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## **Knowledge ,Awareness And Attitude About Epilepsy Among School Female Teachers In Yanbu**

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## Abstract

**Objectives:** Epilepsy is quite possibly the most well-known persistent non-transmittable neurologic problem found all through the world. This study was conducted to assess Saudi female schoolteachers' knowledge and attitude about epilepsy in Yanbu, Saudi Arabia.

**Subjects and Methods:** A cross-sectional descriptive study was conducted among female teachers; 708 teachers filled a well-designed and pretested self-administered questionnaire. **Results:** Approximately (37.2%) of the female schoolteachers were dealt with person with epilepsy, (22.7%) of them were teach students with epilepsy. Ninety three percent believed that epilepsy is not a contagious disease. Nearly, half of the respondent (50.4%) did not agree that epileptic students should be taught in separate classes, while (31.5%) of them agree that epileptic children should be prevented from driving. Unfortunately, only (5.6%) of the teachers who were received adequate training about seizure management and epilepsy during their teaching training.

**Conclusions:** This study concludes that the level of knowledge and attitudes toward epilepsy among the female teachers in Yanbu city are low and moderate, respectively. Therefore, close collaboration between medical professionals, parents and teachers is crucial in implementing the management plan and learning interventions in order to encounter the needs of epileptic students.

**Keywords;** Epilepsy, knowledge, Attitudes and School Teacher.

## ملخص الدراسة

الأهداف: من المحتمل جداً أن يكون الصرع من أكثر المشاكل العصبية المستمرة وغير المنقولة شيوعاً والموجودة في جميع أنحاء العالم. أجريت هذه الدراسة لتقييم معرفة معلمات المدارس السعودية وموقفهن من الصرع في ينبع بالمملكة العربية السعودية. تم إجراء دراسة وصفية مقطعية على المعلمات. قام 708 معلماً بملء استبيان تم تصميمه جيداً واختباره مسبقاً من قبل الباحث. وقد اوضحت النتائج بأن قرابة (37.2%) من المعلمات قد سبق لهن التعامل مع مصابين بمرض الصرع، (22.7%) منهن كانوا يعلمون طالبات مصابين بالصرع. يعتقد (93%) أن الصرع ليس مرضاً معدياً. ما يقرب من نصف المشاركين في البحث بنسبة (50.4%) لم يوافقوا على ضرورة تعليم الطلاب المصابين بالصرع في فصول منفصلة، بينما وافق (31.5%) منهم على ضرورة منع الأطفال المصابين بالصرع من القيادة. لسوء الحظ، فقط (5.6%) من المعلمين الذين تلقوا تدريباً مناسباً حول إدارة النوبات والصرع أثناء تدريبهم التدريسي.

الاستنتاجات: خلصت هذه الدراسة إلى أن مستوى المعرفة تجاه مرض الصرع لدى المعلمات في مدينة ينبع منخفضة. لذلك، فإن التعاون الوثيق بين المهنيين الطبيين وأولياء الأمور والمعلمين أمر بالغ الأهمية في تنفيذ خطة الإدارة وتدخلات التعلم من أجل تلبية احتياجات الطلاب المصابين بمرض الصرع.

**الكلمات المفتاحية:** الصرع ، المعرفة ، المواقف ، معلمو المدارس.

## **INTRODUCTION**

### **1. 1 Background:**

Epilepsy is one of the most common chronic non-communicable neurologic disorders found throughout the world.[1] The World Health Organization (WHO) identified epilepsy as one of the oldest conditions known to humanity and the most common neurological condition affecting individuals.[2] It is characterized by episodes of recurrent convulsive attacks of different types. [1]

It is indeed unfortunate that a common disease like epilepsy carries such strong social stigma. The social attitude, the stigmata and the discrimination against epileptics are often more devastating and harmful than the disease itself.[3] It has been suggested that this stigma can be more of a burden than the conditions itself. Several factors increase the feeling of being stigmatized by epileptic individuals, and one of it was the poor education that an individual receives in their life.[3] One of the key components is the stigmatizing that can associate with epilepsy early in life, especially at school reflecting severe physical and psychological impact on epileptic school children. This can affect the quality of education, and the epileptic child receives and worsen the feeling of stigma. In addition, raising the knowledge level will improve the welfare of young student with epilepsy. In view of its complex nature, epilepsy is a condition with high psychosocial and economic costs. Therefore, a multidisciplinary approach to its management is required. [4]

To improve the overall management of epilepsy, the concerns of both health professionals and people with epilepsy should be taken into account. Some of the major problems faced by both health professionals and people with epilepsy are poor knowledge in the community, lack of awareness, and cultural beliefs and stigma.[3] Many people do not know how to appropriately deal with an episode of seizure. Some believe that epilepsy is contagious or that it may cause learning disabilities. These and other inappropriate ideas are culturally reinforced and can promote negative attitudes toward people with epilepsy and practice, which can ultimately negatively affect the quality of life of epileptic patients and their families.[5]

In Saudi Arabia, teachers are considered as social leaders and role models thus influencing the child's critical period of social and psychological development. [6] For that reason, studying teachers' knowledge about epilepsy is beneficial for promoting our future generations.

Approximately 50 million people worldwide have epilepsy, and nearly 80% of them live in developing regions.[1] It has been observed that the highest incidence rates are found in the populations of developing countries with values of 140–230/100,000/ year.[2] The prevalence in Saudi Arabia in the most recent study was estimated to be 6.54/1000 population.[6]

Teachers attitude toward epilepsy is their predisposition or tendency to respond positively or negatively toward various issues related to students with epilepsy. These attitudes influence their choice of action and responses to challenges, incentives, and rewards. Although attitude is a complex and abstract construct, recent studies have demonstrated the manner in which teachers' attitudes may be translated into behaviors that can have problematic results for students with epilepsy. Teachers' perception of and approach to these students with epilepsy varies with the accuracy of their knowledge, which is often inadequate, limited, or even erroneous [7].

A study in Korea showed that schools teachers are important role models for children and have a lifelong influence. Teachers' attitudes may influence the educational performance of children, particularly those with epilepsy.[8] In Saudi Arabia, teaching is the most popular civilian job. It attracts people of both sexes and the different ages from all social and economic classes, with varying levels of education. Despite the significant impact of the teacher's role in the lives of these children, very little research has been conducted in Saudi Arabia to assess these issues.[6] In a recent Saudi study, Abulhamail *et al.* reported that primary school teachers' knowledge of epilepsy needed improvement, and that educational campaigns on epilepsy were required.[9]

A Brazilian study showed that , Knowledge about epilepsy is an important issue in determining teachers' attitudes toward children with epilepsy. In general, teachers do not receive any formal instructions on epilepsy during their education and training despite the fact that as much as 40% of the children's developing life is spent at school [5]

A study carried out in Nigeria interestingly found that more than half (52%) of their respondents knew the different types of seizures and how they look like. [10]

Dr. Jobran M. Alqahtani, his study was conducted to assess Saudi male schoolteachers' knowledge of epilepsy and practice in Southern Saudi Arabia. Subjects and Methods: A cross-sectional descriptive study was conducted among male teachers; 315 teachers filled a well-designed and pretested self-administered questionnaire. Results: Approximately three-quarters (72.7%) of the schoolteachers had witnessed epileptic fits. Forty-six percent believed that epilepsy was caused by electrical discharges. Most of the school teachers (79.7%) disagreed with the idea of teaching children with epilepsy separately, or preventing them from sporting activity (50.5%). In addition, 94.9% disagreed with the idea that epilepsy was shameful. Unfortunately, 64.1% of the teachers who were exposed to cases of seizures were not able to provide first aid to students having epileptic fits ( $P = 0.03$ ). Conclusions: The schoolteachers were generally knowledgeable about epilepsy. This fact can be used to design a national program through which teachers can help to bring about a well-informed and tolerant community toward epileptics. (13)

### **Objectives:**

To assess the knowledge, Awareness and Attitude about epilepsy among school female teachers in Yanbu city in Saudi Arabia.

### **Material and Methods:**

Questionnaire -based, Cross sectional study was conducted at Yanbu City, Saudi Arabia. Yanbu is a major Red Sea port in the Al Madinah Province of western Saudi Arabia. 708 female teachers of the public schools in Yanbu City were responded to this study

The research tool was a valid, reliable, paper-based, self-administrated questionnaire mainly adopted from other studies study [12] with a cover letter explaining its aim and objectives. The questionnaire was initially drafted in English, and subsequently translated into Arabic and translated back into English, to check for discrepancies. Answers to the questions were mainly of the yes/no/not sure variety, but teachers were also allowed to respond to questions on the sources of information and prior exposure to epileptic patients.

Collected data were coded, validated and statistically analyzed using SPSS software program version 22. Qualitative data were expressed as number and percent. Quantitative data were expressed as mean and  $\pm$  standard deviation (SD). The t test used to compare between quantitative variables and chi square test used to compare between qualitative variables. A P value  $< 5\%$  was considered to indicate statistical significance.

### **Ethical consideration**

- ✚ Permission from Al-Medina joint program of family and community medicine was obtained.
- ✚ Permission from directorate of educational affairs of Yanbu was obtained.
- ✚ Before data collection, a brief background on the study and its objectives was mentioned in the beginning of the questionnaire giving the candidates the opportunity to participant or not.
- ✚ Only the researcher had the access to collect, store and manipulate the data using his personal computer maintaining the identity of participants and confidentiality of the data.

## **RESULTS**

Analysis and interpretation of data collected from 708 samples size using SPSS statistical program version 22 to assess the knowledge, Awareness and Attitude about epilepsy among school female teachers in Yanbu.

As demonstrated in table (1) below, the majority of respondents (37.2%) were dealt with person with epilepsy, (18.2%) of them have one in their family with epilepsy, (22.7%) were teach students with epilepsy, (3.7%) currently teach students with epilepsy, (36.9%) of them aware about the life circumstances of persons with epilepsy, (48.7%) of the teachers ready to handle a seizure if one of students had a fit during class, (14.2%) of teachers aware about different types of seizures, (91.3%) of teachers would like to have more general knowledge about epilepsy, (94.5%) would like to have more information about how to respond when a student is having a seizure, (5.6%) of them received adequate training about seizure management and epilepsy during teaching training, (4.5%) of them think that individual with epilepsy are mentally retarded, (7.9%) of teachers think that individual with epilepsy does not possess a normal life expectancy, (66.3%) of teachers expected the condition of epileptic person deteriorate, (88.7%) noted that epileptic child is like anyone else just after seizures are controlled, (71.4%) noted that epileptic child can cope with hard work, (37.3%) noted epileptic child can safely participate in strenuous activity, (93.9%) noted the epilepsy is not a contagious disease, (17.7%) noted the offspring of patient with epilepsy will have epilepsy, (28.1%) noted the epileptic child in regular class has an adverse effect on other children and finally (69.5%) noted that epilepsy and epilepsy medication have a significant effect on student's mood, memory and learning.



**Table 1: Frequency distribution of the responses to knowledge questions about epilepsy**

	<u>Questions</u>	<u>Responses</u>	<u>Frequency</u>	<u>Percentage</u>
1	Have you ever dealt with a person with epilepsy?	Yes	264	37.2
		No	445	62.8
2	Does any member of your family have epilepsy?	Yes	129	18.2
		No	580	81.8
3	Have you been a teacher of a student with epilepsy?	Yes	161	22.7
		No	548	77.3
4	Are you currently a teacher of a student with epilepsy?	Yes	26	3.7
		No	683	96.3
5	Are you aware of the life circumstances of persons with epilepsy?	Yes	281	39.6
		No	428	60.4
6	Will you be prepared to handle a seizure if one of your students had a fit during class?	Yes	345	48.7
		No	364	51.3
7	Are you aware of the different types of seizures and what they look like?	Yes	101	14.2
		No	608	85.8
8	Would you like to have more general knowledge about epilepsy?	Yes	647	91.3
		No	62	8.7
9	Would you like to have more information about how to respond when a student is having a seizure?	Yes	670	94.5
		No	39	5.5
10	Have you received adequate training about seizure management and epilepsy in your teaching training?	Yes	40	5.6
		No	669	94.4

11	Individual with epilepsy are also mentally retarded	Yes	32	4.5
		No	677	95.5
12	Individual with epilepsy does not possess a normal life expectancy	Yes	56	7.9
		No	653	92.1
13	You can expect the condition of epileptic person to deteriorate	Yes	470	66.3
		No	239	33.7
14	Epileptic child is like anyone else just after seizures are controlled	Yes	629	88.7
		No	80	11.3
15	Epileptic child can cope with hard work	Yes	506	71.4
		No	203	28.6
16	Epileptic child can safely participate in strenuous activity	Yes	262	37.0
		No	447	63.0
17	Epilepsy is not a contagious disease	Yes	666	93.9
		No	43	6.1
18	Offspring of patient with epilepsy will have epilepsy	Yes	124	17.5
		No	585	82.5
19	Epileptic child in regular class has an adverse effect on other children	Yes	199	28.1
		No	510	71.9
20	Epilepsy and epilepsy medication have a significant effect on student's mood, memory and learning	Yes	493	69.5
		No	216	30.5

Table (2) and figure (1) presents the level of knowledge of teachers about the epilepsy, it was detected that the majority of teachers were high level of knowledge (20.6%) and low level (79.4%) with overall knowledge mean and St. Deviation (1.79) and (0.405) respectively.

**Table 2: The level of knowledge among the school teachers:**

		Frequency	Percent	Mean	Std. Deviation
	High	146	20.6	1.79	0.405
	Low	563	79.4		

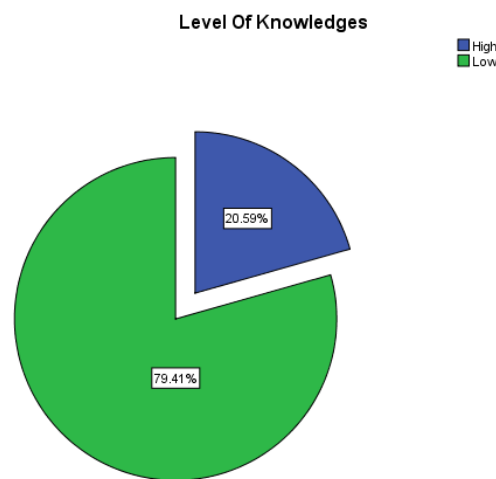


Figure 1: level of knowledge

The following table (3) demonstrates the 14 items of attitude score together with percentage of respondents with positive attitudes toward persons with epilepsy. (48%) of participants showed a positive attitude to the statement “persons with epilepsy have the same rights as all people”. Similarly, (39.3%) positively responded to the item “equal employment opportunities should be available to individuals with epilepsy,” (67.1%) showed a positive attitude to the item “insurance companies should not deny insurance to individuals with epilepsy,” (34.1%) don't know about “persons with epilepsy should be prohibited from driving.”

(41.3%) showed a positive attitude to the item " Persons with epilepsy should not be prohibited from marrying" (34%) of respondents showed a positive attitude toward the statement "The individual with epilepsy should not be prevented from having children." (41.3%) of respondents disagree about the statement "The onset of epileptic seizures in a spouse is sufficient reason for divorce." (53.3%) of respondents disagree about the statement "Persons with epilepsy are a danger to the public" (36.8%) of respondents disagree about the statement "Persons with epilepsy are more likely to develop and express criminal tendencies than are other people." (47.8%) of respondents agree about the statement "Parents should expect of their child who has epilepsy what they expect of other children." (41%) of respondents agree about the statement "the responsibility for educating children with epilepsy rests on the 'community", (50.4%) of respondents disagree about the statement "Schools should not place children with epilepsy in regular classrooms" (39.9%) of respondents disagree about the statement "Children need to be protected from classmates who have epilepsy" and (47%) of respondents agree about the statement "Children with epilepsy should attend regular public schools".

**Table 3: Frequency distribution of the responses to attitudes about epilepsy**

	Questions		Very disagree	Disagree	Don't know	Agree	Very agree
1	Persons with epilepsy have the same rights as all people.	N %	(10) (1.4%)	(26) (3.7%)	(163) (23%)	(170) (24%)	(340) (48%)
2	Equal employment opportunities should be available to individuals with epilepsy.	N %	(4) (0.6%)	(25) (3.5%)	(96) (13.5%)	(301) (42.5%)	(283) (39.9%)
3	Insurance companies should not deny insurance to individuals with epilepsy.	N %	(5) (0.7%)	(8) (1.1%)	(28) (3.9%)	(192) (27.1%)	(476) (67.1%)
4	Persons with epilepsy should be prohibited from driving.	N %	(24) (3.4%)	(93) (13.1%)	(242) (34.1%)	(223) (31.5%)	(127) (17.9%)
5	Persons with epilepsy should not be prohibited from marrying.	N %	(27) (3.8%)	(71) (10.0%)	(85) (12.0%)	(233) (32.9%)	(293) (41.3%)

6	The individual with epilepsy should not be prevented from having children.	N %	(45) (6.3%)	(124) (17.5%)	(103) (14.5%)	(196) (27.6%)	(241) (34.0%)
7	The onset of epileptic seizures in a spouse is sufficient reason for divorce.	N %	(87) (12.3%)	(293) (41.3%)	(248) (35.0%)	(70) (9.9%)	(11) (1.6%)
8	Persons with epilepsy are a danger to the public.	N %	(253) (35.7%)	(378) (53.3%)	(66) (9.3%)	(10) (1.4%)	(2) (0.3%)
9	Persons with epilepsy are more likely to develop and express criminal tendencies than are other people.	N %	(193) (27.2%)	(261) (36.8%)	(227) (32.0%)	(25) (3.5%)	(3) (0.4%)
10	Parents should expect of their child who has epilepsy what they expect of other children.	N %	(10) (1.4%)	(78) (11%)	(132) (18.6%)	(339) (47.8%)	(150) (21.2%)
11	The responsibility for educating children with epilepsy rests on the community.	N %	(14) (2%)	(102) (14.4%)	(147) (20.7%)	(291) (41%)	(155) (21.9%)
12	Schools should not place children with epilepsy in regular classrooms.	N %	(136) (19.2%)	(357) (50.4%)	(117) (16.5%)	(72) (10.2%)	(27) (3.8%)
13	Children need to be protected from classmates who have epilepsy.	N %	(106) (15.0%)	(283) (39.9%)	(127) (17.9%)	(140) (19.7%)	(53) (7.5%)
14	Children with epilepsy should attend regular public schools.	N %	(7) (1.0%)	(36) (5.1%)	(79) (11.1%)	(333) (47.0%)	(254) (35.8%)

The following table (4) and figure (2) presents the level of attitudes of teachers about the epilepsy, it was detected for low, moderate and high attitudes (1.6%), (54.3%) and (44.1%) respectively with overall attitudes mean and St. Deviation (2.43) and (0.525).

**Table 4: The level of attitudes among the school teachers:**

		Frequency	Percent	Mean	Std. Deviation
	Low	11	1.6	2.43	0.525
	Moderate	385	54.3		
	High	313	44.1		

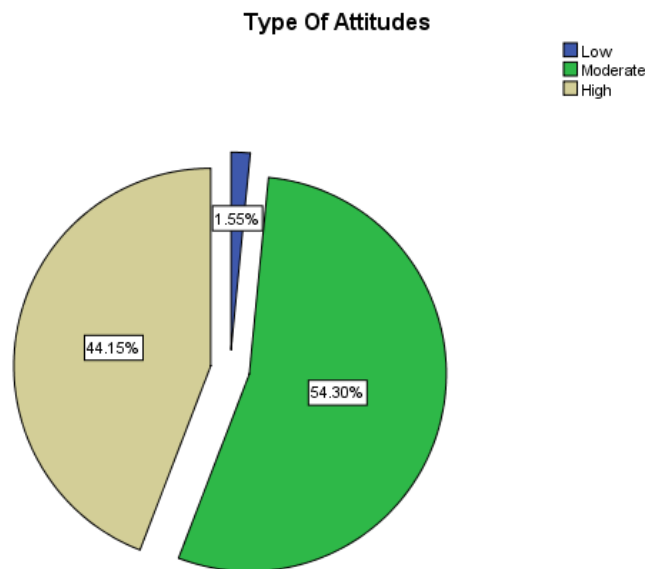


Figure 2: level of attitudes

## **8. DISCUSSION**

Teachers are usually in touch with epileptic children or adults. This requires a better educative program for these professionals in order to reduce the myths and fears surrounding epilepsy.

The majority of respondents to our study, (37.2%) were dealt with person with epilepsy, (18.2%) of them have one in their family with epilepsy, (22.7%) were teach students with epilepsy, (3.7%) currently teach students with epilepsy, (36.9%) of them aware about the life circumstances of persons with epilepsy, (48.7%) of the teachers ready to handle a seizure if one of students had a fit during class, (14.2%) of teachers aware about different types of seizures, (91.3%) of teachers would like to have more general knowledge about epilepsy, (94.5%) would like to have more information about how to respond when a student is having a seizure, (5.6%) of them received adequate training about seizure management and epilepsy during teaching training, (4.5%) of them think that individual with epilepsy are mentally retarded, (7.9%) of teachers think that individual with epilepsy does not possess a normal life expectancy, (66.3%) of teachers expected the condition of epileptic person deteriorate, (88.7%) noted that epileptic child is like anyone else just after seizures are controlled, (71.4%) noted that epileptic child can cope with hard work, (37.3%) noted epileptic child can safely participate in strenuous activity, however, this result agree with Dr. Jobran M. Alqahtani who conducted from his study Most of the school teachers (79.7%) disagreed with the idea of teaching children with epilepsy separately, or preventing them from sporting activity (50.5%), (93.9%) noted the epilepsy is not a contagious disease, (17.7%) noted the offspring of patient with epilepsy will have epilepsy, (28.1%) noted the epileptic child in regular class has an adverse effect on other children and finally (69.5%) noted that epilepsy and epilepsy medication have a significant effect on student's mood, memory and learning.

As demonstrated from this result of questions the level of knowledge was low among the teachers this result agrees with A Brazilian study which showed that, Knowledge about epilepsy is an important issue in determining teachers' attitudes toward children with epilepsy. In general, teachers do not receive any formal instructions on epilepsy during their education and training despite the fact that as much as 40% of the children's developing life is spent at school

When demonstrates the 14 items of attitude score together with percentage of respondents, moderate level of the attitudes was noted among the teachers, although attitude is a complex and abstract construct, recent studies have demonstrated the manner in which teachers' attitudes may be translated into behaviors that can have problematic results for students with epilepsy. Teachers' perception of and approach to these students with epilepsy varies with the accuracy of their knowledge, which is often inadequate, limited, or even erroneous [7].

## **9. CONCLUSION**

Epilepsy is one of the most common chronic non-communicable neurologic disorders worldwide. Knowledge and attitude of school teachers toward epilepsy could have significant impact on the educational difficulties of epileptic students. This study concludes that the level of knowledge and attitudes toward epilepsy among the teachers are low and moderate, respectively. Therefore, contribution between physicians and teachers in understanding of seizure and the treatment may have important impact on lowering the learning difficulties among epileptic students. In addition, general public educational campaign for epilepsy should be encouraged in order to improve the quality of life in person with epilepsy. A more tolerant attitude towards epilepsy could be expected, after increasing the levels of formal education among general population, especially in teachers.



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