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Syed Wasim Akhtar
Abbasi Shaheed Hospital

Zarin Mogal
Jinnah Postgraduate Medical Centre

Shaukat Ali
Jinnah Postgraduate Medical Centre

Munawar Ali
Jinnah Postgraduate Medical Centre

Abdul Latif Sonija
Baqai Medical University

See next page for additional authors

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Authors

Syed Wasim Akhtar, Zarin Mogal, Shaukat Ali, Munawar Ali, Abdul Latif Sonija, Husainuddin Afridi, and Hasan Aziz

SURVEY OF KNOWLEDGE, ATTITUDE AND PRACTICE OF EPILEPSY AMONG 221 SCHOOL TEACHERS IN KARACHI

Syed Wasim Akhtar¹; Zarin Mogal²; Shaukat Ali²; Munawar Ali²; Abdul Latif Sonija³; Husainuddin Afridi²; Hasan Aziz²

¹ Neurology Section, Department of Medicine, Karachi Medical & Dental College and Abbasi Shaheed Hospital, Karachi, Pakistan.

² Department of Neurology, Jinnah Postgraduate Medical Centre, Karachi, Pakistan.

³ Department of Neurology, Baqai Medical University, Karachi, Pakistan.

Correspondence to: Dr. S. Wasim Akhtar, FCPS(Neuro), Associate Professor of Neurology, Neurology Section, Department of Medicine Karachi Medical & Dental College and Abbasi Shaheed Hospital, Karachi, Pakistan. Email: drwasim.neuro@gmail.com

ABSTRACT

Purpose: To assess Knowledge, Attitude and Practice of epilepsy among schoolteachers as baseline information for an epilepsy awareness program. **Methods:** Ten School Awareness Workshops were held in Karachi under Comprehensive Epilepsy Control Program of Pakistan (under intimation of ILAE/IBE/WHO Global Campaign Against Epilepsy), using a 15-item questionnaire. **Results:** The 221 correctly filled questionnaires were analyzed. Most of the teachers were from government schools (73.8%), females (86.9%) and graduate or above (84.2%). The mean age was 35.2 (+9.6) years. The 50.7% "had met" or "acquainted with" a person with epilepsy. They (75.6%) did not consider epilepsy a commonly prevalent condition, yet believed (66.5%) no age is immune. For etiology 42.1% responded to "brain-electrical-abnormality" whereas 48.0% to "stress and tension." Epilepsy was considered: a harmless disease (41.6%), hereditary (13.6%) and transmissible (2.7%). For semiology 77.8% considered "unconsciousness/convulsions." For first-aid measure: "lay in bed" (45.2%), "put a spoon in the mouth" (15.8%) and "smell a shoe" (20.4%). About 33.1% did not know epilepsy is treatable. Majority thought (75.6%) children with epilepsy could study in normal schools and believed (48.0%) they could become a successful schoolteacher/sportsperson. For the impact of the society: "negative impact" (43.9%) and "no impact" (40.3%). They supported persons with epilepsy getting married (68.8%) and having children (62.4%). The mean KAP score was 8.0+2.4 (53.3% of the total score = 15); independent of age, gender and educational level. **Conclusion:** Despite many misunderstandings the attitude of the teachers towards epilepsy was generally positive. Majority supported students with epilepsy to be in normal schools.

Key Words: Epilepsy, school teachers, awareness

INTRODUCTION

Epilepsy is one of the most common and stigmatizing neurological disorder. Out of 50 million people with epilepsy in the world, about 80% are living in the developing countries including Pakistan 1. In community-based surveys, it has been considered to be infectious, insanity and evil-spirit. Even in the developed world, teachers have significant deficits in terms of general knowledge about epilepsy, its impact in educational settings, and appropriate management of seizures in the classroom 2,3. Furthermore, attitude of schoolteachers towards epilepsy is likely to have an important impact in the schooling of children with epilepsy 4. The purpose of the present study is to assess the Knowledge, Attitude and Practice (KAP) of epilepsy among schoolteachers as baseline information for an epilepsy awareness program; no such study was previously conducted in Pakistan.

METHODS

This study is a part of "School Awareness Workshops" held under Comprehensive Epilepsy Control Programme of Pakistan (under ILAE/IBE/WHO Global Campaign Against Epilepsy) from October 2002 to December 2005. Ten workshops were conducted in Karachi. The respondents who had heard about epilepsy were given a questionnaire with 15 questions on knowledge, attitude and practice of epilepsy. Age, sex and education level of the respondents were also asked. The name of the respondent was not required. For each correct answer 1 mark was given to calculate a KAP score. For question 14 and 15 everybody was given 1 mark because more than one correct answers were possible for the former and a wrong answer was expected for the latter. Therefore, the possible range of KAP score was 2 to 15.

RESULTS

DEMOGRAPHIC INFORMATION

Of the 243 respondents, 221 correctly filled questionnaires were analyzed. Most of the rejected questionnaires had missing information about the age, mostly by the female respondents. The teachers (73.8%) were predominantly from government schools and mostly females (86.9%) with female to male ratio of 6.6:1. The mean age of the respondents was 35.2(+9.6) years: females 34.9(+9.3) years and males 37.2(+11.6) years. The levels of education were: master (31.7%), graduate (52.5%), higher-secondary certificate (9.9%) and secondary certificate (5.9%).

KNOWLEDGE OF EPILEPSY

Most of the respondents had either met (29.0%) or were acquainted with (21.7%) persons with epilepsy; 6.3% had their doubts about their acquaintance and 43.0% were not acquainted. For epilepsy prevalence the responses were: "less common" (53.4%), "uncommon" (22.2%) and "very common" (16.3%); 8.1% did not have any idea about it. For the age of epilepsy sufferers the teacher responded: "any age" (66.5%) and "young age and children" (26.7%). For epilepsy aetiology, the respondents chose: "brain-electrical-abnormality" (42.1%), "stress/tension" (48.0%) and none supported "possessed/magic." Only 9.9% did not know about the cause. Epilepsy was considered: "a harmless disease" (41.6%), "hereditary" (13.6%), "not a disease" (19.0%), "transmissible" (2.7%) and uncertain (23.1). For epilepsy semiology, the responses were: "unconsciousness/convulsions" (77.8%), "disconnection/behaviour-change" (3.2%) and both (13.6%).

For effectiveness of treatment, the responses included: "effective up to 90%" (34.8%), "success up to 50%" (23.5%), "possibility up to 10%" (8.6%), non-treatable (5.0%) and "Uncertain" (28.1%). As for the availability of antiepileptic drugs (AED), 38.0% believed that most AEDs were available, 23.5% felt that one or two AEDs were available while 30.8% were unaware whether AEDs were available in Pakistan; 7.7% thought that AEDs were available outside Pakistan. Very few (5.9%) said they could name an AED and only 3.6% named it correctly. +

ATTITUDE AND PRACTICE

For first-aid measure the responses were: "lay in bed"

(45.2%) "make them smell a shoe" (20.4%), "put a spoon in the mouth" (15.8%) and "to do nothing" (5.0%); 13.6% did not know about any first-aid measure. The attitude towards schooling included: "can study in normal school" (75.6%), "cannot study in normal schools" (9.5%) and "can study in normal school but in a separate classroom" (5.4%). Most of the schoolteachers (48.0%) believed that persons with epilepsy could be "a successful schoolteacher as well as a sportsperson"; 11.3% supported for schoolteacher but not sportsperson, 4.0% supported for sportsperson but not schoolteacher, 19.5% supported neither, and 17.2% could not make an opinion.

As for the impact of the society on people with epilepsy, the responses were: "negative impact" (43.9%), "no impact" (40.3%) and "not having enough mental ability to be affected by the society" (7.2%). As for the marriage 68.8% thought that persons with epilepsy should get married, and 62.5% believed they should have children.

KAP SCORE

The mean KAP-score (8.0+2.4) as percentage of total score (15) was 53.3%. Most of them (67.9%) scored between 6-10 scores. The responses were independent of age, gender and educational level.

DISCUSSION

Few studies have been conducted in the world to assess the KAP of epilepsy among schoolteachers. They are based on different research protocols and have variable sample size but all addressed similar issues.

GOALS ACHIEVED

The goal of this study was to have measurable baseline information about the approach of schoolteachers towards epilepsy. This will, in turn, help to formulate an epilepsy public awareness plan through health education of schoolteachers. In this connection the responses were scored and a KAP score was calculated. The mean KAP-score (8.0 +2.4) as percentage of the total score (15) was 53.3%. Most of the respondents (67.9%) scored between 6 and 10. The mean KAP score was independent of age, gender and educational level. A similar score was noted in Khon-Kaen Thailand⁵ (60%). In USA the average knowledge score was 54 (12-66) and average attitude score was 109.85 (40-126) 4. Both scores were associated with more years of teaching experience, higher level of education, and higher self-reported general knowledge of epilepsy. In Indonesia⁶ the average score was 7 (4-12) and it was

not affected by age, sex or education level.

DEMOGRAPHIC INFORMATION

Of the 243 respondents, we analyzed the 221 correctly filled questionnaires. The sample size in the literature varies from 84 in Indonesia⁶ to 664 in Korea.⁷ The teachers in this study were mostly from public schools (73.8%). This was expected as public schools are more common in the country. Similar findings are noted in literature: 62% in Indonesia⁶, 27-83% in Brazil⁸ and 78.5% in Thailand⁹.

Most of the respondents were females (86.9%). Female preponderance is reported between 53.5% and 94%. However, in Nigeria females were only 45.3%^{4,6,8,9,10,11,12}. The mean age of the respondents was 35.2(+9.6) years. Similar figure is noted in Turkey¹¹ (32.0 years). A higher mean age is found in Ilorin Nigeria¹³ (38.4 years), in Thailand⁹ (41.0 years), Indonesia⁶ (41.0 years) and USA⁴ (42.8 years).

Most of our respondents (84.2%) had an education level of graduate or above. A higher percentage was observed in Turkey¹¹ (100%) and USA⁴ (98.6%), a similar in Ilorin Nigeria¹³ (78%) and a lower in Brazil⁸ (3-55%).

MEDICAL IMPLICATIONS

For the causes of epilepsy 42.1% of the respondents linked it to abnormal electrical discharges from brain. A higher responses were observed in Khon-Kaen Thailand⁵ (78.4%) and Senegal¹⁴ (69%), a similar from Burkina-Faso¹⁰ (43.2%) and a lower from Thailand⁹ (9.7%). About 48.0% of our schoolteachers think a psychiatric illness as a cause of epilepsy. A higher figure is noted in Indonesia⁶ (57%) and a lower figure in Turkey¹¹ (17.8%), Zimbabwe¹² (12.6%), Ilorin Nigeria¹³ (10%), USA⁴ (-2.8; -3 to +3) and Khon-Kaen Thailand⁵ (2%). "Being-possessed/magic" was considered by none in this study, <1% from Zimbabwe¹² and Thailand⁹, in contrast to 27.7% in Ilorin Nigeria.¹³ Epilepsy has been considered contagious especially in Indonesia⁶ (20%) and some African countries: Ilorin Nigeria¹³ (30.5%), Port Hartcourt Nigeria¹⁵ (68%), Senegal¹⁴ (24%), Zimbabwe¹² (22.6%) and Burkina-Faso¹⁰ (11.9%). Very few supported it in this study (2.7%), USA⁴ (-2.96; -3 to +3), Turkey¹¹ (2.3%), Thailand⁹ (2.8%) and Brazil⁸ (0-5%). Epilepsy was considered hereditary by 13.6% of our respondents. This belief is most prevalent in Khon-Kaen Thailand⁵ (74.5%) and Port Hartcourt Nigeria¹⁵ (55%) followed by Indonesia⁶ (35%) and

Zimbabwe¹² (34.6%). It is less seen in Burkina-Faso¹⁰ (7.7%) and USA⁴ (-1.85; -3 to +3). For epilepsy semiology, 77.8% of our schoolteachers recognize "unconsciousness/convulsions" as the symptom of a seizure. A higher observation is seen in Khon-Kaen Thailand⁵ (90.2%) and Burkina-Faso¹⁰ (85.8%), and a lower in Brazil⁸ (20-27%). Most of the other centers did not include this item in their studies.

For first-aid measure the responses in this study were: "lay in bed" (45.2%), "put a spoon in the mouth" (15.8%) and "make them smell a shoe" (20.4%). The last observation not reported in other similar studies is more common belief among Pakistani people. To put an object in mouth during seizure has been considered in other studies: Khon-Kaen Thailand⁵ (64%), another study from Thailand⁹ (73%), Burkina-Faso¹⁰ (27.5%) and Brazil⁸ (4-4.5%). In Burkina-Faso¹⁰ the respondents also think to lay the subject down (64%), protect head (60.9%) and remove nearby objects (78.7%). In Brazil⁸ 16.6%-18.2% believe to pull the tongue during a seizure.

For effectiveness of treatment, 58.3% of our schoolteachers consider epilepsy as treatable in 50%-90% of the cases. This observation is more seen in Khon-Kaen Thailand⁵ (82.4%), Burkina-Faso¹⁰ (75%) and Turkey¹¹ (80.4%) and less seen in another study from Thailand⁹ (38.2%). A positive response is also noted in USA⁴ (+2.59; -3 to +3). The 38% of our respondents also believed that most AEDs are easily available in Pakistan and 3.6% correctly named an AED. These observations were not included in other studies.

A lack of awareness about seizure aetiology, seizure semiology and seizure treatability may result in under diagnosis and under treatment of the condition. This was confirmed in a previous population-based study in this country¹⁶.

PSYCHOSOCIAL IMPLICATIONS

About half (50.7%) of the schoolteachers had either met or were acquainted with persons with epilepsy. Higher figures are reported from Burkina-Faso¹⁰ (77.3%) and Turkey¹¹ (59.4%). "Few" schoolteachers were acquainted with in Brazil⁸. Most of the respondents (75.6%) did not consider epilepsy a commonly prevalent disorder yet they (66.5%) believed no age is immune to it. These responses were not included in other studies in the literature.

As for marriage and having children 68.8% thought that persons with epilepsy should get married, and 62.4% believed they should have children. In Turkey¹¹

90.2% and 82% supported getting married and having children respectively. On the other hand in Ilorin Nigeria¹³ (95.1%) and India¹⁸ (86.8%) respondents were negatively inclined to their children marrying children with epilepsy. Similar attitude to a lesser degree was observed in Indonesia⁶ (44%) and Thailand⁹ (36.3%). In Korea⁷ although 62.2% supported marriage of person with epilepsy, 96.7% would not allow their child to get married to a person with epilepsy.

Stigma which is considered more devastating than the disorder itself continues to exist in all countries in varying proportions. In this study 43.9% of the respondents think that the society has negative impact on people with epilepsy but 40.3% believed there is no such impact; 7.2% also believed that persons with epilepsy do not have enough mental ability to be affected by the impact of the society. Schoolteachers from Brazil⁸ (84-96%), Burkina-Faso¹⁰ (73.1%) and Indonesia⁶ (63%) think that society discriminates against persons with epilepsy. Perceived stigma was reported by 31% of persons with epilepsy from Korea¹⁷; being severe in 9%. Stigma manifested by objection to the normal classroom was expressed by 14.9% of schoolteachers in Karachi compared to 73.3% in Port Hartcourt Nigeria¹⁵, 15.4% in Burkina-Faso¹⁰, 15% in Thailand⁹, 13.7% in Ilorin Nigeria¹³, 6.1% in Turkey¹¹ and 0-7% in Brazil⁸. A positive attitude is also noted in USA⁴ (-2.12;-3 to +3).

About half (48.0%) of schoolteachers believed that persons with epilepsy could be a successful schoolteacher or a sportsperson. In Turkey¹¹ 82.4% thought that persons with epilepsy could be a successful professional. Schoolteachers in Burkina-Faso¹⁰ (81.2%), Brazil⁸ (85-91%) and Thailand⁹ (58%) think that persons with epilepsy are as intelligent as others. In Brazil⁸ they (83-93%) also consider that persons with epilepsy can become a successful teacher.

Although figures related to the psychosocial impact are encouraging but in a developing country like Pakistan population is very high and small negative figures are likely to have a high impact. Thus, a society, where about 15% schoolteachers object to schooling of children with epilepsy and 50% question their success as professionals, has likely to have a large number of persons with epilepsy being underachiever and burden on the society.

SUGGESTIONS

This study could have been better conducted by taking additional post-awareness assessment of

schoolteachers. It is an eye-opener that about 33% of Schoolteachers do not know that epilepsy is a treatable condition. Addressing this issue in a public awareness program may help to reduce epilepsy treatment gap. A further research is recommended in secondary schoolchildren. This paper would help health planners and epilepsy support group to keep the findings as ground realities upon which they can build theoretical models.

CONCLUSION

Schoolteachers in Karachi Pakistan have an average knowledge about epilepsy which is not influenced by age, gender or education level. They have fewer stigmas about it and positive attitude towards drug-treatment, education, occupational-success, marriage and child-bearing for person with epilepsy. About 33% of schoolteachers do not know that epilepsy is treatable and an epilepsy awareness programme for schoolteacher is likely to benefit persons with epilepsy.

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