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ORIGINAL RESEARCH

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Awareness and attitudes toward epilepsy in Ardabil medical and non-medical university students

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ABSTRACT

Background: Epilepsy is a common neurologic disease that causes many problems such as more costs and social problems due to negative attitudes to disease for patients. This study aimed to evaluate the knowledge and attitudes of medical and non-medical students toward epilepsy in Ardabil city, Iran.

Methods: A cross-sectional descriptive survey was conducted in Ardabil city (Northwest of Iran) in 2017. One hundred and fifty students were selected randomly from all medical and non-medical students who completed the self-administered questionnaire which was provided for this study. Collected data were analyzed by statistical methods in SPSS version 19.

Results: Of all students, 30% were girls and rests of them were boys. Of all students, 47.3% had moderate knowledge and 44.7% had well attitudes about epilepsy. Most of boys with 51.1% and most of girls with 45.7% had moderate knowledge but no significant difference between two sexes. Most of boys with 43.8% and most of girls with 46.7% had moderate attitudes toward epilepsy but no significant difference between two sexes.

Conclusion: Results showed that most of the students in this study had moderate knowledge and good attitudes toward epilepsy.

ARTICLE HISTORY

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KEYWORDS

Ardabil; epilepsy; knowledge; attitudes

Introduction

Epilepsy is a common neurologic disorder that occurred as frequent seizures. If seizure attacks occur in a person at least twice or more than twice and longer than normal is called epilepsy [1].

Medical and non-medical university students are a better group of society that should have had correct and good knowledge about healthcare issues such as epilepsy and also should had positive attitudes toward epilepsy [2].

Epilepsy is a brain chronic disease that usually occurs as seizure and/or distractions that occur in short time and its signs are different by epilepsy type. Seizure attack usually occurs suddenly and starts almost without any alarm sign and lasts long for some minute and then the person does not remember anything about the events. There is some evidence that it is susceptible to certain types of hereditary epilepsy. Epilepsy often occurs due to many medical disorders, such as trauma, medication, poisoning, or alcohol. Epilepsy cannot be cured, but attacks can be controlled with medication up to 70%. In people who do not respond to drugs, surgery, nerve stimulation, or dietary changes can be considered. All epilepsy syndromes are not lifelong and most people recover so much that they no longer need to take medication.

About 1% of world people (65 million) had epilepsy and almost 80% of cases occur in developing countries. Epilepsy is common in aged people and in developed countries, the prevalence of new cases in infants and aged people was more. In developing

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countries, this disease is mostly seen among infants and adolescents that its reason is due to difference in main causes rate. About 5% to 10% of all people have an unreasonable attack until the age of 18 and the chance of second attack is between 40% and 50%. In real-life situations, Knowledge and attitude of people toward epilepsy can affect the dimensions of people's quality of life [3].

Epilepsy can have a worse impact on the quality of life of people. These effects probably included social isolation, notoriety, or disability. These effects may result in poor academic performance and worse job problems. Special disorders that occur in epilepsy people called epilepsy syndrome. These disorders included depression, anxiety, and migraine. Lack of attention and hyperactivity disorder in children with epilepsy is three to five times higher than normal children in the community [4–6].

The rate of knowledge about epilepsy in developed countries was less than industrial countries and statistics showed that the rate of suffering to epilepsy in developed countries was six or seven people per 1,000 and in industrial countries was 49 per 1,000 and in our country Iran, this rate was 2.5 times more than European countries [2].

This study aimed to evaluate the knowledge and attitudes of medical and non-medical students toward epilepsy in Ardabil city, Iran.

Methods

This was a descriptive cross-sectional study that has been done in Ardabil city on Ardabil medical and non-medical university students (each with 75 students) in 2017. One hundred and fifty students were selected randomly from all medical and non-medical students and entered into the study.

Data collection method

Data collected by a self-administrated questionnaire included three sections: (1) Demographic data with four questions, (2) Knowledge toward epilepsy included 41 questions, and (3) Attitudes toward epilepsy included 20 questions. The knowledge questions scored by true = 1 and false = 0 and attitudes questions scored as agree = 1 and disagree = 0. The total score of knowledge was in the range of 0–41 which classified into three classes: less knowledge (≤12), moderate (13–25), and high (>25). Also, the total score of attitudes was in the range of 0–20 which classified into three classes: bad (≤6), moderate (7–13), and good (≥14).

Statistical analysis

Collected data were analyzed using descriptive statistical methods such as table, graph, and statistical indexes and analytical methods such as chi-square test in SPSS version 19. The $p < 0.05$ was considered as significant.

Results

Of all students, 30% were girls and rests of them were boys. Of all students, 47.3% had moderate knowledge (Fig. 1) and 44.7% had well attitudes about epilepsy (Fig. 2). Most of boys with 51.1% and most of girls with 45.7% had moderate knowledge but no significant difference between two sexes (Fig. 3). Most of boys with 46.7% and most of girls with 43.8% had good attitudes toward epilepsy but no significant difference between two sexes (Fig. 4).

Most of medical and non-medical university students had high and moderate awareness toward epilepsy, respectively and the difference between two groups was significant ($p = 0.001$) (Fig. 5).

Most of medical and non-medical university students had moderate and good attitudes toward

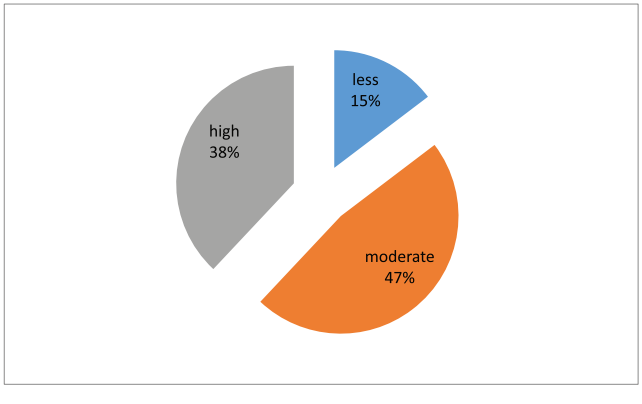

Figure 1. The rate of awareness about epilepsy.

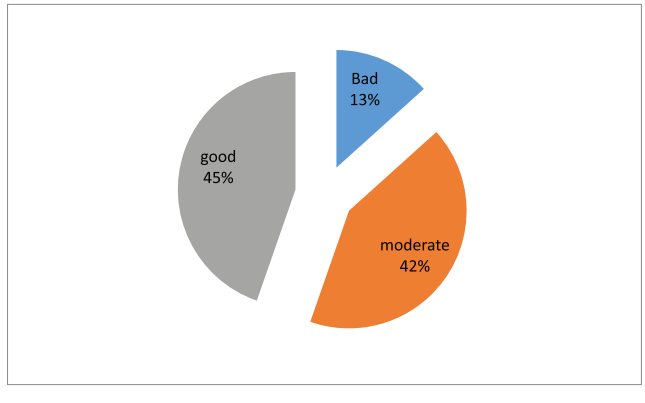

Figure 2. The rate of attitudes toward epilepsy.

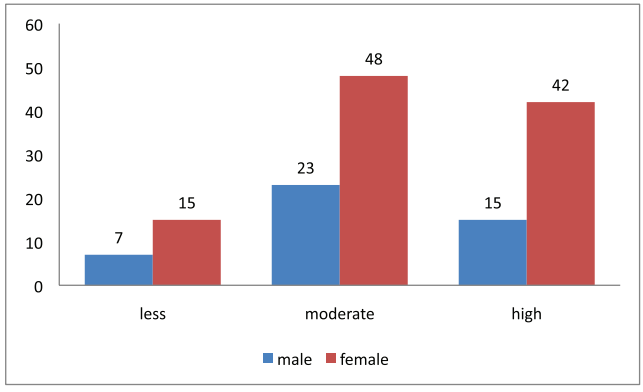

Figure 3. Relation between sex and knowledge level.

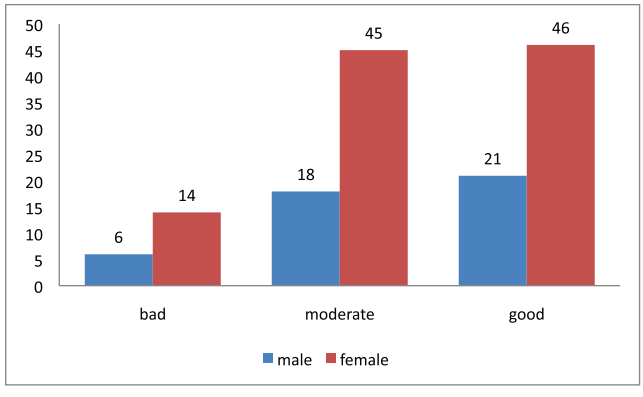

Figure 4. Relation between sex and attitude level.

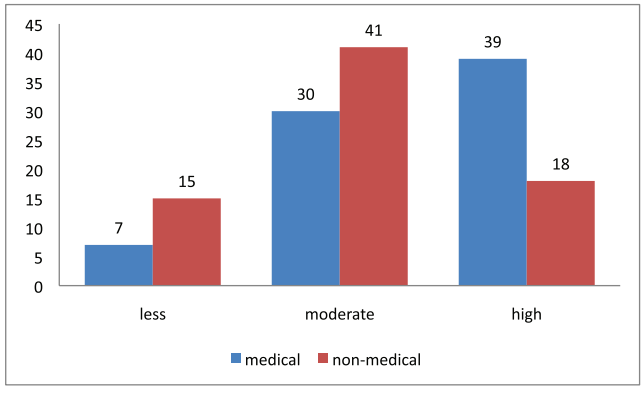

Figure 5. Relation between field of study and knowledge level.

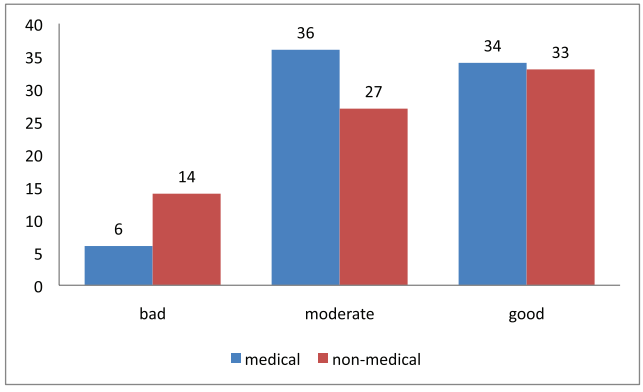

Figure 6. Relation between field of study and attitude level.

Table 1. The necessary actions that should be done in time of exposure with the epileptic person.

Necessary actions	True		False	
	n	%	*n*	%
Remove sharp and dangerous objects from around the person	94	62.7	56	37.3
Trying to wake her up or call him	64	42.7	86	57.3
Avoid falling or dropping of a person	100	66.7	50	33.3
Stay with each other until assistant forces arrive	117	78	33	22
Sending an attacker to the hospital	92	61.3	58	38.7
Loosen tight clothes around the person's neck	106	70.7	44	29.3
Tightening the person to prevent seizures	53	35.3	97	64.7
Trying to open the mouth and put something between the teeth	74	49.3	76	50.7
Feeding sugar to an individual during an attack	76	50.7	74	49.3
Slowly turning a person on one of his sides	46	30.7	104	69.3
Giving the medications to him through the mouth	78	52	72	48
Draw a person away	20	13.3	130	86.7
Put things soft like pillows under the head	76	50.7	74	49.3
Feeding water during the attack	81	54	69	46

epilepsy, respectively and the difference between two groups was significant ($p = 0.001$) (Fig. 6).

The rate of awareness in students with different entrance date to university was significant. But the rate of attitudes toward epilepsy in different entrance was not significant.

Most of students pointed to "stay near epileptic patient until arrival of emergency team with 78% and loosen the tights around the person's neck with 70.7%" (Table 1).

Most of students had positive attitudes to the normal life of epileptic patients (69.3%) and 78.7% positive attitudes to the embarrassed when their family had an epileptic person (Table 2).

36.9% of students pointed to the madness with 36.7% and 58.7% pointed to the drug side effects as the epilepsy cause (Table 3).

Table 2. The attitudes rate of students about epilepsy.

Attitudes	Positive		Negative	
	n	%	*n*	%
People with epilepsy are as intelligent as other people.	96	64	54	36
A person with epilepsy cannot achieve high academic degrees.	112	74.7	38	25.3
I feel embarrassed if someone has epilepsy in my family	118	78.7	32	21.3
People with epilepsy can be successful in their work like other people	117	78	33	22
I do not hire an individual with epilepsy	104	69.3	46	30.7
An individual with epilepsy should hide his illness	109	72.7	41	27.3
Peoples can take care of their daily lives	102	68	48	32
Do not allow my child to play with a child with epilepsy	100	66.7	50	33.3
I do not like to work alongside a person	85	56.7	65	43.3
I'm afraid of being alone with an elderly person since he may be attacked at any moment	71	47.3	79	52.7
Society discriminates against patients with epilepsy.	53	35.3	97	64.7
Patients with epilepsy can have normal life	104	69.3	46	30.7
Epilepsy is a disease that should be embarrassed by those infected	110	73.3	40	26.7
Epilepsy is a kind of madness	65	43.3	85	56.7
The quality of life of people with epilepsy is like other people	39	26	111	74
People with epilepsy should tell their employer that they have the disease	109	72.7	41	27.3
I'm ready to marry an epileptic person	58	38.7	92	61.3
An epileptic person should tell his wife before she gets married that he has epilepsy.	112	74.7	38	25.3
I do not allow my son to marry an epileptic person.	45	30	105	70
People with epilepsy are better off than children.	69	46	81	54

Students say that the most of observed signs during epilepsy attacks were shake the whole body with 76.7% and then sink out of the mouth with 76% (Table 4).

Discussion

Results of this study showed that students who answered truly the reason of epilepsy were stroke with 46.7%, brain tumor 44.7%, damage and injury during birth with 59.3%, brain damage due to head trauma 52.7%, genetic disorder 65.3%, and unknown cause with 42.7%.

In Kazemi et al. [1] study in line with our study results, most of students truly pointed to stroke with 31.7%, brain tumor 49.3%, damage and injury during birth with 61.7%, brain damage due to head trauma 64.7%, genetic disorder 59.3%, and unknown cause with 28.3%.

In Gharegozl et al., most of students truly referred to brain lesions with 52.4%, genetic problems with 26.4%, psychological stresses with 34.8%, and 1.1% of them believed that supernatural factors are the cause of epilepsy [3]. While in our study, supernatural factors such as belief to pray, ghosts, magic, whammy, and curse included 54%, 53.3%, 54%, 50%, and 55.3%, respectively [3]. In other studies, 9%, 29.3%, and 15% of people pointed to madness as the main cause of epilepsy; that in our study, this rate was 36.7% which was more [1,7–10].

It seem that the rate of knowledge among people reach to high rate compared to before. Most of students pointed to shake of the whole body—sink out of the mouth—difficulty in speaking with 76.7%, 76.5%, and 69.3%, respectively, as the main observed symptoms among epileptic patients and had less knowledge about other true symptoms. Similar to this study, in Abbasi et al. [2] study, results showed that most of medical university students had moderate knowledge about epilepsy and also poor knowledge about important point about diseases such as treatment and diagnosis.

In Kazemi et al. [1] study, more than 75% of students pointed to shake of the whole body—sink out of the mouth—difficulty in speaking as the main observed symptoms among epileptic patients which was in line with our study results [1].

The necessary actions that students should be done in time of exposure with the epileptic person they pointed to "stay near epileptic patient until arrival of emergency team with 78% and loosen the

Table 3. The awareness of students about true cause of epilepsy.

The cause of disease	True		False	
	n	%	*n*	%
Stroke	70	46.7	80	53.3
Madness	55	36.7	95	63.3
Brain tumor	67	44.7	83	55.3
Belief to pray	81	54	69	46
Injury at birth	89	59.3	61	40.7
Drug side-effects	88	58.7	62	41.3
Ghosts	80	53.3	70	46.7
Whammy	75	50	75	50
Curse	83	55.3	67	44.7
Unknown	64	42.7	86	57.3
Brain damage due to head trauma	79	52.7	71	47.3
The magic	81	54	69	46
Genetic disorders	98	45.3	52	34.7

Table 4. The observed signs during epilepsy attacks.

Observed signs during epilepsy attacks	True		False	
	n	%	*n*	%
Shake the whole body	115	76.7	35	23.3
Body stiffness	91	60.7	59	39.3
Loss of consciousness	111	74	39	26
Sleep after attack	59	39.3	91	60.7
Doing involuntary gestures	80	53.3	70	46.7
Stare	74	49.3	76	50.7
Shake the part of body	84	56	66	44
Confusion after the attack	72	48	78	52
Urinary incontinence	59	39.3	91	60.7
Sink out of the mouth	114	76	36	24
Anesthesia	92	61.3	58	38.7
Falling	72	48	78	52
Difficulty in speaking	104	69.3	46	30.7
Drooping head	69	46	81	54

tight clothes around the person's neck with 70.7%" that in Kazemi et al. study, these rates were 91.7% and 91% which was more than our study results [2].

Of all students, in average 59.3% had positive attitudes toward epilepsy; that in similar study by Kazemi, this rate with 53% was lower than our study results [2].

In our study, 70% of students pointed that they own let their boy and girls married with the epileptic patient; that in the Kazem and Inanlou studies, these rates were 27.3% and 4% [1,11].

In our study, 43.3% of students known epilepsy as a madness; that in the Kazem and Inanlou studies, these rates were 15% and 11% [1,11].

In our study, 25% of students pointed that the epileptic person can reach to higher degree in science; that in the similar study, this rate was 54.7% which was higher than our study results [1].

Conclusion

Results showed that most of students in this study had moderate knowledge about epilepsy and high attitude toward epilepsy. So, healthy centers should be having educational programs for raising the knowledge of students about epilepsy. Also, doing more studies on other age groups in the form of multi-center studies is recommended.

Acknowledgment

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Conflict of Interest

None.

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