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Knowledge, attitude and practice of epilepsy among schoolteachers in Pakistan

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KNOWLEDGE, ATTITUDE AND PRACTICE OF EPILEPSY AMONG SCHOOLTEACHERS IN PAKISTAN

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ABSTRACT

Background and Purpose: Assessment of Knowledge, Attitude and Practice (KAP) concerning epilepsy among schoolteachers in Pakistan. No such study has previously been conducted in this country and results would help formulate a comprehensive plan of action to address this important issue. **Methods:** This cross-sectional study is a component of the School Awareness Workshop project held between October 2002 and December 2005 under the auspices of NGO-run Comprehensive Epilepsy Control Programme of Pakistan. Fourteen workshops were conducted in five cities of Pakistan using a structured 15-items questionnaire. **Results:** Total 535 questionnaires were analyzed. More than 80% of the respondents were employees of government-run schools; 61.5% females and 77.4% graduates and postgraduates. Mean age was 37.0 (±9.2) years. The mean KAP-score was 8.34 ± 2.38. Sixty-one percent were acquainted with a person with epilepsy. Epilepsy was not considered a commonly prevalent condition by 82.7% yet 69.0% believed no age was immune. Common considered causes of epilepsy included brain-electrical-abnormality (55.0%) and stress and tension (37.4%). Epilepsy was considered hereditary by 21.5% and transmissible by 10.1%. Suggested first-aid measures included putting a spoon in mouth (21.1%) and shoe-smelling (15.7%). About 30% were unaware that epilepsy is treatable. Three-fourths believed a child with epilepsy could study in normal schools and half opined about a negative impact of society on people with epilepsy. More than seventy percent supported marriage and child-bearing.**Conclusion:** Inadequate knowledge about epilepsy and its treatment was observed amongst schoolteachers in Pakistan. However, their attitude towards the affected was generally positive and majority supported education of children with epilepsy in normal schools.

INTRODUCTION

Epilepsy is one of the commonest neurological disorders associated with significant stigma. Of the estimated 50 million people with epilepsy (PWE) in the world, about 80% are living in developing countries1 including Pakistan. Inadequate knowledge about the condition is a major reason of continued erroneous socio-religio-cultural beliefs and practices that only add to the misery of the affected. Community-based surveys have shown infection, insanity or evil-spirits as perceived causes of epilepsy2,3. Schoolteachers are important in shaping the mind-set of the future adult population. The attitude of schoolteachers towards children with epilepsy (CWE) is likely to have a significant impact not only on their educational but also their psychosocial growth. They can also influence the attitude of the classmates and parents of epileptics. Lack of adequate knowledge about epilepsy and appropriate management of seizures in classroom has been demonstrated even amongst teachers in developed countries4. The aim of the present study was to assess the Knowledge, Attitude and Practice (KAP) concerning epilepsy among schoolteachers in Pakistan. No such study has previously been conducted in this country and the results would help formulate a comprehensive plan of action to address this important issue.

METHOD

This cross-sectional study is a component of the School Awareness Workshop project held between October 2002 and December 2005 under the auspices of NGO-run Comprehensive Epilepsy Control Programme of Pakistan (acknowledged by ILAE/IBE/WHO's Global Campaign Against Epilepsy). Fourteen workshops were conducted by volunteer neurologists in five cities of Pakistan; Karachi, Thatta and Hub in the south, Rahimyar Khan in central and Sialkot in the northern region of the country. Pre-awareness KAP assessment of teachers participating in the workshop was done. Only those teachers who had heard about epilepsy were included in the study. A simple self-administered structured questionnaire with 15-items concerning knowledge, attitude and practice about epilepsy

(Table-1) was used. Information about age, sex and educational status of the respondents was mandatory however, mentioning of name was optional. One point was assigned for each correct answer (For questions 14 and 15 one point each was awarded to all respondents in view of more than one acceptable answer). A KAP score was obtained by summing the points; the possible range of the KAP scores being 2 to 15.

RESULTS

Of the 560 participants 559 (99.8%) had heard about epilepsy and of these 535 completely filled questionnaires were analyzed. Most of the rejected questionnaires were of female teachers which lacked information on age. Majority of the teachers were females (61.5%). Mean age of the study group was 37.0+9.2 years. Forty percent of them were postgraduates whilst 37% were graduates and more than 80% were employees of government-run schools. Most of the respondents (60.9%) were acquainted with a PWE whilst a third (33.6%) was not and only a few (5.4%) had doubts about their acquaintance. Most believed (54.8%) epilepsy to be a less common disorder; about a third (27.9%) felt it was uncommon whilst 11.8% thought it to be a very commonly occurring problem. Most teachers (69.0%) believed epilepsy could occur at any age whilst some (17.6%) thought it to occur in young age. Brain-electrical-abnormality was considered the cause of epilepsy by 55% whilst 37.4% mentioned stress/tension and 0.6% believed being possessed/ magic to be the cause. Epilepsy was considered a harmless disease by 34.4%, to be hereditary by 21.5%, and transmissible by 10.1%. Unconsciousness and convulsions was considered the clinical feature of an epileptic attack by the majority (75.3%) whilst only a few (7.3%) thought disconnection/behaviour change to be a feature; 14% considered both. Treatment for epilepsy was considered to be effective “up to 90%” by 39.6% teachers and “up to 50%” by 22.6% whilst 20.8% were uncertain about the treatment efficacy. Many (43.6%) were of the opinion that most antiepileptic drugs (AEDs) were available in Pakistan whilst 28.2% felt that only one or two AEDs were easily available. Thirty percent of the teachers were unaware if AEDs were available in Pakistan and a small number (6.4%) thought that AEDs were available only outside Pakistan. Half of the teachers (49.9%) would make the person to lie in bed as a first-aid measure while 15.7% would make them smell a shoe and 21.1% would put a spoon in the mouth. About 10% would not know what to do. Three-fourths of the teachers (75.1%) believed that CWE could study in normal school as compared to 10.7% who disagreed. Eight percent opined that they could study in normal schools but in a separately designated classroom. Half of the responding teachers believed that a PWE could be a successful schoolteacher or a sportsperson whilst one fourth was of the opinion that they could not be either. Whilst half (47.9%) believed there was a negative impact of the society on PWE, 37.4% felt there was no impact and 7.5% opined that PWE did not have enough mental ability to be affected by the society. Approximately three-fourths (73.8%) thought that persons with epilepsy could get married and 70.3% believed they could have children. The mean KAP-score was 8.34 +2.38 that was 55.6% of the total possible score. Most of the respondents scored between 6 and 10 (67.5%). The responses were independent of age and gender ($P>0.05$) but more highly educated respondents scored higher than others. ($P<0.01$).

Discussion

Schoolteachers command substantial respect and have a positive impact on the society in Pakistan. They can thus play an important role in the formulation of educational and social achievements of CWE. Their positive attitude can help CWE become high achievers whilst their prejudice may result in lifelong stigma which may be more devastating than the disorder itself. They can also play a major role in influencing the social acceptability of CWE by his/her classmates and their parents. The aim of the present study was to assess the Knowledge, Attitude and Practice (KAP) of schoolteachers towards epilepsy to help formulate a health education module to enhance epilepsy awareness amongst this very important group of professionals and give confidence to deal appropriately when encountered by an affected child. No similar study has previously been conducted in Pakistan. This study is part of the ongoing Comprehensive Epilepsy Control Programme of Pakistan (CECP). In phase-I, prevalence, KAP and other ground realities about epilepsy was determined through a population-based study5. The ongoing phase-II focuses on creating epilepsy awareness amongst the masses and decreasing treatment gap. The present study is part of the multidimensional epilepsy awareness program having numerous modules focusing on varied issues and tailored as per the requirement of the target population. Each module is subjected to a periodic audit and is modified as experience is gained from field work. Our aim is to address the issue at all levels with a special focus on the grass-root i.e. schools. A module for secondary school students and teachers was

formulated and an applied and the results presented here are of pre-intervention KAP status amongst schoolteachers in the country. The mean KAP-score in this study was 8.34 ± 2.38 that was 55.6% of the total possible score and was not influenced by age and gender but was affected by the educational level of schoolteachers. Most of the respondents scored between 6 and 10 (67.5%). A similar score was noted in Thailand6 (60%). In USA4 average knowledge score was 54 ± 7.6 (range 12-66) and average attitude score 109.85 ± 11.04 (range 40-126). In Indonesia7 the average score was 7+2.1 (range 4-12). Most respondents (77.4%) in our study were university graduates and postgraduates similar to that reported in Nigeria2 (78%). The numbers were higher in Turkey8 (100%), Korea9 (100%), USA4 (98.6%) and Sudan10 (85%) whilst those in two studies from Brazil11,12 varied (73% and 100%). Results on perception of the causes of epilepsy indicated that 55% of teachers attributed it to an abnormality in the brain. Higher numbers have been reported for this from Greece13 (85%), Korea9 (69.4%) and Senegal14 (69%) whilst lower from Burkina-Faso15 (43.2%), India16 (44.4%) and Egypt17 (45.5%). Conflicting results (78.4% and 9.7%) have been reported in two studies from Thailand6,18. A psychiatric cause to epilepsy was attributed by 37% schoolteachers, which was lower than that reported in Indonesia7 (57%) but higher than that in Turkey8 (17.8%), Zimbabwe19 (12.6%), Nigeria2 (10%), Egypt17 (7.9%) and much more than in USA4 (-2.8; -3 to +3), India16 (1.1%), Greece13 (1.3%), Thailand6 (2%) and Korea9 (3.5%).In this study only 0.6% of the respondents attributed epilepsy to being-possessed or due to magic which is similar to figures reported from Korea9 (0.5%), Zimbabwe19 (0.6%) and Thailand6,18 (1.0%). Higher figures have been reported from Nigeria2 (27.7%), Sudan10 (4.5%) and India16 (5.5%). About 10% of the teachers in Pakistan considered epilepsy to be a transmissible disorder as compared to 20% in Indonesia7, 24% in Senegal14, 22.6% in Zimbabwe19 and 11.9% in Burkina-Faso15. Lower figures have been reported from USA4 (-2.96; -3 to +3), Korea9 (0.2%), Egypt17 (1.6%), Turkey8 (2.3%), Thailand18 (2.8%), India16 (4.9%), Sudan10 (6%) and Brazil11 (7%). Significantly higher but varying figures have been reported from two different regions of Nigeria2,20 (30.5% and 68%).Epilepsy was considered a hereditary disorder by 21.5% in Pakistan similar to that in Egypt17 (23.3%). Higher numbers have been reported from Thailand6 (74.5%), Nigeria20 (55%), Korea9 (44.4%), Indonesia7 (35%) and Zimbabwe19 (34.6%) whilst lower figures have been quoted from India16 (10.4%), Burkina-Faso15 (7.7%) and USA4 (-1.85; -3 to +3). About two-thirds (62.2%) of the respondents in this study believed epilepsy to be a treatable disorder, similar to India16 (62%) and Greece13 (63.3%) but lower than Burkina-Faso15 (75%) and Turkey8 (80.4%). Varying figures are reported in two studies from Thailand6,18 i.e. 82.4% and 38.2% whilst in Korea9 48.3% thought epilepsy was treatable. Three fourths of the schoolteachers in Pakistan believed unconsciousness/convulsions to be the main clinical manifestation of an epileptic seizure. A higher observation has been seen in Thailand6 (90.2%) and Burkina-Faso15 (85.8%) and a lower in Brazil11 (20-27%). In this study when asked about the first-aid measures 49.9% responded that the convulsing person should be made to lie down in bed, 21.1% suggested that a spoon should be put in the mouth and 15.7% would make them smell a shoe. Almost half (44.7%) of the teachers in India16, would resort to shoe-smelling whilst other studies do not report this method. This perhaps is because shoe-smelling is unique to the Subcontinent's culture where a shoe is probably considered efficacious in warding off evil spirits. Most studies in literature report a higher belief of putting an object in the mouth as a first aid measure; 76.5% in Sudan10, 64% and 73% in Thailand6,18, 40.4% in India16, 27.8% in Korea9 and 27.5% in Burkina-Faso15 whilst a lower 4-4.5% in Brazil11. In Korea9 3.3% and in Brazil11 16-18% believed that it desirable to pull the tongue out during a seizure. Stigma which is considered more devastating than the disorder itself21 continues to exist in all countries in varying proportions. In Pakistan 47.9% teachers believed that the society discriminates people with epilepsy (PWE). Much higher figures concerning societal discrimination have been reported from Brazil11 (84-96%), Burkina-Faso15 (73.1%) and Indonesia7 (63%). Perceived stigma has been reported by 31% PWE in Korea21; being severe in 9%. Stigmatization of CWE by way of objections raised on attendance in normal schools/classrooms was made by 18.7% of schoolteachers in Pakistan as compared to 20.8% in India16 15.4% in Burkina-Faso15, 15% in Thailand18, 9.6% in Egypt17, 8% in Korea9, 6.1% in Turkey8, 6% in Greece13, 0-7% in Brazil11. Significantly varying figures have been reported from two different regions of Nigeria2,20 (13.7% and 73.3%) whilst in USA4 it was -2.12;-3 to +3.0ther social issues addressed in this study were marriage and having children. Majority of the teachers in Pakistan (73.8%) supported PWE getting married and 70.3% believed they could have children. These figures are somewhat similar to those from Turkey8 (90.2% and 82% respectively). A related but different aspect on marriage of PWE was reported from Nigeria2 and

India16 where 95.1% and 86.8% respondents respectively would object and not allow their children to marry a PWE. A similar attitude was observed in Indonesia7 (44%) and Thailand18 (36.3%). In Korea9 although 62.2% supported marriage of PWE, 96.7% would not allow their child to get married to a PWE. Views on the choice of future professions of PWE indicate that in Pakistan 49.5% of schoolteachers believed that a person with epilepsy could be a successful schoolteacher or a sportsperson. In Turkey8 82.4% thought that a PWE could be a successful professional. In Brazil11 83-93% respondents also considered that a person with epilepsy can become successful teachers. Schoolteachers in Burkina-Faso15 (81.2%), Brazil11 (85-91%), Thailand18 (58%) and India16 (47.7%) also believed that PWE are as intelligent as others. No similar study has been conducted in Pakistan to date. A comparison of the present study with other similar studies in other countries is given in Table-2. A post-intervention assessment on the same respondents following the pre-awareness KAP evaluation may have provided more information for modifications in CECP's existing teaching module. However, because of revision and modifications, School Awareness Workshops project was replaced by, cost and time effective, School Educational Poster Activity for extensive penetration in all schools, especially in far flung areas of the country. This study shall also act as a reference point for all future researches on this aspect and help other health planners and epilepsy support groups in the country formulate more effective epilepsy awareness programs for school-teachers.

CONCLUSION

Inadequate knowledge about epilepsy and its treatment was observed amongst schoolteachers in Pakistan. It was an eye-opener that 30% of the schoolteachers in Pakistan were unaware that epilepsy is a treatable disorder. However, their attitude towards those who are affected was generally positive with the majority supporting education of CWE in normal schools. This informative study will help improvise epilepsy awareness module for schoolteachers in Pakistan and a special focus on the treatment issue would help reduce the epilepsy treatment gap.

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