwe were willing to accommodate and teach children with epilepsy[10]. The difference in the knowledge and attitude of school teachers towards epilepsy in Zimbabwe compared to the findings in our study and in reports from some other developing countries may reflect differences in emphasis in the curriculum of teachers' education.

The implications of poor knowledge and negative attitude of primary school teachers towards epilepsy are many: the teacher cannot impart simple but important information on epilepsy to his pupils, children with epilepsy can hardly learn from such teachers who already regard them as risk to other persons. In fact, the teachers may themselves be a source stigmatization of the epileptic child in school. It also may reflect the inadequacy of the school and teachers' training curriculum. Changes in knowledge and management of seizures in children with epilepsy following an education session have been reported[15].

In conclusion, the knowledge of primary school teachers in Port Harcourt of epilepsy is poor. The attitude of these teachers towards epilepsy is negative. The primary school teachers are ill-prepared for meaningful assistance to the epileptic pupil or anxious parents. It is recommended that the health education content of teachers' training curriculum be reviewed and improved upon to reflect education on epilepsy. Continued education for teachers in this regard as well as enlightenment campaigns of the public is also recommended.

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EPILEPSY: KNOWLEDGE AND ATTITUDE OF PRIMARY SCHOOL TEACHERS-APPENDIX I.

QUESTIONNAIRE

Code.....
1. Sex .....
2. Nationality .....
3. Qualifications.....
4. Years of teaching Experience.....

Please answer the following questions regarding EPILEPSY/CONVULSIONS by checking the options: YES, NO, DO NOT KNOW as appropriate:

	YES	*NO*	*DON'T KNOW*
05. It is transferred from one person to another	[ ]	[ ]	[ ]
06. It is caused by evil spirit/witches	[ ]	[ ]	[ ]
07. It can be caused by some illnesses during childhood.	[ ]	[ ]	[ ]

08. The condition may run in families [ ] [ ] [ ]
09. The cause is related to the type of food the child takes [ ] [ ] [ ]
10. Too much sun can cause it [ ] [ ] [ ]
11. The children are always of lower intelligence [ ] [ ] [ ]
12. Death during attack is common [ ] [ ] [ ]
13. The foam coming out of the mouth during an attack is contagious [ ] [ ] [ ]
14. Parents should not send a child known to have convulsions to school. [ ] [ ] [ ]
15. Do you have a child or ward at your home now who has frequent convulsions 1.YES 2. NO
16. Since your teaching career, have you ever SEEN a pupil in your class having an attack of convulsions during school hours ? 1.YES 2. NO
17. Do you KNOW (whether or not you have SEEN) any child in your class who has convulsions from time to time? 1. YES 2. NO
18. It would be in the interest of the child with epilepsy to be in a special school especially since most teachers are currently overworked in the conventional schools. 1. YES 2. NO
19. The school authority should withdraw a child who has frequent convulsions from school if only to reassure the other parents. 1. YES 2. NO
20. School children with this condition die young 1. YES 2. NO
21. The disease is best cured spiritually. 1. YES 2. NO

When a child has an attack of convulsions:
Please tick box [X] as appropriate :
AGREE; DISAGREE;DON'T KNOW

22. He/She should be laid on the back [ ] [ ] [ ]
23. He/She should be laid on the side with the head held forward. [ ] [ ] [ ]
24. He/She should be laid face down. [ ] [ ] [ ]
25. He/She should be laid sitting on the chair with the head held downwards. [ ] [ ] [ ]
26. He/she should be held firmly to reduce the convulsions [ ] [ ] [ ]
27. Cold water should be poured on the child. [ ] [ ] [ ]
28. The feet should be put into hot water or fire to stop the convulsions [ ] [ ] [ ]
29. He/She should be laid on the side with the head held backwards [ ] [ ] [ ]
30. The child should immediately be put in a car and taken to the nearest hospital. [ ] [ ] [ ]
31. Sharp and other harmful objects should be removed from the vicinity of the child [ ] [ ] [ ]
32. Kernel Oil, balms (e.g. Robb) applied all over the body helps to reduce the duration and severity of the convulsion. [ ] [ ] [ ]
33. An object e.g. spoon is put into the mouth in order to prevent the tongue from beig bitten by the teeth [ ] [ ] [ ]

The following is useful in stopping convulsions in children

34. Palm oil applied on body and given to drink [ ] [ ] [ ]
35. Coconut water given to drink [ ] [ ] [ ]
36. Cow's urine given to drink [ ] [ ] [ ]
37. Crude oil applied on the body [ ] [ ] [ ]

THANK YOU VERY MUCH