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Public Attitudes Toward Epilepsy and Knowledge on Seizure First Aid

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Abstract

Objective: The aim of the research was to assess the attitudes of the public toward epilepsy and their level of knowledge in first aid.

Methods: This descriptive cross-sectional study was conducted between July 2021 and January 2022, with 1102 individuals who applied to outpatient clinics in a hospital located in the city center of Erzincan (a province located in the eastern Turkey) and agreed to participate in the study. Research data were collected using a Socio-demographic Variables Questionnaire and Public Attitudes Toward Epilepsy Scale. Number, percentage, mean, standard deviation, independent *t*-test, one-way analysis of variance, Mann-Whitney *U* test, Kruskal–Wallis test, Bonferroni test, and Tukey test were used to evaluate the data.

Results: The mean total score of the participants on the Public Attitudes Toward Epilepsy scale was 55.28 ± 9.81. When asked about the seizure first-aid interventions to be applied for an epileptic patient, 61.9% of the participants responded that they would hold the legs and arms for restricting the patient's movements and try to open the clenched hands and jaws, whereas 57.6% said that they would apply artificial respiration or cardiac massage.

Conclusion: Majority of the individuals participating in the study were found to have exhibited negative attitudes toward epilepsy (55.28 ± 9.81), and these individuals were found to refer to incorrect interventions that would rather deteriorate the current status of the patient for first-aid purposes. In order to protect and improve health, it can be suggested to increase the awareness of the society on first-aid practices for epilepsy.

Keywords: Community, epilepsy attitude, first aid

INTRODUCTION

Epilepsy, one of the neurological diseases that affect more than 70 million people around the world,[1] is a chronic disease characterized by neurobiological, cognitive, psychological, and social deficits, as well as recurrent seizures.[2] Epilepsy affects individuals of all ages, races, social segments, and geographical regions; the incidence and prevalence thereof are reported as higher in low-/middle-income countries.[3]

Epilepsy restrains not only physical health but also social and psychological health and severe cases may result in burns, suffocation, or even disability and death caused by suicide due to depression.[4] Although epilepsy is one of the most common neurological diseases, negative attitudes toward epileptic patients like prejudice, stigma, and misunderstanding are also quite common in the community.[5] Due to the negative public attitudes, patients tend to isolate themselves from social environments. Therefore, assessing the general public attitude toward epilepsy is significant in terms of reducing the social isolation of individuals with epilepsy and to improve the status and functions of individuals in society.[6] In addition, assessing the general public attitude toward epilepsy shall help to determine individual and familial beliefs about the disease and to reduce the emotional impact of having seizures in the presence of others.[7]

Thus applying the right first-aid interventions to an epileptic patient, to keep the patient safe during a seizure, is very important to prevent injuries and further complications.[8] Insufficient awareness and incorrect knowledge about seizure first-aid practices may result in negative consequences in epileptic patients who are intervened during a seizure. For this reason, it is necessary to assess the first-aid practices applied throughout the community in order to determine the educational needs thereof and to raise awareness.[9] The aim of the research was to assess the public attitude toward epilepsy and the level of knowledge on first-aid.

METHODS

Research Design

The research was structured with a descriptive and cross-sectional design.

Population and Sample of the Research

Individuals aged 18 years and older, who are admitted to the outpatient clinics of a hospital located in the center of Erzincan province in the east of Turkey for any reason, comprised the population of the research. As a result of the power analysis using the G-Power 3.1.9.4 program, the

minimum sample size was determined as n = 388 with 95% power and 0.05 margin of error. The sample of this study consisted of 1102 people who agreed to participate in the research.

Data Collection
Research data were collected by the researchers via face-to-face interviews conducted between July 2021 and January 2022.

Data Collection Tools
Research data were also collected using a Socio-demographic Variables Questionnaire (Q-SV) and Public Attitudes Toward Epilepsy (PATE) Scale.

Socio-demographic Variables Questionnaire (Q-SV): The questionnaire prepared by the researchers in accordance with the literature consists of a total of 19 questions.[10,11] The first part of the questionnaire is allocated to questions assessing socio-demographic characteristics, whereas the second part includes questions addressing knowledge on seizure first aid.

Public Attitudes Toward Epilepsy (PATE) Scale: The scale was developed by Lim et al.[12] and a further study on the validity and reliability of the Turkish version of the scale was conducted by Aktürk et al.[13] Five-point Likert-type scale consists of 14 items grouped under 2 sub-dimensions: general and personal. The general sub-dimension covers general PATE, whereas the personal sub-dimension covers the participant's concerns about socio-demographic characteristics such as marital status and employment. Items 2, 5, 10, 11, and 14 are reverse coded. Each item is scored on a 5-point Likert-type scale; "strongly agree" is given 1 point, and "strongly disagree" is given 5 points. The death score is between 14 and 70. Higher scores obtained from the scale indicate a more negative attitude toward epilepsy. Aktürk et al[13] found the Cronbach's alpha coefficient to be 0.84 in their study. In this study, Cronbach's alpha coefficient was 0.84.

Data Analysis
Number, percentage, mean, and standard deviation were used to evaluate the research data. The normality distribution of the scale was tested according to the Skewness and Kurtosis values. Normally distributed research data were analyzed via independent *t*-test, and one-way analysis of variance was used for 3 or more groups. Mann-Whitney *U*-tests were used to analyze data that did not exhibit a normal distribution, and Kruskal–Wallis test was used for the analysis of more than 2 independent variables. Bonferroni and Tukey tests were used for comparison.

Ethical Issues
Written approval was obtained from Erzincan Binali Yıldırım University Human Research Ethics Committee (Ethics Committee Approval No: 07-29 dated 30/06/2021) and from the Health Institution where the research data will be collected. The research was conducted in conformance with the Helsinki Declaration.

MAIN POINTS

- In this study, many of the participants stated that incorrect first-aid practices could be applied in epileptic seizures.
- It has been determined that the attitudes of the society toward epilepsy patients are generally negative.
- Participants who are single, female, primary school graduate, have a lower income than their expenses, are self-employed, do not have epilepsy in their family, and do not receive education about epilepsy display more negative attitudes toward epilepsy patients.

RESULTS

Table 1 exhibits that 35.6% of the respondents were 51 years of age or older, 58.6% were female, 70.2% were married, 44.4% held a primary education, 55.5% had an income equal to their expenses, and 26.9% were housewives. The majority of the participants reported that they did not have family members with epilepsy history, they had not seen anyone suffering from epileptic seizures, and they had not received any training for epilepsy.

A statistically significant difference ($P < .05$) was determined between the gender and income status variables and mean total and general sub-dimension scores of PATE scale; mean scores of the female participants and participants whose income were lower than their expenses were found to be higher.

It was determined that there was a significant difference between the age, marital status, profession, family members with epilepsy history, having seen anyone suffering from epileptic seizures, and having been trained for epilepsy variables, and the total and sub-dimensions mean scores of the epilepsy attitude scale ($P < .05$). It was found that the total score averages of the participants between the ages of 18 and 28, single, primary school graduate, self-employed, having no epilepsy in their family, having epileptic seizures, and not receiving training for epilepsy were higher.

Concerning the first-aid interventions that should be applied to someone suffering from an epilepsy seizure, 92.4% of the participants stated that they would help the person sit/lie in a safe place, 86.7% of the participants stated that they would turn the patient who has had a seizure gently onto one side to allow them to remain stable and comfortable, 61.9% of the participants stated that they would hold the legs and arms for restricting the patient's movements, 91.3% of the participants stated that they would loosen ties or anything tight during the seizures, and 61.9% of the participants stated that they would open the clenched hands and jaws. About 88.9% of the participants stated that the person having a seizure should not be given anything by mouth, 66.3% stated that having the person smell cologne or onion should not be used to end the seizure, and 76.6% stated that it would not be useful to shout at the patient or pour water on the patient's face to wake him up after the seizure. In addition, 57.6% of the participants stated that artificial respiration or cardiac massage shall be required during the seizure, whereas 96.3% stated that an ambulance should be called for prolonged seizures (Table 2).

Table 3 exhibits a statistically significant relationship between gender, marital status, and income status variables and the seizure first aid of holding the legs and arms of the patient for restricting the movements ($P < .05$); mean scores of female and single participants as well as participants whose income were higher than their expenses were found to be higher in this respect. A statistically significant relationship was determined between age, gender, marital status, and educational background variables and the seizure first aid of giving the patient something orally during an epileptic seizure (such as drinking water, giving medication) ($P < .05$); mean scores of female, single participants as well as participants aged between 18 and 50 years and who had primary school education were found to be higher in this respect. A statistically significant relationship was determined between age, gender, marital

Table 1. Mean Total and Sub-Dimension Scores of Participants from Public Attitudes Toward Epilepsy Scale with Respect to Their Socio-demographic Characteristics (n = 1102)

			Public Attitudes Toward Epilepsy Scale		
			General Sub-dimension	Personal Sub-dimension	Total
	n	%	X ± SD	X ± SD	X ± SD
Age					
18-28	228	20.7	37.32 ± 6.57	20.50 ± 4.33	57.83 ± 9.91*
29-39	227	20.6	37.32 ± 5.98	19.53 ± 3.90	56.85 ± 8.75
40-50	255	23.1	37.18 ± 6.22	19.10 ± 4.32	56.29 ± 9.52
+51	392	35.6	34.81 ± 6.54	17.41 ± 4.24	52.22 ± 9.78
Test and significance			F: 12.637	F: 29.179	F: 21.832
			***P*: .000**	***P*: .000**	***P*: .000**
Gender					
Female	646	58.6	36.94 ± 6.13	18.93 ± 4.19	55.87 ± 9.34*
Male	456	41.4	35.62 ± 6.83	18.81 ± 4.62	54.43 ± 10.39
Test and significance			t: 3.290	t: 0.443	t: 2.403
			***P*: .001**	***P*: .658**	***P*: .016**
Marital status					
Married	774	70.2	36.04 ± 6.40	18.47 ± 4.31	54.52 ± 9.72
Single	328	29.8	37.22 ± 6.53	19.83 ± 4.35	57.06 ± 9.81*
Test and significance			t: −2.273	t: −4.772	t: −3.953
			***P*: .006**	***P*: .000**	***P*: .000**
Educational background					
Literate	85	7.7	35.57 ± 6.70	17.92 ± 4.50	53.50 ± 10.12
Primary education	489	44.4	37.91 ± 5.77	19.52 ± 4.20	57.43 ± 8.94*
High school	424	38.5	35.92 ± 5.96	19.01 ± 3.95	54.93 ± 8.79
University	104	9.4	31.87 ± 8.54	16.10 ± 5.41	47.98 ± 13.05
Test and significance			F: 29.235	F: 19.943	F: 30.418
			***P*: .000**	***P*: .000**	***P*: .000**
Income status					
Income < expenses	345	31.3	37.46 ± 6.15	19.32 ± 4.48	56.78 ± 9.75*
Income~Expenses	612	55.5	35.90 ± 6.46	18.68 ± 4.24	54.58 ± 9.60
Income > Expenses	145	13.2	35.95 ± 6.93	18.66 ± 4.59	54.62 ± 10.48
Test and significance			F: 6.859	F: 2.614	F: 5.982
			***P*: .001**	***P*: .74**	***P*: .003**
Profession					
Housewife	296	26.9	35.94 ± 6.06	18.39 ± 4.21	54.33 ± 9.29
Officer	213	19.3	36.15 ± 7.20	18.17 ± 4.74	54.32 ± 10.95
Employee	174	15.8	36.07 ± 5.85	19.65 ± 3.99	55.72 ± 8.57
Retired	133	12.1	36.86 ± 6.37	18.79 ± 3.81	55.66 ± 9.30
Student	113	10.2	35.20 ± 7.02	19.11 ± 4.83	54.31 ± 11.01
Self-employed	173	15.7	38.22 ± 6.14	19.72 ± 4.40	57.95 ± 9.51*
Test and significance			F: 4.173	F: 4.384	F: 3.898
			***P*: .001**	***P*: .001**	***P*: .002**
Family members with epilepsy history					
Yes	152	13.8	34.67 ± 6.76	17.73 ± 4.76	52.40 ± 10.61
No	950	86.2	36.67 ± 6.37	19.06 ± 4.28	55.74 ± 9.60*
Test and significance			t: −3.553	t: −3.254	t: −3.640
			***P*: .000**	***P*: .000**	***P*: .000**
Having seen anyone suffering from epileptic seizures					
Yes	529	48.0	37.83 ± 5.99	19.56 ± 4.17	57.40 ± 9.27*
No	573	52.0	35.06 ± 6.60	18.25 ± 4.45	53.32 ± 9.90
Test and significance			t: 7.265	t: 5.037	t: 7.047
			***P*: .000**	***P*: .000**	***P*: .000**
Having been trained for epilepsy					
Yes	131	11.9	33.96 ± 7.75	17.53 ± 5.29	51.49 ± 11.96
No	971	88.1	36.72 ± 6.20	19.06 ± 4.20	55.79 ± 9.37*
Test and significance			t: −3.916	t: −3.174	t: −3.949
			***P*: .000**	***P*: .002**	***P*: .000**

* It is statistically more significant within the group.
SD, standard deviation.

status, and educational background variables and the seizure first aid of having the person smell cologne or onion to end the seizure ($P < .05$); mean scores of female, single participants as well as participants aged between 18 and 28 years and who had primary school education were found to be higher in this respect.

A statistically significant relationship was determined between the profession variable and the seizure first aid of applying artificial respiration or cardiac massage during an epileptic seizure ($P < .05$); mean scores of housewife participants were found to be higher in this respect. A statistically significant relationship was determined between age, gender, marital status, educational background, and income status variables and the seizure first aid of shouting at the patient or pouring water on the patient's face to wake him up after the seizure ($P < .05$); mean scores of female, single participants and participants aged between 29 and 39, who had primary school education and whose income were higher than their expenses, were found to be higher in this respect.

Table 4 reveals that the mean total score of the participants on the PATE scale is 55.28 ± 9.81, mean score on the general sub-dimension thereof was 36.39 ± 6.46, and the mean score on the personal sub-dimension thereof was 18.88 ± 4.37.

DISCUSSION

Negative attitudes and practices toward epilepsy patients may compromise the current status of the patients. An attempt to stabilize patients during a seizure may lead to fractures and other complications. Such practices and the negative attitude toward epilepsy are considered to be the result of a lack of knowledge about how to manage epileptic patients.[14] The aim of the research was to assess the public attitude toward epilepsy and the level of knowledge on first aid.

The Relationship between Public Attitudes Toward Epilepsy and Socio-demographic Variables

The findings of the research revealed that the attitudes of the public toward epilepsy were rather negative (55.28 ± 9.81). Similar to the findings of this research, community-based studies conducted in different countries also revealed negative PATE.[4,7,15-19] A single study conducted on the subject revealed moderate PATE,[20] whereas one other study in the literature revealed positive PATE.[9,21] Studies conducted with specific sample groups (teachers, health professionals, and university students), however, determined that PATE were positive.[22-25] Possible causes of this variation between community-based studies and the results of studies conducted with specific sample groups are considered to be socio-cultural and religious factors, educational background, academic training, and professional experience in the field of health.

Findings of this research revealed that the participants' age, gender, marital status, educational background and income status, profession, having family members with epilepsy history, having seen anyone suffering from epileptic seizures, and having been trained for epilepsy have been found to be variables affecting PATE; accordingly, single, female, self-employed participants and participants who had primary school education, whose income level is below their expenses, who did not have any family members with epilepsy history, who had seen someone suffering from epileptic seizures, and who had not been trained for epilepsy were determined to have rather negative attitudes toward epilepsy. Findings of a particular study revealed that male participants who did not have any family members with epilepsy history, who had not seen anyone suffering from epileptic seizures before, and who had not been trained for epilepsy tend to have rather negative attitudes toward epilepsy.[4] Another research with similar findings herein revealed that participants who had seen someone suffering from epileptic seizures before and who had not been trained for epilepsy tend to have rather negative attitudes toward epilepsy.[21] The study conducted by Wubetu et al[17] reported that individuals with an income level lower than their expenses, with lower levels of education, who had not seen anyone suffering from epileptic seizures before, and who had not been trained for epilepsy tend to have rather negative attitudes toward epilepsy. Furthermore, another study revealed that individuals who are 46 years of age and younger, who are illiterate, who had not been trained for epilepsy, and who did not have any family members with epilepsy history tend to have rather negative attitudes toward epilepsy.[15]

Knowledge about Seizure First-Aid Practices

Majority of the participants of this research noted that they would hold the legs and arms for restricting the patient's movements (61.9%), apply artificial respiration or cardiac massage (57.6%), and try to open the clenched hands and jaws of the patient (61.9%) as a first-aid intervention during an epileptic seizure. Findings of a particular study revealed that majority of the participants would hold the legs and arms for restricting the patient's movements (66.5%) as a first-aid intervention.[9] Nearly half of the teacher participants (45.2%), in another study, noted that the clenched jaws of the patient should be forced to open during an epileptic seizure.[26] About 30% of the participants in the study conducted by Alshareef et al[27] reported that they would try to open the clenched hands and jaws of the patient and would hold the legs and arms for restricting the patient's movements as a first-aid intervention during an epileptic seizure while 25% reported that they would apply artificial respiration or cardiac massage. The participants in another study stated that they would hold the legs and arms for restricting the patient's movements as a first-aid intervention during an epileptic seizure.[8,28] About 3.2% of the participants in the study conducted by

Table 2. Knowledge of the Participants on Seizure First Aid (n = 1102)

	Yes		No	
	n	%	n	%
Help the person sit/lie in a safe place	1018	92.4	84	7.6
Turn the patient who has had a seizure gently onto one side that would allow them to remain stable and comfortable	955	86.7	147	13.3
Hold the legs and arms for restricting the patient's movements	682	61.9	420	38.1
Loosen ties or anything tight during the seizures	1006	91.3	96	8.7
Giving the patient something orally during an epileptic seizure (such as drinking water, giving medication)	122	11.1	980	88.9
Having the person smell cologne or onion to end the seizure	371	33.7	731	66.3
Try to open the clenched hands and jaws during an epileptic seizure	682	61.9	420	38.1
Artificial respiration or cardiac massage during an epileptic seizure	635	57.6	467	42.4
To shout at the patient or pour water on the patient's face to wake him up after the seizure	258	23.4	844	76.6
To call an ambulance if an epileptic seizure lasts a long time or when a recurrent seizure begins in a short time	1061	96.3	41	3.7

Table 3. Mean First-Aid Knowledge Scores of Participants with Respect to Their Socio-demographic Characteristics

	Help the Person Sit/Lie in a Safe Place	Turn the Patient Gently onto One Side	Holding the Legs and Arms of the Patient	Loosen Ties or Anything Tight	Giving the Patient Something Orally	Having the Person Smell Cologne or Onion	Trying to Open the Clenched Hands and Jaws	Artificial Respiration or Cardiac Massage	Shouting at the Patient or Pouring Water on the Patient's Face	Calling an Ambulance
Age										
18-28	1.05 ± 0.22	1.17 ± 0.37	1.39 ± 0.48	1.09 ± 0.28	1.92 ± 0.27*	1.78 ± 0.41*	1.41 ± 0.49	1.39 ± 0.48	1.78 ± 0.41	1.04 ± 0.21
29-39	1.06 ± 0.24	1.11 ± 0.32	1.41 ± 0.49	1.07 ± 0.26	1.92 ± 0.25*	1.70 ± 0.45	1.39 ± 0.48	1.43 ± 0.49	1.83 ± 0.37*	1.03 ± 0.19
40-50	1.07 ± 0.25	1.10 ± 0.30	1.38 ± 0.48	1.07 ± 0.26	1.90 ± 0.29*	1.66 ± 0.47	1.34 ± 0.47	1.38 ± 0.48	1.78 ± 0.41	1.03 ± 0.17
+51	1.10 ± 0.30	1.14 ± 0.34	1.35 ± 0.47	1.09 ± 0.29	1.83 ± 0.37	1.56 ± 0.49	1.38 ± 0.48	1.45 ± 0.49	1.70 ± 0.45	1.03 ± 0.17
Test and significance	KW:6.365 ***P*: .095**	KW:5.544 ***P*: .136**	KW:2.083 ***P*: .555**	KW:1.214 ***P*: .750**	KW:17.762 ***P*: .000**	KW:33.766 ***P*: .000**	KW:2.780 ***P*: .427**	KW:4.174 ***P*: .243**	KW:14.059 ***P*: .003**	KW:1.233 ***P*: .745**
Gender										
Female	1.07 ± 0.25	1.13 ± 0.33	1.41 ± 0.49*	1.09 ± 0.29	1.91 ± 0.28*	1.74 ± 0.43*	1.39 ± 0.48	1.41 ± 0.49	1.80 ± 0.39*	1.03 ± 0.18
Male	1.08 ± 0.27	1.13 ± 0.34	1.33 ± 0.47	1.07 ± 0.26	1.85 ± 0.35	1.54 ± 0.49	1.35 ± 0.48	1.43 ± 0.49	1.70 ± 0.45	1.04 ± 0.20
Test and significance	U:145156.0 ***P*: .449**	U:146091.0 ***P*: .696**	U:136382.0 ***P*: .013**	U:144685.0 ***P*: .306**	U:138738.0 ***P*: .002**	U:118370.0 ***P*: .000**	U:141892.0 ***P*: .218**	U:144115.0 ***P*: .476**	U:132278.0 ***P*: .000**	U:146167.0 ***P*: .511**
Marital status										
Married	1.08 ± 0.27	1.13 ± 0.33	1.36 ± 0.48	1.08 ± 0.27	1.87 ± 0.32	1.61 ± 0.48	1.35 ± 0.47	1.42 ± 0.49	1.75 ± 0.42	1.03 ± 0.17
Single	1.06 ± 0.25	1.14 ± 0.34	1.42 ± 0.49*	1.10 ± 0.30	1.91 ± 0.27*	1.77 ± 0.41*	1.43 ± 0.49	1.42 ± 0.49	1.78 ± 0.41*	1.04 ± 0.21
Test and significance	U:145156.0 ***P*: .449**	U:146091.0 ***P*: .696**	U:136382.0 ***P*: .013**	U:144685.0 ***P*: .306**	U:138738.0 ***P*: .002**	U:118370.0 ***P*: .000**	U:141892.0 ***P*: .218**	U:144115.0 ***P*: .476**	U:132278.0 ***P*: .000**	U:146167.0 ***P*: .511**
Educational background										
Literate										
Primary education	1.12 ± 0.33	1.08 ± 0.27	1.27 ± 0.44	1.08 ± 0.27	1.77 ± 0.41	1.51 ± 0.50	1.35 ± 0.48	1.44 ± 0.50	1.63 ± 0.48	1.05 ± 0.23
High school	1.07 ± 0.26	1.14 ± 0.35	1.38 ± 0.48	1.08 ± 0.28	1.91 ± 0.27*	1.69 ± 0.45*	1.37 ± 0.48	1.39 ± 0.48	1.79 ± 0.40*	1.03 ± 0.19
University	1.06 ± 0.24	1.14 ± 0.34	1.39 ± 0.49	1.08 ± 0.28	1.89 ± 0.31	1.67 ± 0.46	1.39 ± 0.49	1.43 ± 0.49	1.76 ± 0.42	1.03 ± 0.17
Test and significance	KW:4.489 p:0 ***P*: .213**	KW: 3.804 p: 0 ***P*: .283**	KW: 4.975 ***P*: .174**	KW:0.29 ***P*: .999**	KW:16.546 ***P*: .001**	KW:13.493 ***P*: .004**	KW:1.389 ***P*: .708**	KW:5.444 ***P*: .142**	KW:12.885 ***P*: .005**	KW: 1.656 ***P*: .647**
Income status										
Income< expenses	1.06 ± 0.24	1.13 ± 0.34	1.31 ± 0.46	1.10 ± 0.30	1.86 ± 0.34	1.68 ± 0.46	1.39 ± 0.48	1.43 ± 0.49	1.72 ± 0.44	1.02 ± 0.16
Income~Expenses	1.08 ± 0.27	1.13 ± 0.34	1.40 ± 0.49	1.07 ± 0.26	1.89 ± 0.30	1.64 ± 0.47	1.38 ± 0.48	1.41 ± 0.49	1.76 ± 0.42	1.04 ± 0.20
Income>Expenses	1.08 ± 0.27	1.11 ± 0.32	1.44 ± 0.49*	1.09 ± 0.29	1.92 ± 0.26	1.70 ± 0.45	1.33 ± 0.47	1.42 ± 0.49	1.84 ± 0.36*	1.03 ± 0.18
Test and significance	KW:0.671 ***P*: .715**	KW:0.427 ***P*: .808**	KW:10.509 ***P*: .005**	KW:2.548 ***P*: .280**	KW:3.705 ***P*: .157**	KW:2.580 ***P*: .275**	KW:1.417 ***P*: .492**	KW:0.176 ***P*: .916**	KW:7.479 ***P*: .024**	KW:1.156 ***P*: .561**
Profession										
Housewife	1.07 ± 0.25	1.13 ± 0.33	1.35 ± 0.48	1.09 ± 0.29	1.89 ± 0.31	1.65 ± 0.47	1.37 ± 0.48	1.48 ± 0.50*	1.73 ± 0.44	1.04 ± 0.20
Officer	1.07 ± 0.25	1.10 ± 0.30	1.38 ± 0.48	1.07 ± 0.26	1.88 ± 0.32	1.69 ± 0.46	1.38 ± 0.48	1.35 ± 0.47	1.80 ± 0.39	1.03 ± 0.17
Employee	1.06 ± 0.24	1.16 ± 0.37	1.38 ± 0.48	1.08 ± 0.28	1.90 ± 0.28	1.68 ± 0.46	1.31 ± 0.46	1.44 ± 0.49	1.78 ± 0.41	1.04 ± 0.19
Retired	1.11 ± 0.31	1.12 ± 0.33	1.41 ± 0.49	1.06 ± 0.23	1.87 ± 0.33	1.57 ± 0.49	1.42 ± 0.49	1.44 ± 0.49	1.75 ± 0.43	1.03 ± 0.19
Student	1.08 ± 0.28	1.17 ± 0.38	1.40 ± 0.49	1.13 ± 0.34	1.89 ± 0.30	1.71 ± 0.45	1.45 ± 0.49	1.48 ± 0.50	1.77 ± 0.41	1.03 ± 0.18
Self-employed	1.06 ± 0.25	1.11 ± 0.32	1.36 ± 0.48	1.07 ± 0.26	1.88 ± 0.32	1.64 ± 0.47	1.37 ± 0.48	1.33 ± 0.47	1.75 ± 0.43	1.02 ± 0.16
Test and significance	KW:3.499 ***P*: .624**	KW:5.705 ***P*: .336**	KW:1.867 ***P*: .867**	KW:5.307 ***P*: .380**	KW:1.198 ***P*: .945**	KW:7.238 ***P*: .204**	KW:6.575 ***P*: .254**	KW:16.581 ***P*: .005**	KW:4.726 ***P*: .450**	KW:0.872 ***P*: .972**

* It is statistically more significant within the group.
KW, Kruskal–Wallis.

Table 4. Mean Scores on the Public Attitudes Toward Epilepsy Scale and its Sub-dimensions

	Min-Max	X ± SD
Public Attitudes Toward Epilepsy Scale and its Sub-dimensions		
General sub-dimension	9-45	36.39 ± 6.46
Personal sub-dimension	5-25	18.88 ± 4.37
Public Attitudes Toward Epilepsy Scale Total	19-70	55.28 ± 9.81

Karabulut et al[29] reported that they would apply artificial respiration or cardiac massage as a first-aid intervention during an epileptic seizure, 22.2% thereof reported that they would try to open the clenched jaws of the patient, and 34.8% reported that they would try to block the seizures. Findings of this research indicate that public awareness of the knowledge and practices related to epilepsy should be improved/supported particularly in order to avoid the possible harm/injuries to be caused by the first-aid interventions, which will be applied to the patient during an epileptic seizure.

First-aid knowledge scores of participants with respect to their socio-demographic characteristics interestingly revealed that female participants tend to hold the legs and arms for restricting the patient's movements, to orally administer something, to make the patient smell cologne or onions, to shout at the patient, or to pour water on the patient's face as a first-aid intervention during an epileptic seizure, although these are rather incorrect interventions. The findings of another study, however, indicated no significant relationship between the gender of the participants and their level of seizure first-aid knowledge.[30] Individuals who graduated from primary education reported that it would be necessary to orally administer something, to make the patient smell cologne or onions, to shout at the patient, or to pour water on the patient's face during an epileptic seizure, although these are rather incorrect interventions. The findings of another study, however, indicated no significant relationship between the educational background of the participants and their level of seizure first-aid knowledge.[30]

Considering all these results, it was stated that the attitudes of the society toward epilepsy patients were generally negative and many of the participants stated that they performed first-aid practices that had harmful effects on patients. Awareness on first-aid practices should be increased in order to protect and improve health.

CONCLUSION

Public attitudes towards epilepsy patients are found to be generally negative; accordingly, majority of the participants reported that they would refer to rather incorrect practices that would deteriorate/compromise the current status of patients (to hold the legs and arms, to orally administer something, to make the patient smell cologne or onions, to open the clenched hands and jaws, to apply artificial respiration or heart massage, to shout at the patient, or to pour water on the patient's face) as a first-aid intervention during an epileptic seizure. The findings of this research have indicated that it is necessary to raise public awareness about the first-aid practices that should be applied for epilepsy and during epileptic seizures through public service announcements, social media, and social trainings. Increased awareness in this respect is considered to contribute to the social acceptability of epilepsy patients and the applicability of correct first-aid interventions thereto.

Ethics Committee Approval: Ethics committee approval was received for this study from the ethics committee of Erzincan Binali Yıldırım University Human Research (Date: June 30, 2021, Decision No: 07/29).

Informed Consent: Written consent was obtained from all participants participating in this study.

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