Knowledge, Attitude and Practices of School Teachers towards Epileptic School Students at District Dir Lower, Khyber Pakhtunkhwa, Pakistan

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Abstract The present study was under taken at District Dir Lower Khyber Pakhtunkhwa Pakistan in order to know about the knowledge, attitude and practices of teachers towards epileptic students. This cross sectional study was carried out among teachers from both public and private sector schools (Primary, Middle and High). A self-administered closed ended KAP questionnaire was administered among 150 teachers (75 public and 75 private schools). Out of the total 134 (89.333%) teachers have heard concerning epilepsy. Overall 50 (33.333%) teachers thought epilepsy is contagious disorder while 77 (51.333%) teachers said that epileptics cannot succeed like normal students. According to 66 (44%) respondents, epileptics have delayed growth. Of the total subjects, 112 (74.666%) teachers responded positively regarding allowing and engaging epileptics in outdoor activities. Only 23 (15.333%) teachers replied that epileptics should be thought with other students while 127 (83%) suggested special schools for epileptics. A total of 83 (55.333%) teachers said social stigmata hamper epileptics' academic achievements while 65 (43.333%) thought the disease itself. Of all, 97 (64.666%) teachers were willing to help a seizing student, though only 19 (12.666%) teachers had pursued information regarding epilepsy. Of 150 recruited subjects, 32 (21.333%) were of the opinion that epilepsy is preventable while 36 (24%) thought epilepsy is curable. It was concluded that there is a lack of awareness among teachers regarding epilepsy, more specifically in private sector. Negative attitudes, misconceptions and myths also exist about epileptics among teachers in the study area. Mass awareness regarding epilepsy is recommended for improving life quality of this socially stigmatized class.

Keywords Epilepsy, Knowledge, Attitude, Teachers, Dir Lower

brain. Its occurrence is worldwide and affect almost every age of people. It is a form of clinical phenomenon not a single entity of disease. It is characterized by repeated seizures. Currently all around the globe it is affecting about 50 million individuals. Among these 80 percent are citizens of developing countries [1]. Just like other countries around the globe, its prevalence is also under study in Pakistan. Its prevalence was 1 percent in 1994 [2] but in 2003 it was projected as 9.99 individuals per 1000 populaces [3]. It is really ill-fated that this common disease is also led by sturdy communal stigma. This condition is even more distressing when the social attitude led to discrimination and stigma against epileptic is more often happening [4].

Attitude of teaching staff plays a vital role in educating, upbringing and nurturing epileptics, which is purely dependent on their knowledge regarding epilepsy. Henceforth knowledge about epilepsy for a teacher is really important and necessary element in order to guide the educational involvement, experiences and skills of epileptic students. Despite being the truth that same as other parts around the globe, teachers in Pakistan play a central role in educating a society and as educators. The same society is having epileptics, which require special attention and knowledge from a teacher point of view but unfortunately some misbeliefs and myths are causing social discernments against epileptic students [5]. A study carried out in Karachi's slum area demonstrated that there is a significant gap between epilepsy and community knowledge [6]. Another study conducted with teachers revealed a lack of knowledge regarding epilepsy [7].

Therefore the current study was aimed to assess the knowledge of teachers at district lower Dir, Khyber Pakhtunkhwa Pakistan regarding epilepsy. It was also investigated that how these teachers perceive the educational capabilities of students. The study also evaluated the tendency of the recruited teachers regarding accepting or rejecting epileptics and their practices and abilities for helping a convulsing student if any.

1. Introduction

Epilepsy is the chronic non communicable diseases of the

Figure 1. Map showing Study Area, its political division and geographic location

2. Materials and Methods

2.1. Study Area

District Dir Lower is situated with Longitudes and Latitudes of 34°, 37' to 35°, 07' North and 71°, 31' to 72°, 14' East respectively, with approximate 2700 feet (820 meter) above mean sea level [29]. District Dir is bounded by District Chitral to the Northern Side, by Bajaur agency and Afghanistan to the Western side, by District Malakand to the Southern side and by District Swat to Eastern side [30]. Administratively District Dir Lower is subdivided into seven tehsils. These are Timergara, Balambat, Khall, Samar Bagh, Munda, Lal Qila and Adenzai. Fig. 1 is showing study area, District Dir Lower, modified from Ullah *et al.* [31].

2.2. Study Period

This study was conducted from September 2014 through December 2014.

2.3. Data Acquisition

This cross-sectional natured study was conducted among public and private schools' teachers. During the study 75 teachers were recruited from public schools and private schools each by convenient sampling method. They were

administered with a self-administered questionnaire, adopted from earlier studies conducted on the same aspect of epilepsy. The questionnaire was consisting of closed ended questions, having responses with either 'Yes', 'No' or 'I do not know'. The teachers were asked to fill up the questionnaire in segregation after obtaining an oral cognizant consent. They were given with a proper space and time to fill up the questionnaire and were not made to prompt their response. As in earlier studies [1, 3, 8-10] the questionnaire was divided into three sub sections. First part of the questionnaire was having socio-demographic data of the teachers and their knowledge. Second part of the questionnaire was having questions regarding their attitude towards epileptic students. Last section of the questionnaire was having questions about practices of these teachers regarding epileptics.

2.4. Data Analysis

The acquired data was analyzed by using SPSS (Version 20). All quantifiable variables were presented as mean and standard deviation. These variables were also presented as frequencies and percentages by following Ullah *et al.* [32].

3. Results

A total number of 150 questionnaires were administered among schools' teachers from both public as well as public sector. Their response was 100 percent. Almost all questions

of the questionnaire were answered by all the respondents. The mean age of the recruited subjects was 39.10 ± 10.34 for teachers from public schools while 35.20 ± 11.02 for private schools' teachers. The percentage and frequency of teachers were 50% (n=75) for both public and private schools' teachers. Of all the respondents teaching in public schools, 40% were teaching in high schools, 37% in middle schools while 23% in primary schools. Similarly of all the teachers teaching at private schools, 46% were teaching at high level, 41% at middle level while 13% were teaching at primary level. Of the total recruited subjects, 95 individuals were having more than ten years teaching experience.

Among the public schools' teachers, 69 (92%) while 65 (86.666%) among private schools teachers have heard regarding epilepsy before. Of all the respondents from both public and private 88 (58.666%) have heard about epilepsy

through print media, followed by 40 (26.666%) through electronic media and 13 (8.666%) through friends and family. Of the total respondents 9 (6%) were not aware of epilepsy at the time of questionnaire fill up. Table 1 is having information regarding teachers' knowledge about various aspects of the disease.

According to 66 (44%) respondents, epileptic children have delayed growth. 77 (51.333%) is of the opinion that they cannot succeed as normal ones. 83 (55.333%) teachers think that academic achievements of epileptic students is hampered by social stigmata while 65 (43.333%) said that it is because of the disease itself. Table 2 is presenting information regarding teachers suggested career options for epileptics.

Table 1. Knowledge of teachers about epilepsy (75 (Public) + 75 (Private) = 150(Total))

	Public Teachers		Private Teachers		Total	
	<i>n</i>	%	<i>n</i>	%	<i>N</i>	%
Signs & symptoms of epilepsy						
Fainting	70	93.333	55	73.333	125	83.333
Staring blankly into space	41	54.667	37	49.333	78	52.000
Blinking of eyes and jerks	63	84.000	39	52.000	102	68.000
Tongue rolling back	59	78.667	41	54.667	100	66.667
Causes of epilepsy						
Head injury	31	41.333	19	25.333	50	33.333
Brain stroke	40	53.333	31	41.333	71	47.333
Brain infection	35	46.667	15	20.000	50	33.333
Without specific cause	45	60.000	21	28.000	66	44.000
Myths/beliefs about epilepsy						
A contagious disease	19	25.333	31	41.333	50	33.333
Causes mental retardation	39	52.000	41	54.667	80	53.333
A punishment for sins	13	17.333	21	28.000	34	22.667
Bewitchment/supernatural possession	9	12.000	15	20.000	24	16.000
Barriers/problems faced by epileptic child						
Labelled as a disabled child	37	49.333	47	62.667	84	56.000
Unable for good education	35	46.667	47	62.667	82	54.667
Socially unaccepted	29	38.667	35	46.667	64	42.667
Suffer from low self-esteem	50	66.667	55	73.333	105	70.000

Table 2. Teachers' choices of suitable careers for epileptics

	Public Teachers		Private Teachers		Total	
	<i>n</i>	%	<i>n</i>	%	<i>N</i>	%
Career						
Teacher	40	53.333	37	49.3	77	51.333
Lawyer	34	45.333	28	37.3	62	41.333
Accountant	31	41.333	24	32.0	55	36.667
Doctor	40	53.333	31	41.3	71	47.333
Engineer	31	41.333	21	28.0	52	34.667
Sports	29	38.667	16	21.3	45	30.000
Pilot	3	4.000	7	9.3	10	6.667

Table 3. Helping a seizing child (75 (Public Teachers) + 75 (Private Teachers) = 150 (Total))

Option to help a seizing child by	Public Teachers		Private Teachers		Total	
	<i>n</i>	%	<i>n</i>	%	<i>N</i>	%
Roll the child to side	51	68.0	40	53.3	91	60.6
Loosen clothing	40	53.3	27	36.0	67	44.6
Prevent tongue rolling back	40	53.3	13	17.3	53	35.3
Remove sharps from vicinity	52	69.3	21	28.0	73	48.6
Ensure breathing	55	73.3	48	64.0	103	68.6
Record duration of fit	43	57.3	29	38.6	72	48.0

Of the total subjects, 112 (74.666%) responded positively to the question regarding allowing and engaging epileptics in outdoor activities while 38 (25.333%) replied in negation. Of the total 150 respondents 23 (15.333%) think epileptics should be thought with other students while a massive number of 127 (83%) subjects suggested special and separate schools for epileptics. 32 (21.333%) teachers were of the opinion that epilepsy is preventable while 118 (78.666%) replied in negation. 36 (24%) teachers think epilepsy is curable while 114 (76%) responded in negation. The recommended options for treatment were 123 (82%), 107 (71.333%) and 60 (40%) for medication, God's help through prayers and traditional healing respectively. 41 (27.333%) teachers had come across students having seizures in classrooms while 77 (51.333%) knew epileptic students. 18 (27%) replied with refusal to teach epileptics or a class having an epileptic. 97 (64.666%) were wanting to help a seizing student by witnessing. Table 3 is having the frequently chosen options by the teachers by helping a seizing student.

Of the total recruited teachers only 19 (12.666%) teachers had pursued knowledge about epilepsy during their trainings while the rest of the respondents do not had any knowledge or information regarding epilepsy during their trainings. A total of 113 (75.333%) teachers were of the opinion that mass awareness should be initiated in hospitals while 121 (80.666%) thought knowledge regarding epilepsy should be employed into teachers' trainings.

4. Discussion

Teachers play a significant role in almost all societies of the world, as advisors as well as educators. That's why; the present preliminary study of its nature in the study area was conducted in order to know about KAP of the school teachers from both public and private schools towards epileptics. Although different studies conducted in both developing as well as developed countries have revealed respondents having knowledge regarding epilepsy yet many miss conceptions exists about epilepsy and are linked with epileptics [10]. These miss conceptions are a matter of great concern and are playing a key role in discrimination and stigma against epileptics. Several studies conducted in past have shown persistence of wrong perceptions and negative

attitude towards epileptic students even in developed and rich countries [11].

There is a gap between estimation of epilepsy stigma in countries with limited resources [12, 13], therefore the current study was conducted in order to know about teachers' perception regarding epilepsy. Our results regarding teachers' knowledge regarding signs and symptoms as well as causes of the disorder was correct. This will guide a teacher to identify a seizing student as epileptic rather than any supernatural possession, a misconception regarding suffering children.

This study also revealed some interesting findings such as most of the teachers were having basic knowledge regarding epilepsy, public schools' teachers were having more knowledge about epilepsy than private schools' teachers. It was very astounding that most of the teachers, even well experienced ones, were having miss conceptions regarding epileptics such as 44% answered as epileptic students have delayed development and growth. Of the total 51.333% teachers replied that epileptics could not succeed same as normal students. This type of negative attitude will definitely hinder epileptics' development, hence these were very important findings.

A study conducted at Iran revealed avoidance, fear and negative attitudes of biology teachers towards epileptic student [14]. Similarly a study with rural population showed that 90% of the subjects were of the opinion that epileptic children cannot thrive in any of the societies like healthier ones do [15]. Just like these studies, it was also observed during the current study, as 25.333% of the public schools teachers and 41.333% of the private schools' teachers thought epilepsy as a contagious disease where as 10.666% teachers of the public schools' teachers and 13.333% of the private schools' teachers refused to teach epileptics.

Myths and wrong beliefs also pass down generation after generation and give rise to misconceptions. In current study such misconceptions were identified as well, such as linking mental retardation with epilepsy. Linking epilepsy and irrationality vary among different developing countries, such as 23.6%, 16% and 7% Vietnamese [16], Chinese [17] and Taiwanese [18] sensed a direct relationship between these two. Conversely in developed countries such as in USA [19], Denmark [20] and Italy [21] studies revealed a negative association concerning epilepsy and insanity. It seems that

these differences are due to the misguidances, misbeliefs and improper treatment or unavailability of treatments for epilepsy in developing countries. In the present study the misbelief of considering epilepsy as a supernatural possession was blamed by 12% of the public schools' teachers and 20% of the private teachers, comprised an overall 16% of the total teachers is comparable to the studies conducted at Karachi (10.9%) [7] and much higher than an Indian study (5.5%) [5] and a study conducted at Thailand (0.9%) [22].

There is an immense need of the teaching staff at any school to be aware of extra support required by epileptics on account of being a scholastically susceptible group. This present study was having a portion regarding barriers or problems faced by the epileptics in schools, in order to compare its results obtained with the studies conducted locally [7,23]. Similar to their results in our study it was thought by major portion of the teachers from both public (46.667%) and private (62.667%) schools that epileptics are not capable of getting good enough education. Most of the teachers were of the view that there should be separate schools for epileptics due to their socially rejection by other fellows. This might be due to fact that the fact that our teachers are still unaware of the additional support required by this suffering class, that they prioritized special schools for them. Positively, most of the teachers favored social engagement of these students in outdoor activities. Among the public schools' teachers 53.333% favored teaching and medicine as field of profession for epileptics while 49.333% and 41.333% of the private schools' teachers favored teaching and medicines respectively as suitable profession for epileptic students.

In our study a meager portion 35 (23.333%) of teachers were of the view that epilepsy is treatable, which is much lower as compare to studies conducted at Italy (46.8%) [24] and Brazil (90%) [25]. Likewise variations have been observed in teachers' perceptions regarding epilepsy treatment in different studies. Such as Zambian teachers, having weaker knowledge, recommended traditional healers more likely as compare to treatment by physicians [26]. Another study 84.5% school teachers recommended medication for treating epilepsy [7] while in our study 80% of public while 84% of private schools' teachers suggested physicians' treatment through medications as a better treatment option.

A higher portion of our study preferring knowledge regarding this mental disorder to be incorporated into teachers' professional education, training manuals, workshops and seminars showed eager of teachers to have enough knowledge is affirming previous studies [7,27,28].

5. Conclusions

The current preliminary study of its type in the study area concluded that there is a lack of awareness among teachers regarding epilepsy, especially in private sector. Moreover

negative attitudes towards epilepsy and misconceptions and myths also exist about epileptics among teachers in the study area. The brighter aspect of the current study was that most of the teachers were in favor of mass awareness and teachers' education regarding epilepsy in order to help this socially stigmatized class. It was also concluded that the well informed subjects were likely having more positive attitudes which provide them an upper hand by managing epileptics successfully.

6. Recommendations

Mass awareness regarding epilepsy is recommended for improving life quality of epileptics, specifically parents and teachers should be targeted populaces. Further studies in the vicinities and other parts of the province is highly enthused especially in rural areas where people are having a little or no knowledge regarding epilepsy and are more harsh towards such sufferers.

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