Teachers' perceptions of epilepsy

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Abstract

A questionnaire survey undertaken among 142 schoolteachers in North Staffordshire revealed most of the respondents did not feel confident when teaching children who had epilepsy and a minority considered their knowledge of the subject to be adequate. Only four teachers had received recent specific instruction on childhood epilepsy and the majority requested training on epilepsy and other medical conditions. Despite this lack of confidence and specific training, the respondents demonstrated good general knowledge of epilepsy and adequate awareness of the difficulties encountered by epileptic schoolchildren. If optimal care is to be achieved for children with epilepsy, then teachers must feel confident with this subject. School health services have a clear role in ensuring that teachers have sufficient knowledge of childhood epilepsy, that they have adequate support, and that communication between teachers, parents, and paediatricians is encouraged.

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Teachers, in general, do not receive any formal instruction on childhood illness during their training. Following the integration of children with special needs into mainstream schools, teachers are now quite likely to encounter children with a wide variety of significant medical disorders. Previous studies have already demonstrated a lack of knowledge among school teachers of common chronic disorders such as asthma[1] and diabetes.[2] Epilepsy is one of the more common diseases encountered among schoolchildren with an overall prevalence of four to five per thousand.[3]

A survey in 1975 demonstrated that teachers had a limited understanding of epilepsy and that little or no support on the subject was available to them from the school medical service.[4] It is important to consider the attitudes and awareness that teachers may have regarding childhood epilepsy. Although a common disorder, it still possesses a social stigma that may result in parental reluctance to share information with teaching staff. In addition, there is evidence to suggest that children with epilepsy, as a group, are more prone to learning disorders.[5] As much as 40% of a child's waking life is spent at school, and during that time teachers could have an important part to play in the management and surveillance of children with epilepsy.

The aim of this study was to determine current attitudes and awareness of childhood epilepsy held by school teachers in North Staffordshire.

Methods

One hundred and forty nine schoolteachers in 12 mainstream schools were invited to participate in the study. Teachers' knowledge and attitudes were determined by means of a self completed questionnaire consisting of 39 questions. The questions were mainly of the true/false variety but also allowed for teachers to express their opinions by means of free text. The areas covered by the questionnaire included:

(1) Teachers' personal details incuding age, sex, years of teaching experience, and whether they had first aid training.

(2) General knowledge of the aetiology, presentation, treatment, and outcome of schoolchildren with epilepsy.

(3) Previous experience of epilepsy in children, including personal encounters with epileptic children and previous specific training on childhood epilepsy.

(4) Views regarding possible learning difficulties in epileptic children and the most appropriate school placement for them.

(5) Appropriate restrictions of activity for children who had epilepsy; appropriate careers for them and views regarding the difficulties that might be encountered by them on leaving school.

(6) First aid treatment of epileptic fits and views regarding the administration of rectal diazepam at school.

(7) Overall confidence of the teachers when presented with a child with epilepsy.

(8) Levels of communication between parents, teachers, and medical staff.

Statistical analysis of results was achieved by means of the Number Cruncher Statistical System statistical package version 5 (Utah, 1989). Because of occasional missing data, totals in the tables may not add up to 100%.

Results

(1) TEACHERS

One hundred and forty two teachers (44 male, 98 female) participated in the study; seven teachers refused. Ninety four teachers (66%) were aged 35 years or more and 90 respondents (63%) had 10 or more years of teaching experience. Twenty seven teachers (19%) were first aiders.

(2) GENERAL KNOWLEDGE OF EPILEPSY

Table 1 summarises the responses to 10 general

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Table 1 Teachers' general knowledge of epilepsy. Figures are number (%) of teachers

	Correct answer	Actual answers		
		True	False	Don't know
1. An epileptic fit happens when there is a discharge of abnormal electrical activity in the brain	True	109 (77)	5 (4)	28 (20)
2. All children who have fits have epilepsy	False	129 (91)	3 (2)	10 (7)
3. Epilepsy can run in families	True	94 (66)	13 (9)	35 (25)
4. In some epileptic children a fit can be triggered by flashing lights	True	123 (87)	6 (4)	13 (9)
5. Children with epilepsy are usually educationally subnormal	False	0 (0)	114 (99)	2 (1)
6. Drugs used to treat epilepsy can cause drowsiness	True	85 (60)	8 (6)	49 (34)
7. The outlook for children with epilepsy is mostly good	True	119 (84)	2 (1)	21 (15)
8. The proportion of schoolchildren with epilepsy is approximately 0·5–1·0%	True	38 (27)	42 (30)	62 (44)
9. Epilepsy can occur following a head injury	True	65 (46)	18 (13)	59 (41)
10. The test most often used to diagnose epilepsy is called an EEG	True	89 (63)	6 (4)	47 (33)

knowledge questions concerning epilepsy. The number of correct responses varied from 99% to question 5, which asked if children with epilepsy were usually educationally subnormal, to 27% correct for question 8, which asked the prevalence of epilepsy in schoolchildren. The mean overall number of correct replies was 70%.

Table 2 Teachers' previous experience of epilepsy. Figures are number (%) of teachers

	Responses		
	Yes	No	Don't know
Have you ever witnessed a fit?	97 (69)	43 (31)	1 (1)
Have you ever taught a child with epilepsy?	81 (57)	53 (38)	7 (5)
Have you a friend or relative with epilepsy?	41 (29)	93 (66)	7 (5)
Have you attended courses on epilepsy?	4 (3)	137 (97)	0 (0)
Have you read leaflets on epilepsy?	31 (22)	108 (77)	2 (1)

Table 3 Responses of teachers to questions regarding epilepsy and learning. Figures are number (%) of teachers

	True	False	Don't know
Children with epilepsy are more likely to have problems with learning	21 (15)	97 (68)	24 (17)
	Yes	No	Don't know
Would you accept a lower standard of work from a child with epilepsy?:	7 (5)	118 (83)	18 (12)
Where should children with epilepsy be educated?			
All in normal schools	68 (48)		
Most in normal schools	65 (46)		
Some in special schools	6 (4)		
Most in special schools	0 (0)		
Don't know	2 (1)		

(3) PREVIOUS EXPERIENCE OF EPILEPSY (TABLE 2)

The majority of teachers had witnessed an epileptic fit (n=97; 69%) or had taught a child with epilepsy (n=81; 57%). Forty one teachers (29%) had either a friend or a relative with epilepsy. Thirty one teachers (22%) could remember reading leaflets or other literature concerning epilepsy and four teachers (3%) had attended a seminar or course on childhood epilepsy within the last five years. When asked from whom they would obtain further information regarding epilepsy, 120 (88%) would approach the school doctor; 12 (8%) would make inquiries from the child's general practitioner, and five (4%) would ask the school nurse.

(4) EDUCATIONAL ASPECTS OF EPILEPSY

Ninety seven teachers (68%) did not consider that children with epilepsy were more likely to have problems with learning and their consensus of opinion was such that they should not expect a lower standard of work from children with epilepsy (table 3). The majority of teachers were of the opinion that either all or most epileptic children should be educated in mainstream schools.

(5) RESTRICTIONS

Table 4 refers to the teachers' responses concerning restrictions that might be imposed on schoolchildren with epilepsy. In general, teachers considered football, running, and gymnastics but not rock climbing to be appropriate sports. They disagreed with statements that children with epilepsy should never ride a

Table 4 Responses of teacher to questions regarding childhood epilepsy and restrictions. Figures are number (%) of teachers

	True	False	Don't know
1. The following are suitable sports for *most* children with epilepsy:			
Football	120 (85)	2 (1)	20 (14)
Running	121 (85)	2 (1)	19 (14)
Rock climbing	23 (16)	82 (58)	37 (26)
Gymnastics	71 (50)	31 (22)	40 (28)
2. Children with epilepsy must never ride a bicycle	3 (2)	116 (82)	23 (16)
3. Children with epilepsy will never be allowed to drive	12 (9)	102 (72)	28 (19)
4. Children with epilepsy should not participate in laboratory experiments	1 (1)	117 (83)	24 (17)
5. Children with epilepsy must never go swimming	7 (5)	121 (85)	14 (10)
6. Suitable careers for children with epilepsy are:			
Teacher	97 (68)	18 (13)	59 (19)
Bus driver	10 (7)	111 (78)	21 (15)
Nurse	77 (54)	31 (22)	34 (24)
Accountant	127 (89)	0 (0)	15 (11)

bicycle, never be allowed to drive, never participate in laboratory experiments, and never go swimming. Suitable careers, in their opinion, for epileptics were teaching, nursing, accountancy, but not bus driving. The teachers were asked to state those difficulties which children with epilepsy might encounter when leaving school and their responses were as follows: employer discrimination (n=59; 42%), ignorance of others (n=29; 20%), problems of social integration (n=27; 19%), lack of acceptance by colleagues (n=12; 8%), and limited job choice (n=11; 7%).

(6) TREATMENT OF EPILEPTIC FITS

Table 5 indicates the answers to a question where teachers were asked to define their responses in the event of a child having an unexpected fit in the classroom. The majority of teachers would place the child in the recovery position, would not place a handkerchief in the child's mouth, would not immediately call for an ambulance, and would not attempt to restrain jerking limb movements. As to the appropriateness of always sending a child home after a fit, there was some uncertainty regarding this with almost equal numbers answering 'yes' or 'don't know'. Teachers were also asked who was the most appropriate person to administer rectal diazepam. Fifty teachers (35%) declined to answer this question. Of those who responded the answers were as follows: teacher (n=7; 8%), head teacher (n=2; 2%), school nurse (n=39; 42%), doctor (n=23; 25%), classroom assistant (n=3; 3%), and first aider (n=17; 18%). The teachers were also asked to give reasons for their answers to this question and comments included that they would not accept responsibility for this treatment and that training in the administration of rectal diazepam would be needed.

(7) LEVELS OF CONFIDENCE

The respondents were asked if they could evaluate their overall levels of confidence when teaching or supervising epileptic children. Only seven teachers (5%) felt very confident when dealing with children who had epilepsy, 44 (31%) felt quite confident, and 90 (64%) replied that they did not feel confident. Teachers who had previously witnessed an epileptic fit had significantly higher levels of confidence than those who had not ($\chi^2_1=18{\cdot}65$, $p<0{\cdot}001$). Similarly, confidence was higher in those who had a friend or relative who had epilepsy ($\chi^2_1=11{\cdot}20$, $p<0{\cdot}001$). Five teachers (4%) felt that they knew enough about childhood epilepsy, 120 (87%) considered their knowledge inadequate, and the remaining 12 (9%) were not sure. Sixty six teachers (46%) state that their confidence would be increased by further training in childhood epilepsy and 63 (44%) required more information in the form of booklets and leaflets. The majority (n=129; 92%) felt that further instruction in childhood epilepsy would be of benefit and also requested instruction in asthma, diabetes, haemophilia, cystic fibrosis, hearing impairment, and AIDS.

Table 5 Teachers' management of an epileptic fit. Figures are number (%) of teachers

If a child suddenly had a fit in your classroom would you:	*Yes*	*No*	*Don't know*
1. Immediately call for an ambulance	12 (9)	106 (75)	24 (16)
2. Place child in the recovery position	121 (85)	7 (5)	14 (10)
3. Place a handkerchief in the child's mouth	15 (11)	87 (62)	40 (27)
4. Restrain jerking limb movements	7 (5)	107 (75)	28 (20)
5. Send child home after he had recovered	41 (29)	53 (47)	48 (34)

(8) COMMUNICATION BETWEEN TEACHERS, PARENTS, AND THE SCHOOL MEDICAL SERVICE

Of the 81 teachers who to their knowledge had taught a child with epilepsy, 40 (49%) were first made aware of the child's epilepsy by prior discussion with parents, 24 (30%) first learned of the child's epilepsy when the child had a fit in school, and 11 (14%) teachers had discussion with either the school nurse or doctor. In general, teachers welcomed the notion of prior discussion with an epileptic child's parents and they considered the following topics to be of use in this context: frequency of fits, medication, warning signs of imminent fits, and parent contact details.

Discussion

This survey has revealed many positive findings regarding teachers' perceptions of childhood epilepsy. In particular, the teachers are to be commended on their depth of general knowledge of childhood epilepsy in spite of their lack of previous training on the subject. It would appear from this study that this knowledge was acquired as a result of personal experience over the years rather than from structured training. The teachers studied were relatively mature and experienced and this may have had a bearing on their responses to the general knowledge questions. It is interesting that their level of knowledge of childhood epilepsy was better than that of teachers in other studies when knowledge and attitudes to asthma[1] and diabetes[2] were studied.

The positive attitude demonstrated by the teachers regarding educational aspects of children with epilepsy is very encouraging and is in contrast to attitudes found in earlier studies.[6 7] Perhaps their views, if anything, are somewhat optimistic in some respects. The teachers in this study, in general, did not consider that epileptic children were more prone to learning difficulties. The subject of academic outcome in these children is controversial but many studies, including that by Stores and Hart,[8] have indicated that children with epilepsy, in general, are more likely to have learning difficulties. The reasons for this are unclear at present but teachers should at least be aware of the potential for academic failure in epileptic children so that their progress in school can be closely monitored. It is of interest that most teachers considered a career in teaching to be appropriate for a school leaver who had epilepsy. This again emphasises the positive attitude of the teachers. Current recommendations, however, require that teacher training applicants must be free from seizures for three years and that, while in post, they may be barred from teaching physical

education, craft, science, and home economics.[9] The final encouraging outcome from this study is the request made by the teachers for further training or instruction in epilepsy and other common childhood disorders.

The main finding from this study was the overall lack of confidence among the teachers despite possessing both reasonable knowledge and considerable awarenes of the difficulties faced by epileptic schoolchildren. A number of factors may have combined together to contribute to undermining the confidence experienced by the teachers when they encounter children who have epilepsy. In the first instance, lack of structured training on epilepsy is likely to be relevant. A fear of the unknown, especially among younger teachers, and a lack of clarity of what is expected from them as professionals can result in anxiety based upon lack of experience and relevant knowledge. Secondly, lack of proper communication between parents, medical staff, and teachers will also result in uncertainty. It is regrettable that our findings are similar to those of Holdsworth and Whitmore who, in 1974, demonstrated similar lack of communication.[4] While knowledge and attitudes of teachers in this study have certainly improved since then, it would appear that levels of communication between all interested parties remain the same. A supreme example of lack of communications would be those 24 instances where teachers were first made aware of a child's epilepsy by the child having a fit in school.

The subject of administration of rectal diazepam by teachers in mainstream schools is fraught with difficulty. There is no doubt that in certain circumstances rectal diazepam can be an extremely effective method of treatment,[10] especially in status epilepticus. However, training and support is needed if teachers are to use this drug effectively and it could be argued, quite reasonably, that its use might be better restricted to special schools where pupil supervision is greater and help from a classroom assistant is available. There is a considerable body of teacher opinion opposing the administration of rectal diazepam by teachers in mainstream schools for this reason.[11]

THE WAY FORWARD

(1) Training

Several writers have called for the institution of instruction on common medical disorders while teachers are in training.[1 4] While this recommendation is perhaps relevant in concept, following recent changes in the training of teachers,[12] it is unlikely to be practical. Teachers will now spend less overall time in training and it seems unlikely that time will be set aside in order to increase their awareness of medically related issues. In this event, the onus for training of teachers in common childhood disorders must now lie with local health authorities. This should be undertaken by health authorities as a matter of some urgency especially for newly qualified teachers. An appropriate training package could be offered that would include aspects of medical illnesses in childhood which have particular relevance for schools.

(2) Communication

The importance of adequate communication between parents, teachers, and the school medical service cannot be overemphasised. It seems a pity that this aspect of the care of epileptic children has not greatly improved since the study by Holdsworth and Whitmore.[4] This lack of communication could be improved in several ways. Hospital paediatricians should have close liaison with colleagues in the school health service when treating schoolchildren with epilepsy. School nurses, in particular, are in a good position to ensure that adequate channels of communication exist between parents, school, and hospital services. The parent held child health record has already been shown to improve communication between parents and other parties and could be of great benefit here.[13] Community paediatricians, as part of their advocacy role, have an important coordinating function with regard to the integration of children with epilepsy into mainstream schools and could enlist the help of the voluntary sector, including the British Epilepsy Association, which has already produced helpful training material for teachers.

(3) Support

Once an epileptic child is admitted into school, ongoing support and advice could reasonably be provided by the school health team of school doctor and nurse. Now that most authorities have at last abandoned routine medical examinations for all school entrants, there should be more time available for this valuable work.

(4) Reduction of social stigma

There is no doubt that some of the difficulties faced by epileptic schoolchildren result from the social stigma that the illness attracts. Epilepsy remains a poorly understood and sometimes feared illness by the general public. Colver advocated a community based campaign to increase public awareness of asthma.[14] Perhaps the time has now come for a similar campaign to increase awareness of childhood epilepsy in order to reduce its ongoing stigma. Such a campaign would do much to facilitate the successful integration of children who have epilepsy into mainstream schools.

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