Neurology Asia 2024; 29(1) : 87 – 96

Adults' knowledge levels of and attitudes toward epilepsy: a cross-sectional study in Samsun Türkiye

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Abstract

Background & Objective: Epilepsy is not only a common neurological disorder, but also a stigmatising cause of psychosocial difficulties and discrimination. This study aimed to evaluate adults' knowledge levels and attitudes toward epilepsy. *Methods:* This cross-sectional study was conducted between August and September 2022 from four family healthcare units in Samsun, Türkiye. In the questionnaire, a personal information form, the Epilepsy Knowledge Scale (EKS), and the Epilepsy Attitude Scale (EAS) were used. *Results:* Four hundred and six people participated in this study. The mean age of the participants was 39.4±13.6 years, and 54.2% were women. The mean EKS score was 9.9±3.1 (Maximum 16), and the mean EAS score was 56.8±8.9 (Maximum 70). University graduates (p=0.001), participants familiar with individuals with epilepsy (p<0.001), with epilepsy in the family (p<0.001), who had witnessed epileptic seizures (p<0.001), who had previously heard about epilepsy (p<0.001), and who had read about epilepsy (p<0.001) registered higher mean epilepsy knowledge scores. Participants over 35 (p=0.002), unmarried individuals (p<0.001), university graduates (p<0.001), the employed (p=0.008), participants with children (p<0.001), who knew individuals with epilepsy (p=0.016), with epilepsy patients in the family (p=0.023), who had witnessed epileptic seizures (p<0.001), who had previously heard of epilepsy (p=0.012), and who had read about epilepsy (p<0.001) registered higher mean attitudes to epilepsy scores. Positive attitudes toward epilepsy increased according to the level of knowledge of epilepsy (r=0.387; p<0.001).
Conclusion: The participants from Samsun, Türkiye exhibited moderate levels of knowledge about epilepsy and positive attitudes toward the disease. Increasing levels of knowledge were associated with increasingly positive attitudes toward epilepsy.

Keywords: Epilepsy, knowledge, attitudes, adult, stigmatization

INTRODUCTION

Epilepsy is a chronic neurological disorder that is prevalent worldwide and is characterized by recurrent seizures associated with abnormal, excessive, or synchronized neuronal activity in the brain.[1,2] There are approximately 50 million people with epilepsy worldwide. Approximately 80% of them live in low- or middle-income countries.[3] The estimated prevalence of epilepsy is 6: 1000 in developed countries and 18.5: 1000 in developing countries.[4] Studies have reported a prevalence of active epilepsy of 5-9:1000 in Türkiye.[5,6]

Factors such as failure to fully recognize epilepsy and the parents of children with epilepsy concealing them from society and keeping them away from social life result in delays in children receiving prompt treatment. Problems also arise in areas such as receipt of education, finding a job, and starting a family.[7] Incorrect attitudes and practices toward people having seizures can also be harmful to patients. Forced stabilization of people having seizures can result in fractures and serious injury. Such inappropriate procedures result from a lack of knowledge about the patient who is having a seizure.[8] Medication alone is not enough to help people with epilepsy lead a normal life. Society must also adopt a positive attitude toward the disease. Since the social prognosis of epilepsy has been described as worse than the clinical prognosis, it should not be considered and valued as a neurological disease alone.[9] Lack of knowledge and awareness about epilepsy is one of the main causes of social rejection of people with epilepsy. Stigma and discrimination adversely affect the treatment and lives of people with epilepsy and also lead to psychosocial difficulties.[10]

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Date of Submission: 2 August 2023, Date of Acceptance: 22 October 2023

https://doi.org/10.54029/2024mzr

Knowledge of and attitudes toward epilepsy in their populations have been evaluated in several countries in the hope that this will assist with the design of informative educational programs.[11-14] It has been observed that there is a lack of information about epilepsy; however, it has been reported that there are positive attitudes toward individuals with epilepsy.[15-17] There are many studies in the literature about students, teachers, healthcare workers, patients with epilepsy and their parents.[18-23] However, to the best of our knowledge, limited studies have been performed on evaluating knowledge and attitudes concerning epilepsy in primary healthcare settings. This study aimed to evaluate adults' knowledge levels and attitudes toward epilepsy.

METHODS

Study design and participants

This cross-sectional, descriptive study was performed between August and September 2022 in four family healthcare units in the Turkish province of Samsun. Samsun is a city located in the north of Türkiye with a population of approximately 1.5 million. The study population consisted of 6,835 people aged 18-65 years who were registered in Pelitköy Education Family Health Center and Aziziye Education Family Health Center affiliated to Ondokuz Mayıs University Faculty of Medicine, Department of Family Medicine. The sample size was calculated as 364 with a 95% confidence interval (alpha = 0.05), 5% margin of error and 50% likelihood ratio using the Openepi program. Patients were accepted according to the order of outpatient clinic visits in sample selection.

The inclusion criteria was being male or female between the ages of 18-65. The exclusion criteria were: 1. Diagnosis of epilepsy, 2. Being a healthcare worker or studying in a health-related department, 3. Patients with communication disabilities (mentally disabled individuals, those with hearing problems, those with language problems).

Data collection tools

The sociodemographic characteristics section of the questionnaire was created by searching the literature.[9,19,24] A 15-individual pilot study was conducted using a questionnaire among patients who were admitted to FHCs. Amendments were then made in terms of clarity and comprehensibility, after which the questionnaire, consisting of 41 questions, assumed its final form. It consisted of three sections: the first investigated the sociodemographic characteristics (11 items), the second consisted of the Epilepsy Knowledge Scale (16 items), and the third of the Epilepsy Attitude Scale (14 items). Individuals who met the inclusion criteria were informed about the study after their clinical examination, and the principal investigator administered all questionnaires face-to-face to those who agreed to participate.

Sociodemographic characteristics

The personal information form consisted of sociodemographic information such as age, gender, marital status, employment status, education level, having children, and 11 items inquiring about knowing someone with epilepsy, having someone with epilepsy in the family, seeing someone with epilepsy seizures, and having heard or read about epilepsy before. For the data to be in accordance with the literature and for ease of presentation some of them were grouped. Participants' ages were divided into two groups: ≤35 years and >35 years. Education status was divided into high school and below and university. Marital status was divided into unmarried and married. Employment status was assessed with the question "Do you have a gainful employment?".

Epilepsy Knowledge Scale

The Epilepsy Knowledge Scale (EKS) developed by Aydemir was used. The EKS consisted of 16 items. The answer options were "true", "false" and "don't know". The "correct" option was evaluated as '1 point' and the "incorrect" and "don't know" options were evaluated as '0 points'. Items 4, 11, 13 and 16 were reverse-scored. The total score on this scale was between 0 and 16, with a higher score indicating more epilepsy knowledge. The items in the scale-covered the medical aspect of epilepsy (information about causes, treatment, epileptic syndromes), social aspect (information about cognitive-behavioral characteristics of patients with epilepsy) and what to do during seizures.[25]

Epilepsy Attitude Scale

The Epilepsy Attitude Scale (EAS) developed by Aydemir was used to determine the attitudes of the community towards epilepsy and individuals with epilepsy. The Epilepsy Attitude Scale determined the participants' positive or negative attitudes towards epilepsy and individuals with epilepsy. The epilepsy attitude scale consisted of 14 items. It was a 5-point Likert-type scale.

The answers for each item were determined as strongly agree, agree, disagree, strongly disagree and have no idea and ranged from 1 to 5 (Strongly agree: 1 point, agree: 2 points, have no idea: 3 points, disagree: 4 points, strongly disagree: 5 points). Items 3, 7 and 12 were reverse-scored.

The minimum score was 14 and the maximum score was 70. A higher score indicated a more positive attitude towards epilepsy and individuals with epilepsy.[25]

Statistical analysis

Data were analyzed using IBM SPSS Statistics version 21 software and expressed as number percentage, mean, and standard deviation. The distribution of continuous data was evaluated using the Kolmogorov-Smirnov test and graphs. Two-way group comparisons of continuous data were performed using the independent samples t-test or ANOVA for three or more groups. The relationship between knowledge and attitude scores was evaluated by correlation analysis. Statistical significance was set at $p < 0.05$.

Ethics approval

This study was conducted in accordance with the Declaration of Helsinki on Human Rights. Ethical committee approval was obtained prior to the start of the study (OMUKAEK 2022/249). Permission was also obtained from the Samsun Provincial Health Directorate.

RESULTS

A total of 406 individuals participated in this study. The mean age of the participants was 39.4±13.6 years, 55.4% were aged over 35, 54.2% were women, 64.8% were married, 56.4% were educated to a high school level or lower, 56.7% were in work, and 63.1% had children. Furthermore, 38.9% of the participants knew someone with epilepsy, 12.8% had an individual with epilepsy in the family, 58.2% had appeared to be someone undergoing an epileptic seizure at any time, 93.8% had heard of epilepsy, and 34% had read about epilepsy (Table 1).

The mean EKS score was 9.9±3.1. University graduates (p=0.001), individuals acquainted with someone with epilepsy (p<0.001), with a family member with epilepsy (p<0.001), who had witnessed an epileptic seizure (p<0.001), who had previously heard about epilepsy (p<0.001), and who had read about the disease (p<0.001) registered higher knowledge of epilepsy scores (Table 2).

Overall correct responses to knowledge items, followed by variation in knowledge levels in Table 3. "*Brain surgery can be used to treat epilepsy in some cases*" received a correct response from 22.6% of the participants. The incorrect statement "*When you see a person having a seizure, you can stop the seizure by giving him/her an onion to smell*" was identified as such by 31.5% of participants. The false proposition *"When you see a person having a seizure, you should spill water on his/her face to stop the seizure*" was described as correct by 35.5% of participants. The items most frequently correctly agreed with by the participants were "*Patients with epilepsy can be as successful at work as others*," "*Patients with epilepsy can lead normal lives,"* and "*Most people with epilepsy have normal intelligence*."

The mean EAS score was 56.8±8.9. Individuals younger than 35 (p=0.002), the unmarried (p<0.001), university graduates (p<0.001), the employed (p=0.008), individuals with children (p<0.001), who were acquainted with someone with epilepsy (p=0.016), with a family member with epilepsy (p=0.023), who had witnessed an epileptic seizure (p<0.001), who had previously heard about epilepsy (p=0.012), and who had read about epilepsy (p<0.001) registered higher attitudes to epilepsy scores (Table 4).

Responses to the EAS provided by the participants are listed in Table 5. The analysis showed that 44.3% of the participants disagreed with the statement that "*I would date someone who has epilepsy,"* and 34.4% were undecided. Eighteen percent of the participants agreed with the proposition, "*I would object to the marriage of my child with someone who has epilepsy*," and 25.3% were undecided. Additionally, 39.6% of the participants disagreed with the proposition that "*I would marry someone who has epilepsy*," while 37.3% were undecided.

A positive correlation was found between participants' EKS and EAS scores (r=0.387; p<0.001).

DISCUSSION

In addition to being a widespread neurological disorder, epilepsy is also a stigmatizing cause of psychosocial difficulties and discrimination. This state of affairs is associated with negative

Table 1: Participants' characteristics and experience of epilepsy (n=406)

Variable	Category	n (%)
Age	≤35 years	181 (44.6)
	>35 years	225 (55.4)
Sex	Male	186 (45.8)
	Female	220 (54.2)
Marital status	Unmarried	143 (35.2)
	Married	263 (64.8)
Education	High school or lower	229 (56.4)
	University	177 (43.6)
Employment status	No	176 (43.3)
	Yes	230 (56.7)
Children	No	150 (36.9)
	Yes	256 (63.1)
Acquainted with an individual with epilepsy	No	248 (61.1)
	Yes	158 (38.9)
Epilepsy patient in the family	No	354 (87.2)
	Yes	52 (12.8)
Witnessed an epileptic seizure	No	168 (41.4)
	Yes	238 (58.6)
Heard about epilepsy	No	25 (6.2)
	Yes	381 (93.8)
Read about epilepsy	No	268 (66.0)
	Yes	138 (34.0)

impacts on the lives of people diagnosed with epilepsy, inaccurate perceptions and the resulting social discrimination.[26,27] Knowledge gaps, misconceptions and negative attitudes towards epilepsy have been identified in both developed and developing countries.[17,28] The levels of epilepsy and attitudes toward the disease need to be evaluated to understand the knowledge, attitudes, and perceptions of society, correct misconceptions, and develop targeted awareness programs.

The level of knowledge about epilepsy in the present study population was moderate. Similarly, Aydemir also reported a moderate level of knowledge of epilepsy.[29] Low levels of knowledge about epilepsy have been reported in studies in Türkiye and Uganda.[17,28] Particularly limited knowledge levels were detected on some items. Only one participant in five in this study was aware of the accuracy of the statement that "*Brain surgery can be used to treat epilepsy in some cases*." Similar rates have been reported in social studies in Türkiye.[25,29] A low rate of awareness that brain surgery can be an option for epilepsy was determined in a study from Italy.[30] One participant in three was aware of the inaccuracy of the statement "*When you see a person having a seizure, you should spill water on his/her face to stop the seizure*." A similar figure has been observed in other studies.[25,29] One-third of participants were aware of the inaccuracy of the statement, "*When you see a person having a seizure, you can stop the seizure by giving him/her an onion to smell*." Other studies reported 40-60% rates for this item.[25,29] It appears that this topic has still not been explained sufficiently, even at this time, when access to information has grown due to the increasing number of specialist physicians and technological advances. Education programs in which basic points are emphasized appear to be needed.

In this study, no significant association was found between participant age and epilepsy knowledge scores. Similar results were reported in a study involving parents.[20] However, a social study found that knowledge of epilepsy decreased as age increased.[17] However, other studies have reported that knowledge scores improved with age.[14,25] Therefore, it may be concluded that the relationship between age and knowledge levels is uncertain. These inconsistencies may derive from factors such as individuals' sociocultural levels,

Table 2: A comparison of participants' epilepsy knowledge levels in terms of characteristics

Variable	Category	Epilepsy Knowledge Scale Scores Mean±SD	p-value*
Age	≤35 years	9.7±3.4	0.091
	>35 years	10.2±2.9	
Sex	Male	9.8±3.3	0.268
	Female	10.1±3.0	
Marital status	Unmarried	9.9±3.4	0.873
	Married	10.0±3.0	
Education	High school or below	9.5±3.0	**0.001**
	University	10.5±3.3	
Employment status	No	9.7±3.0	0.210
	Yes	10.1±3.3	
Children	No	9.9±3.4	0.713
	Yes	10.0±3.0	
Acquainted with an individual with epilepsy	No	9.1±3.1	**<0.001**
	Yes	11.3±2.7	
Patient with epilepsy in the family	No	9.7±3.2	**<0.001**
	Yes	11.7±2.5	
Witnessed an epileptic seizure	No	8.9±3.1	**<0.001**
	Yes	10.7±3.0	
Heard about epilepsy	No	6.0±2.7	**<0.001**
	Yes	10.2±3.0	
Read about epilepsy	No	9.1±3.0	**<0.001**
	Yes	11.7±2.7	

*Independent sample t-test was used for two-group comparisons.

the place whether the study was conducted, and social circles.

No significant sex differences were determined in terms of epilepsy knowledge scores. Other studies have also concluded that epilepsy knowledge scores do not exhibit sex differences.[20,25] However, studies also report higher knowledge scores among women than men.[17,19] In this study, no significant difference was found between the epilepsy knowledge scores in terms of marital status. Similar results have been reported in previous studies.[17,24] The literature supports the results of the present study. In this study, the levels of knowledge of epilepsy were significantly higher in participants with higher levels of education. This is consistent with the findings of previous studies.[14,15,20,31] Higher levels of knowledge about epilepsy among individuals with higher levels of education were expected. Working participants also exhibited higher epilepsy knowledge scores than unemployed individuals in this study, although the difference was not statistically significant. A study from Saudi Arabia also reported higher scores on epilepsy knowledge among the employed.[32] The higher epilepsy knowledge scores among working individuals may perhaps derive from their encountering more individuals with epilepsy in their working lives.

The vast majority of the participants in this study reported having heard about epilepsy, and one in three reported having read about the disease. The rates of having heard or read things about epilepsy in previous studies were lower than those in our research.[20,29,33] Three-fifths of the participants in the present study had witnessed an epileptic seizure, and two-fifths knew of someone with epilepsy. Previous studies showed lower rates of witnessing a seizure.[14,20] Although some studies have reported similar rates of being acquainted with an individual with epilepsy, others have reported higher or lower rates.[14,20] The rates of having heard or read about epilepsy, witnessing an epileptic seizure, and knowing someone with epilepsy in this study were higher than those in other research. This may be attributable to the greater ease of access to information today and

Table 3: Percentages of respondents selecting the correct response by Epilepsy Knowledge Scale items

Epilepsy Knowledge Scale items	%
Epilepsy has many different types (T).	40.5
Most people with epilepsy can work (T).	60.0
Most patients with epilepsy can go to public schools (T).	68.8
Patients with epilepsy can be dangerous to others during a seizure (F).	54.2
Some seizures may last for a matter of seconds (T).	46.7
For most patients with epilepsy, seizures can be controlled with drugs (T).	61.9
Brain surgery can be used to treat epilepsy in some cases (T).	22.6
Most people with epilepsy have normal intelligence (T).	70.5
Patients with epilepsy can be as successful at work as others (T).	76.4
An epileptic seizure is caused by an abnormal function of the nerve cells in the brain (T).	40.0
Epilepsy is a kind of incurable disorder (F).	40.6
Inadequate sleep, stress, and taking alcohol can cause a seizure (T).	63.6
When you see a person having a seizure, you can stop the seizure by giving him/her an onion to smell (F).	31.5
Patients with epilepsy can lead normal lives (T).	73.5
Some kinds of seizures can be hardly noticed by others (T).	38.8
When you see a person having a seizure, you should spill water on his/her face to stop the seizure (F).	35.5

Table 4: A comparison of the participants' attitudes toward epilepsy in terms of characteristics

Variable	Category	Epilepsy Attitude Scale Scores Mean±SD	p-value*
Age	≤35 years	58.3±9.1	**0.002**
	>35 years	55.6±8.6	
Sex	Male	57.2±9.6	0.461
	Female	56.5±8.3	
Marital status	Not married	59.0±8.9	**<0.001**
	Married	55.6±8.7	
Education	High school or below	55.4±8.7	**<0.001**
	University	58.6±8.9	
Employment status	No	55.5±8.6	**0.008**
	Yes	57.8±9.1	
Children	No	58.8±8.8	**<0.001**
	Yes	55.6±8.8	
Acquainted with an individual with epilepsy	No	56.0±8.9	**0.016**
	Yes	58.1±8.8	
Epilepsy patient in the family	No	56.4±9.0	**0.023**
	Yes	59.4±8.4	
Witnessed an epileptic seizure	No	54.7±9.5	**<0.001**
	Yes	58.3±8.2	
Heard about epilepsy	No	52.4±10.1	**0.012**
	Yes	57.1±8.8	
Read about epilepsy	No	55.1±9.1	**<0.001**
	Yes	60.0±7.6	

*Independent samples t-test was used for two-group comparisons

Table 5: Percentages of participants' responses to the Epilepsy Attitudes Scale

Epilepsy attitude scale items	Completely agree	Agree	No idea	Disagree	Completely disagree
	%	%	%	%	%
If I had epilepsy, I would hide it from my friends.	2.5	5.7	8.4	40.0	43.5
I would stay away from a friend if I knew she/he had epilepsy.	0.7	5.7	3.7	34.6	55.3
I would date someone who has epilepsy.	7.9	13.5	34.4	28.3	16.0
I would object to working with someone who has epilepsy.	0.7	5.7	7.9	39.3	46.4
I would be embarrassed if someone in my family had epilepsy.	1.7	2.5	3.9	29.7	62.2
I would object to the marriage of my child with someone who has epilepsy.	4.7	13.3	25.3	21.6	35.1
I would marry someone who has epilepsy.	8.4	14.7	37.3	20.9	18.7
I would not trust a doctor with epilepsy, if I knew of his/her illness.	1.7	8.4	11.3	34.4	44.2
I prefer to stay away from someone with epilepsy.	2.2	5.4	6.1	35.9	50.4
Having epilepsy is something to be embarrassed about.	0.7	2.5	3.9	28.7	64.1
I feel uncomfortable working with someone who has epilepsy.	0.7	4.7	6.9	34.9	52.8
I feel comfortable with someone who has epilepsy.	5.9	15.2	24.3	34.2	20.4
I think patients with epilepsy are frightening.	1.2	6.6	9.1	33.7	49.4
I think people with epilepsy are not physically attractive.	1.0	3.7	12.8	29.7	52.8

A positive correlation was found between participants' EKS and EAS scores (r=0.387; p<0.001).

to patients with epilepsy being more involved in social life. In this study, participants who were familiar with someone with epilepsy, with an epilepsy patient in the family, who had witnessed an epileptic seizure, who had heard things about epilepsy, and who had read things about the disease registered higher epilepsy knowledge scores.

Similarly, in another study, individuals acquainted with someone with epilepsy and who had previously witnessed seizures registered higher epilepsy knowledge scores.[17] Another study from Türkiye reported higher epilepsy knowledge scores among participants who had heard or read things about epilepsy.[19] Since learning behaviors can develop according to individuals' needs, it has been suggested that they can improve their knowledge and skills more when they need to help people they know.

The present study revealed that the participant possessed positive attitudes toward individuals with epilepsy. Other studies have reported similar results.[15,17] However, others have reported negative societal attitudes toward the condition.[28,34] Turkish society is tolerant toward individuals with special needs, and displaying a negative attitude toward any patient is considered disrespectful. The differences between the findings may therefore derive from sociocultural factors. Negative attitudes emerged in some items, particularly in the present study. Almost half the participants disagreed with the proposition that "*I would date someone who has epilepsy*," while a third were undecided. One in five participants disagreed with the proposition that "*I would object to the marriage of my child with someone who has epilepsy,*" while a quarter were undecided. Almost half the participants disagreed with the statement that "*I would marry someone who has epilepsy*," while more than a third were undecided. Negative attitudes were detected in the field of marriage and romantic relationships. Participants still appear to harbor reservations concerning being close to an individual with epilepsy, maintaining a relationship with one, or having a child with epilepsy. The disease is regarded as an obstacle to marriage in both western and eastern countries.[30,35] Other studies reported negative attitudes toward marriage and romantic attachments.[16,29] Focusing on these issues in public education programs can reduce the stigmatization of individuals with epilepsy regarding relationships and marriage.

Older individuals exhibited significantly more negative attitudes than younger participants. A previous study from Türkiye showed a negative correlation between age and attitude.[29] Similar results have been reported in studies conducted in other countries.[13,30] The present study is consistent with the previous literature. The more positive attitudes exhibited by the young may be attributable to education levels decreasing as age increases. Sex did not have a significant effect on attitude in the present study. Other studies have reported similar conclusions.[17,20,24] Married individuals in this research registered significantly higher epilepsy attitude scores than unmarried individuals. A previous study also showed that single individuals had more positive attitudes.[17] A study involving hospital personnel did not report significant differences in attitudes toward individuals with epilepsy in terms of marital status.[19] The findings in the present study can be derived from unmarried individuals being younger and having higher educational levels.

Participants with higher educational levels were found to have better attitudes toward individuals with epilepsy in this research. This finding is also compatible with previous studies.[15,31] It is possible that the level of knowledge about epilepsy increased with the level of education of the participants, which may have a positive effect on their attitudes towards the disease. Employed individuals registered significantly higher epilepsy attitude scores than unemployed. A study from Türkiye reported a similar finding.[9] However, a study from Saudi Arabia found no association between attitude scores and employment status.[32] Frequent encounters with individuals with epilepsy in participants' working lives may have affected these positive attitudes. Providing greater employment opportunities for individuals with epilepsy may contribute to developing a more positive societal attitude toward the condition.

Participants acquainted with individuals with epilepsy, with such patients in their families, who had witnessed a seizure, who had heard things about epilepsy, and who had read things about the disease exhibited more positive attitudes toward the condition. Other studies have also observed more positive attitudes among people acquainted with individuals with epilepsy, who had witnessed seizures, or who had an individual with epilepsy in their families.[17,29] Factors such as assisting individuals with epilepsy to take part in daily life and providing employment for them can enhance awareness of epilepsy and positively affect people's attitudes toward it. A significant positive low-strength correlation was found in the present study between epilepsy knowledge levels and attitudes toward epilepsy. Another study in Türkiye reported a similar finding.[17] Studies from Uganda and Saudi Arabia have reported limited knowledge of epilepsy and negative attitudes among participants.[28,36] Negative attitudes towards epilepsy may be due to a lack of knowledge. This finding shows that increased knowledge about epilepsy contributes to the development of more positive attitudes toward people with the condition. Increasing the knowledge and awareness of primary health care workers through the training curricula developed by the International League Against Epilepsy Education Council will improve the knowledge and attitudes of society.[37]

This study has some limitations. First, the data were obtained only from people who applied to the education family health centers in Samsun. Therefore, the results may not be representative of the general population. Second, since the data were collected through face-to-face interviews, the participants may not have been objective. Third, the items in the questionnaire used to determine the status of hearing and reading about epilepsy had closed-ended answers. It would have been more useful to ask in detail where the participants got information about epilepsy. Finally, there were no defined cut-off values for the epilepsy knowledge and attitude scales used.

In conclusion, participants in this study possessed moderate epilepsy knowledge and positive attitudes toward the disease. However, individual analysis of the questions on the knowledge scale revealed that there is still a lack of knowledge regarding the treatment and etiology of epilepsy and seizure intervention. Individual analysis of the questions on the EAS showed that negative attitudes still persist on personal-emotional subjects such as romantic attachments and marriage with individuals with epilepsy. It appears that epilepsy awareness campaigns capable of providing information about appropriate means of dealing with epileptic seizures and the heritability of the condition are not at a sufficient level. Epilepsy knowledge and attitude scores increased in line with education level, being acquainted with an individual with epilepsy, having such an individual in the family, having witnessed a seizure, having heard about epilepsy, and having read about the disease. As the level of knowledge about epilepsy increased, positive attitudes increased.

ACKNOWLEDGEMENTS

The authors thank all participants for their cooperation.

DISCLOSURE

Financial support: None

Conflict of interest: None

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