Knowledge and Attitudes of Epilepsy Disorder among Undergraduate Healthcare Professional Students at University of Kufa

Jihad Jawad Kadhim[1], Rusul Jabbar Tauma[2], Ammar Mahmood Al-Fatlawi[3]
[1,2,3]University of Kufa, Iraq

Sections Info	ABSTRACT
Article history: Submitted: June 30, 2025 Final Revised: July 10, 2025 Accepted: July 31, 2025 Published: August 26, 2025 *Keywords:* Epilepsy Stigma Knowledge	*Objective: The association of epilepsy with possession of spirits is common in Iraqi society, leading to the stigmatization of people with epilepsy for generations. Closing the knowledge gap of university students and improving their attitude is key to alleviating this stigma. **Method:** Researchers created a self-administered questionnaire that examined medical students' knowledge of epilepsy and their attitudes towards it. We obtained epilepsy knowledge scores and examined their association with gender and college specializations. **Results:** The results showed that among 120 students, 83% had good knowledge of epilepsy, and 17% of them had low knowledge. Some of the students distinguished epilepsy as a hereditary disease, 34.2%. They identified loss of consciousness, behavior change and memory disturbance as signs of epilepsy, 57.5%, and 70.8% of them thought that symptoms of seizures include falling to the ground and foaming at the mouth. **Novelty:** This study showed that students of the medical group from the University of Kufa have a relatively better understanding of positive attitudes towards certain aspects of epilepsy; however, there are misconceptions they have in different aspects.*

INTRODUCTION

Epilepsy is a neurological disorder that occurs as a result of the abnormal discharge of cortical neurons and is characterized by recurrent seizures [1]. Epilepsy is one of the most common neurological diseases after stroke. Epidemiological studies conducted around the world have shown that epilepsy affects people of all ages and genders [2]. There are more than 50 million people with epilepsy worldwide. The incidence of epilepsy in the world is 7/1,000. [3], [4], [5], [6], [7].

Epilepsy is still a disease dominated by insufficient knowledge, false beliefs, and prejudices. Although there are developments in the field of medicine for epilepsy, changes in knowledge and attitudes in society do not occur at the same pace, and this negative situation continues in people who work or will work in the health field [8], [9], [10]. Insufficient knowledge and a lack of awareness about epilepsy are the most important causes of social rejection for people with epilepsy [11]. Stigma and discrimination not only negatively affect the treatment process and quality of life for patients with epilepsy but also cause them to experience psychosocial difficulties [12]. Therefore, many calls for intervention have been made to address and change/correct such negative attitudes [13]. The role of health professionals is very important in raising the general population's awareness about epilepsy [14]. Nurses are healthcare professionals who play a key role in epilepsy care [15]. Nurses play an important role in providing the necessary education and support to individuals with epilepsy and their families and in explaining the social aspects of the disease to the community [16]. A study conducted by Shawahna highlighted nursing students' willingness to play a role in

changing the general public's perception of epilepsy and removing the epilepsy stigma [17].

In a study conducted by Higgins and colleagues, it was concluded that the care given by a specialist epilepsy nurse increased the quality of the care processes. It was further found that those who received care from a specialist epilepsy nurse had a higher level of satisfaction and quality of life [18]. In short, in order to provide optimal health care and support for patients with epilepsy, nurses should have sufficient knowledge of epilepsy and a positive attitude toward patients with epilepsy [19]. Therefore, the evaluation of future nurses' knowledge and attitudes about epilepsy while their education is still in progress is important in terms of designing appropriate interventions to address and improve knowledge and to change/correct negative attitudes [20].

The incidence and prevalence of epilepsy vary according to the development levels of each country [5]. While the incidence of epilepsy is 20–70/100,000 in developed countries [6], it is between 64 and 122/100,000 in developing countries. The prevalence of epilepsy was found to be 6/1000 in developed countries with an average of 18.5/1000 in developing countries [7]. According to these rates, individuals living in developing countries should have a high level of knowledge on the management of epilepsy. In the studies, it was observed that there was a lack of awareness about epilepsy, even among the general population and healthcare professionals [8]. Misunderstanding, lack of knowledge, and bad attitudes and behaviors toward epilepsy negatively affect patients with epilepsy in many areas [9]. The evaluation of the knowledge level and attitudes toward epilepsy is important in forming a basis for the development of strategies to be implemented to reduce all false beliefs in this regard [9].

Importance of the Problem

being one of the most common neurological diseases, epilepsy is accompanied by stigmatization due to false information, negative thoughts, and negative social attitudes [16]. Individuals with epilepsy suffer from various stigmas such as discrimination, social isolation, and human rights violations [9]. Epilepsy imposes high physical, mental, financial, and social burdens on individuals [15]. Stigma in epilepsy may be a trigger for psychiatric diseases (like depression and anxiety) [9] or hinder access to appropriate treatment [15].

Problem statement

Stigma negatively affects patients' quality of life [12]. Insufficient knowledge and lack of awareness about epilepsy are considered to be predictors of social rejection toward patients with epilepsy [14]. In addition, elderly patients with epilepsy suffer from greater perceptions of stigma and worse psychosocial outcomes [17]. Evaluating the knowledge level and attitude toward epilepsy is key to reduce the burden of the disease, the stigma and all false beliefs about epilepsy [9].

Study objective

The aim of this study was to evaluate the knowledge, attitudes, and behaviors that students in the field of healthcare services have about epilepsy. Furthermore, no studies were found in literature that evaluate the knowledge, attitudes, and behaviors that students studying in the field of healthcare services have about epilepsy.

Behaviors that should be known by nursing students

Individuals with high levels of fatalism tend to express an external attribution and believe that outcomes will not change no matter what is done [18]. Therefore, the attitudes of individuals with strong fatalist perceptions of diseases can be very negative [19]. Since fatalist thinking attributes what happens or what will happen to external factors (fate), this tendency can affect health and the behaviors necessary for taking measures against diseases or searching for treatment options [18]. In many studies conducted on fatalism with different groups, fatalism was shown to be related to various beliefs that had health consequences, with either positive or negative health effects. For this reason, to provide more effective, high-quality healthcare services to individuals with epilepsy, it is important to ascertain nursing students' health fatalism, knowledge, and attitudes concerning epilepsy and the factors affecting these characteristics.

About first aid and safety

Epilepsy is a common condition of the brain in which a person tends to have recurrent unprovoked seizures.

About 70% of people with epilepsy gain control of their seizures with medication. People who continue to have seizures are more vulnerable to the potential risks associated with seizures, especially when seizures occur without warning and impair awareness.

Epilepsy, like other long-term conditions such as asthma or diabetes, comes with certain risks. If left unchecked these can become very serious.

Seizure-related risks are higher when people have poorly controlled seizures. Good seizure control is the first step in reducing seizure-related risks.

Seizures can sometimes lead to injuries or falls, and they can occasionally be more serious – even contributing to, or causing, death. Different types of seizures carry different risks.

Your risk level depends on the type of seizures you have, and your lifestyle. For instance, poorly controlled tonic-clonic seizures pose the highest safety risk, and if you take part in activities such as mountain climbing, this risk is increased.

a. Epileptic seizure first aid

If you are with someone having a tonic-clonic seizure (where the body stiffens, followed by general muscle jerking), try to:

1. Stay calm and remain with the person.
2. If they have food or fluid in their mouth, roll them onto their side immediately.
3. Keep them safe and protect them from injury.
4. Place something soft under their head and loosen any tight clothing.
5. Reassure the person until they recover.
6. Time the seizure, if you can.
7. Gently roll the person onto their side after the jerking stops.

Do not put anything into their mouth or restrain or move the person, unless they are in danger.

Life is never risk-free, but taking positive action to reduce your seizures, thinking about risks specific to you and discussing seizure management with your doctor are a start to reducing some of your seizure-related risks.

RESEARCH METHOD

Study Design: This research was carried out by conducting statistics on assessing the level of knowledge and attitude of students towards epilepsy and knowing the relationship between students' levels of knowledge, their attitudes, and their socio-demographic data. The researchers began conducting these statistics on January 24, 2023.

The setting of the study: This study was conducted in the province of Najaf / at the University of Kufa / and the statistics were conducted on four colleges, the College of General Medicine, the College of Dentistry, the College of Pharmacy and the College of Nursing.

Study Sample: The total number of samples is 120 samples, these samples are divided into four totals for each faculty group, the Faculty of Medicine 28 samples, the Faculty of Dentistry 30 samples, the College of Medicine 30 samples and the College of Nursing 32 samples.

a. Criteria for the sample inclusion: Statistics were conducted on students of the medical group of all genders and all age groups.

The study instrument: To determine the effectiveness of this study, which was conducted to evaluate the level of knowledge of students about epilepsy and the relationship between the level of knowledge of students, their trends and their socio-demographic data, the researchers relied on three components:

a. Demographic characteristics: The demographic characteristics data sheet consists of 11 elements, including age, gender, residence, marital status, college, stage, and some questions about their knowledge of epilepsy, including whether you have heard or read about epilepsy, do you know a person with epilepsy, have you ever seen a person having an epileptic seizure, lesson and lesson.

b. Knowledge of students about epilepsy: The second part consists of 5 items, which include the number of people with epilepsy compared to healthy people, the causes of epilepsy, the causes of epilepsy, their beliefs about epilepsy medication and the symptoms of epilepsy.

c. Students' behaviors towards epilepsy patients: It consists of 12 fields of questions, including:

1. Do you agree to work with epilepsy patients?
2. Do you agree to have a close relationship with an epileptic patient?
3. Do you agree to live with a patient suffering from epilepsy?
4. Do you agree that epilepsy patients should be isolated?
5. Do you agree that the epileptic patient should be responsible for the family?
6. Do you agree to shake hands with epilepsy patients?
7. Do you agree to prevent your children from playing with an epileptic patient?
8. Do you agree to operate your epileptic patient?
9. Do you agree to marry a patient with epilepsy to one of your family members?
10. Do you agree that epilepsy is treatable?
11. Do you agree to prevent epilepsy patients from learning in schools?
12. Do you agree to lead a patient with epilepsy for family life?

Data collection : The data was collected at the University of Kufa in the faculties of the medical group and the College of Nursing. 120 students were allocated to conduct the statistics, after that the samples were divided into the four colleges, the College of

General Medicine 28 samples, the College of Dentistry 30 samples, the College of Pharmacy 30 samples and the College of Nursing 32 samples. Demographic characteristics, students' knowledge about epilepsy, and students' behaviors towards epilepsy patients were evaluated as a test for the four groups.

Statistical analysis

The following statistical data analysis approach is used to analyze the study data:

1. Descriptive Data Analysis:
   a) Tables (frequencies and percentages).
   b) Statistical numbers.

2. Analyzing inferential data:
   a) The ratio of the relationship between the general position and the college.
   b) Relationship ratio the general attitude of the study participant and his demographic characteristics.
   c) The ratio of the relationship between general knowledge, sex, college, stage, and students who suffered from epileptic seizures.
   d) Student attitudes toward epileptic patients.
   e) Study participants' responses regarding their knowledge of epilepsy.
   f) The responses of the participants in the study were evaluated related to their attitudes towards patients with epilepsy.

RESULTS AND DISCUSSION

Results

Table 1. Distribution of the students according to demographic characteristics.

Items	Divisions	Frequency	Percent
Age	19 and less	34	28.3
	20 - 23	**51**	**42.5**
	24 - 27	32	26.7
	28 and more	3	2.5
	Total	120	100.0
	Mean = 21.32		
	Std. Deviation = 2.362		
Gender	Male	41	34.2
	Female	**79**	**65.8**
	Total	120	100.0
Residence	**Urban**	**110**	**91.7**
	Rural	10	8.3
	Total	120	100.0
Marital statues	**Single**	**110**	**91.7**
	Married	9	7.5
	Divorced	1	.8
	Total	120	100.0
College	Medicine	28	23.3
	Dentistry	30	25.0

	Pharmacy	30	25.0
	Nursing	**32**	**26.7**
	Total	120	100.0
Stage	**First**	**24**	**20.0**
	Second	25	20.8
	Third	14	**11.7**
	Fourth	**46**	**38.3**
	Fifth	11	**9.2**
	Total	120	100.0
Have you ever heard or read about epilepsy	**Yes**	**100**	83.3
	No	20	16.7
	Total	120	100.0
Do you know or have you ever known anyone who had epilepsy	**Yes**	**65**	**54.2**
	No	55	**45.8**
	Total	120	**100.0**
Have you ever seen anyone having an epileptic seizure?	**Yes**	**70**	**58.3**
	No	50	**41.7**
	Total	120	**100.0**
Have you ever had an epileptic seizure?	Yes	14	**11.7**
	No	**106**	**88.3**
	Total	120	**100.0**

Table 1 illustrates the statistical distribution of the study sample according to their demographic data, this table explains that the majority of the students with age (20-23) years old. In addition, the table shows that a high percentage (65.8%) was female. Concerning residence, the table demonstrates that most of them (91.7%) were living in urban areas. Regarding marital status, a high percentage (91.7%) were single.

Besides, the table shows that the students who heard or read about epilepsy s were (83.3%) of the study participant. About half of them knew or have ever known anyone who had epilepsy and about half of them have seen someone having an epileptic seizure, the table displays that there (88.3%) were have not ever had an epileptic seizure.

Table 2. Participant response to knowledge items.

No.	Variable	Freq.	Percent	Mean	Assessment
	Epilepsy occurs in . . .				
1	One in every 100 people	52	43.3		
	One in every 1000 people	50	41.7	**0.433**	**Fair**
	One in every 10,000 people	14	11.7		

	One in every 1,00,000 people	4	3.3		
	Total	120	100.0		
What do you think causes epilepsy?					
2	Accidents	17	14.2	**0.425**	**Fair**
	Inherited disease	41	34.2		
	Brain tumors	11	9.2		
	all of the above	51	42.5		
	Total	120	100.0		
What do you think an epileptic attack is?					
3	A loss of consciousness	18	15.0	**0.508**	**Fair**
	An episode of behavioral change	29	24.2		
	A period of memory disturbance	4	3.3		
	all of the above	69	57.5		
	Total	120	100.0		
What do you think about drug therapy for epilepsy?					
4	It is seldom effective in controlling seizures	30	25.0	**0.508**	**Fair**
	It is best given as two or more drugs that work together	21	17.5		
	It occasionally produces malformations in babies of mothers with epilepsy	8	6.7		
	all of the above	61	50.8		
	Total	120	100.0		
What are the signs and symptoms of epileptic seizures you know of?					
5	Falling down	20	16.7	0.708	**Good**
	Rolling of the eyes	9	7.5		
	Foaming of the mouth	6	5.0		
	all of the above	85	70.8		
	Total	120	100.0		

Poor knowledge at mean (0.0 – 0.32) fair knowledge at mean (0.33 – 0.65) Good knowledge at mean (0.66 – 1).

Table 2 shows the responses of the participants in the study regarding their knowledge of epilepsy, where their knowledge was fair with regard to the first, second, third and fourth questions, while their knowledge of the fifth question was good at the mean (0.708).

Table 3. Participant response to attitude items.

No.	variable	Completely agree	agree	Neutral	Disagree	Completely Disagree	Mean	Assess.
1	Agree to work with epileptics	17.5	43.3	22.5	13.3	3.3	3.583	**agree**
2	Agree to have close relation	15	43.3	30.8	6.7	4.2	3.583	**agree**
3	Agree to live together with epileptics	20	39.2	23.3	11.7	5.8	3.558	**agree**
4	Epileptics should be isolated	1.7	2.5	10	27.5	58.3	1.617	**disagree completely**
5	Epileptics can manage their family	5	30	28.3	23.3	13.3	2.9	**neutral**
6	Agree to shake hands with epileptics	40	39.2	6.7	7.5	6.7	3.975	**agree**
7	Keep child from contacting epileptics	6.7	15.8	15.8	25	36.7	2.308	**disagree**
8	Agree to recruit epileptics as a servant	9.2	35.8	32.5	14.2	8.3	3.233	**neutral**
9	Agree with family member marrying epileptics	8.3	30.8	28.3	23.3	9.2	3.058	**neutral**
10	Epilepsy is a treatable disease	12.5	30	38.3	10	9.2	3.267	**neutral**
11	Epileptics should not learn in schools	7.5	5.8	7.5	19.2	60	1.817	**disagree**
12	Epileptics can lead a healthy lifestyle	7.5	30.8	28.3	17.5	15.8	2.967	**neutral**

Completely disagree at mean (1.0 – 1.79), disagree at mean (1.8 – 2.59), neutral at mean (2.60 – 3.39), agree at mean (3.40 – 4.19), completely agree at mean (4.20 – 5.0).

Table 3 shows the responses of the participants in the study regarding their attitude toward epileptic patients.

Table 4. Over all students' knowledge toward epilepsy.

Section	Divisions	Frequency	Percent
Knowledge	Good	34	**28.3**
	Fair	**59**	**49.2**
	Poor	27	**22.5**
	Total	120	**100.0**
	Mean **0.53 (Fair)**		
	St Deviasion **0.277**		

Poor knowledge at mean (0.0 – 0.32) fair knowledge at mean (0.33 – 0.65) Good knowledge at mean (0.66 – 1).

Table 4 shows students' knowledge regarding epilepsy, where their knowledge was neutral at the mean (0.53)

Table 5. Over all students' attitude toward epileptic patients.

Section	Divisions	Frequency	Percent
	Completely agree	0	**0.0**
	Agree	24	**20.0**
	Neutral	**73**	60.8
Attitude	Disagree	22	**18.3**
	Completely disagree	1	**0.8**
	Total	120	**100.0**
	Mean **2.988 (Neutral)**		
	St Deviasion **0.49**		

Completely disagree at mean (1.0 – 1.79), disagree at mean (1.8 – 2.59), neutral at mean (2.60 – 3.39), agree at mean (3.40 – 4.19), completely agree at mean (4.20 – 5.0).

Table 5 shows students' attitudes toward epileptic patients, where their attitudes were neutral at the mean (2.988).

Table 6. Association between students' demographic data and their knowledge.

students' demographic data	Chi square	Df.	Sig.	
Age	10.858a	6	.093	NS
Gender	**5.947a**	**2**	.051	S
residence	5.147a	2	.076	NS
Marital status	3.197a	4	.525	NS
College	**20.803a**	**6**	.002	S
Stage	**16.329a**	**8**	.038	S
Have you ever heard or read about epilepsy	4.680a	2	.096	NS
Do you know or have you ever known anyone who had epilepsy	.124a	2	.940	NS
Have you ever seen anyone having an epileptic seizure?	.381a	2	.826	NS
Have you ever had an epileptic seizure	**6.961a**	**2**	.031	S

Table 6 shows that there is a significant correlation (P < 0.05) between general knowledge and gender, college, stage, and students who have previously experienced epileptic seizures in their lives, while the table shows that there is no significant correlation (P > 0.05) between the general knowledge of the study participant and their other characteristics demographic.

Table 7. Association between students' demographic data and their attitude toward epileptic patients.

Students' demographic data	Chi square	Df.	Sig.	
Age	7.095a	9	.627	NS
Gender	2.510a	3	.473	NS
residence	2.948a	3	.400	NS
Marital status	1.266a	6	.974	NS
College	**17.208a**	**9**	.046	S
Stage	18.977a	12	.089	NS
Have you ever heard or read about epilepsy	**7.669a**	**3**	.053	S
Do you know or have you ever known anyone who had epilepsy	7.066a	3	.070	NS
Have you ever seen anyone having an epileptic seizure?	1.781a	3	.619	NS
Have you ever had an epileptic seizure	**20.223a**	**3**	.000	HS

Table 7 shows that there is a significant correlation (P < 0.05) between general attitude and college, students who have ever heard or read about epilepsy, and students who have previously experienced epileptic seizures in their lives. While the table shows that, there is no significant correlation (P > 0.05) between the general attitude of the study participant and their other characteristics demographic.

Discussion

University students represent the generation that is about to enter the workforce in a broad range of vocations. In this large study, we assessed epilepsy-related knowledge and attitudes in a university setting, given the widespread community misconcep tions and misinformation in this geographical region of interest. The study highlights a major issue that requires future interven- tion; the "spiritual" and "mental disorder" misconceptions about epilepsy in a higher education institution and the attitudes toward individuals with epilepsy in terms of marriage, employment, and different aspects of social interactions. The results could be very informative and helpful in designing awareness programs for epi- lepsy in this region.

This study was conducted to assess knowledge and attitudes towards epilepsy among students at the University of Kufa. This study showed that most of the students were between the ages of 20-23 years, and that the highest percentage was among females (65.8%). Most of the students were from urban areas (91.7%). As for the marital status, a high percentage was single (91.7%).

This study showed that the percentage of general medicine students was (23.3%), while the percentage of dental students and pharmacy students was (25%), and the percentage of nursing students was (26.7%), which is the highest percentage among students in the medical group. This study showed that the majority of students were in the fourth stage, so the percentage was (38.3%).

With regard to the students who had heard or read about epilepsy, they were (83.3%) of the study participants, which is a percentage very close to previous studies [,2021]. As for those who knew people with epilepsy, the percentage was (54.2%) compared to the previous study [19] less. As for the percentage of students who had previously seen someone suffering from an epileptic seizure, it was (58.3%), and compared to previous studies [22][23], it is a low percentage. The percentage of students who had previously had an epileptic seizure was (11.7%), which is a very small percentage compared to previous studies [18][22][24].

This study showed the percentages of students' knowledge of epilepsy, so the percentage (43.3%) of them believes that epilepsy occurs 1 in 100 people. Compared to the previous study [25], it is a small percentage, let us assume this difference is due to their cultural background. As for the causes of epilepsy, (34.2%) of the participating students believed that it is a hereditary disease, meaning that the causes of epilepsy are hereditary, a percentage similar to the percentage in previous studies [26][23]. (14.2%) of the students believed that it was due to exposure to accidents, which is a very small percentage compared to previous studies [27][20][22][28] and (9.2%) of the students believed that it was due to a brain tumor, which is a small percentage compared to previous studies [29][28][26][25] As for the students who believed that all of the previous reasons were the causes of epilepsy, they were (42.5%). We assume that the students could not distinguish between epilepsy and non-epileptic psychological seizures, which is a psychological disorder and not a nervous one ,They cannot distinguish between the causes and aggravating factors of an epileptic seizure.

With regard to the appearance of epilepsy, we found that loss of consciousness (15%), behavior change (24.2%), memory disturbance (3.3%), and the most common manifestations of epilepsy were all of these previous symptoms (57.5%) in similar studies [30][31][32] These findings were, perhaps, due to the difference in study populations among medical healthcare students.

Looking at pharmacological treatment for epilepsy, (25%) thought that treatment is rarely effective in controlling seizures, and (17.5%) of the students unexpectedly did not know that they should not give two drugs together, usually the combination of drugs leads to more Side effects can be disastrous for patients. (6.7%) of the students believed that when treatment was given to pregnant women with epilepsy, this percentage was very small compared to previous studies. [23][24][30] We assume this is because their information about the disease is insufficient.

With regard to the signs and symptoms of seizures, (70.8%) of the students believed that the symptoms of epileptic seizures are falling to the ground, rolling eyes, and foaming from the mouth, compared to the previous study[29][28], which is a good percentage and close to it. With regard to students' behavior towards epileptic patients, (43.3%) of the students agree to work with epileptic patients or to have a close relationship with them. Dealing with them is bad. And (39.2%) of the students agree to live with epileptic patients, and this is a percentage similar to the previous study [32] and we assume that this is due to wrong cultural beliefs.

(58.3%) of the students do not agree that the epileptic patient should be isolated, and this percentage is similar to the previous study. And (30%) (28.3%) of the students agreed and neutralized that the patient should be responsible for a family, and compared to previous studies [24] [25] it was a small percentage. This is due to traditional, cultural and fearful beliefs about the difference between knowledge and attitude in our study.

As for shaking hands with patients with epilepsy, it was (79.2%). Most of the students expressed positive attitudes towards people with epilepsy, which is a good percentage compared to the previous study [18]. (36.7%) of the students do not agree to prevent their children from playing with a patient with epilepsy. Compared to the previous study [17], the percentage is close. (35.8%) agree to operate epileptic patients, compared to the previous study [19][20]. Normal and approximate ratio. (30.8%) of the students agree that an epileptic patient should marry a member of their family. Compared to previous studies [27][26], it is a weak percentage, and we assume that traditional beliefs are frightening.

(38.3%) of the students agree that epilepsy patients are treatable, and compared to the previous study, this result is better than the result in the previous study [21] This difference is due to the difference in the population, and some of them did not undergo neurology rounds. (60%) of students do not agree to prevent epilepsy patients from learning in schools. Compared to previous studies, the percentages in our study were higher. This may be due to differences in the study population.

This study showed that the percentage of students' knowledge about epilepsy was (53%), which is fair, and compared to previous studies [30][32], it is a generally high level of knowledge among medical students. As for students' behavior, it was (30%) compared to the percentages of previous studies. It is a small percentage. We assume that this is due to misunderstanding and a knowledge gap at some point in relation to epilepsy. The bad attitude is that neuroscience was taught by an internal medicine specialist, not a neurologist.

The stigma and spiritual misconceptions about epilepsy exhibited by the next generation are major concerns that require immediate intervention. Educating university students that epilepsy is a disease like any other is war- ranted. They are future influencers, and their attitudes will matter in bringing about a change.

CONCLUSION

Fundamental Finding : According to this study, students of the medical group at the University of Kufa seem to have a relatively better understanding of positive attitudes towards certain aspects of epilepsy. It is supported by their responses and their agreement to work with epileptic patients and to establish relationships and friendships with them, and their acceptance to operate the epileptic patient and their agreement to be responsible for his family, however there are still misconceptions in various aspects and showed a low tolerance towards people with epilepsy through some Their understanding and positions, although there are percentages of them who do not agree with that. This behavior indicates low tolerance, especially when it comes to individual

action and understanding. Their preference for other diseases over the epileptics close to them confirms their reluctance to contact an epileptic patient. At the same time, it seems that demographic characteristics, including age groups, educational level, place of residence, and knowledge of a person with epilepsy have effects on understanding and attitudes towards epilepsy, and that positive attitudes of students towards epilepsy increased with increasing levels of their knowledge of this disorder. **Implication :** The study confirms the need for educational programs such as public education campaigns to improve knowledge and understanding about epilepsy in the general population. The findings highlight that while medical students may possess relatively better attitudes compared to the general population, misconceptions and low tolerance still persist, which could affect their professional practices and interactions with epileptic patients. This implies that interventions should not only target factual knowledge but also focus on reshaping attitudes and reducing stigma through structured exposure, training, and empathy-building exercises. **Limitation:** However, it is very difficult to change public attitudes towards people with epilepsy. The persistence of misconceptions and low tolerance indicates that education alone may not be sufficient to fully eliminate stigma, as attitudes are deeply influenced by cultural and social norms. The study also acknowledges that demographic characteristics significantly affect attitudes, suggesting that variations in age, residence, or exposure to epilepsy might limit the generalizability of these findings. **Future Research :** Future research should examine the effectiveness of targeted educational interventions in changing both knowledge and attitudes among different demographic groups, considering variables such as age, educational level, and social background. Comparative studies between medical and non-medical students could provide deeper insights into how professional training influences attitudes toward epilepsy. Additionally, longitudinal research that tracks changes in attitudes over time following awareness campaigns or clinical exposure would enrich the understanding of how stigma reduction strategies can be sustained in the long term.

REFERENCES

[1] G. Bobov and C. Capik, "The reliability and validity of the religious health fatalism scale in Turkish language," *J. Relig. Health*, vol. 59, pp. 1080–1095, 2020.

[2] H. Yaşar, H. Tekeli, H. Balıbey, and S. Alay, "Assessment of knowledge and attitudes of patients with epilepsy and health professionals about epilepsy disease," *J. Turk Chapter ILAE*, vol. 19, pp. 127–131, 2013.

[3] A. Karaca and Z. Durna, "Epilepsili hastalarda psikososyal destek," *Gümüşhane Univ. Sağlık Bilimleri Derg.*, vol. 7, pp. 218–225, 2018.

[4] H. Sert, S. Çetinkaya, A. Seven, and M. Pelin, "Knowledge levels of senior nursing students about epilepsy," *J. Hum. Sci.*, vol. 14, pp. 1966–1974, 2017.

[5] N. Dayapoğlu and M. Tan, "Clinical nurses' knowledge and attitudes toward patients with epilepsy," *Epilepsy Behav.*, vol. 61, pp. 206–209, 2016.

[6] S. Unsar, Ö. Özdemir, Ö. Erol, Z. Bıkmaz, and E. Yenici Bulut, "Evaluation of nursing students' epilepsy-related knowledge and attitudes," *Epilepsy Behav.*, vol. 111, p. 107167, 2020.

[7] R. Shawahna and M. Jaber, "Assessing knowledge and attitudes of Palestinian undergraduate nursing students toward epilepsy and patients with epilepsy: a cross-

sectional study," *Epilepsy Behav.*, vol. 102, p. 106811, 2020.

[8] F. Alhalaiqa, O. Al Omari, A.-M. Batiha, M. ALBashtawy, R. Masa'Deh, S. Al-Ghabeesh, *et al.*, "Knowledge and attitudes of Jordanian university students toward epilepsy: a cross-sectional comparison study," *Int. Q. Community Health Educ.*, vol. 38, pp. 75–82, 2018.

[9] E. Kiyak, E. Erkal, S. Demir, B. C. Demirkiran, Y. Uren, and S. Erguney, "Evaluation of attitudes toward epilepsy and health fatalism in northeastern Turkey," *Epilepsy Behav.*, vol. 115, p. 107495, 2021.

[10] K. Yeni, Z. Tülek, N. Bebek, A. Çavuşoğlu, H. Güven, N. Şimşek, *et al.*, "Knowledge and attitudes toward epilepsy among students of health occupations in a university," *Epilepsi*, vol. 25, pp. 13–20, 2019.

[11] E. R. N. San Diego and E. L. Merz, "Diabetes knowledge, fatalism and type 2 diabetes-preventive behavior in an ethnically diverse sample of college students," *J. Am. Coll. Health*, pp. 1–10, 2020.

[12] M. Molaei-Zardanjani, M. Savabi-Esfahani, and F. Taleghani, "Fatalism in breast cancer and performing mammography on women with or without a family history of breast cancer," *BMC Women's Health*, vol. 19, p. 1–5, 2019.

[13] A. Aydın and G. Ceylan, "Orman ürünleri sanayi çalışanlarının iş sağlığı ve güvenliğine kaderci bakış açılarının tespit edilmesine yönelik bir alan araştırması," *Düzce Univ. Bilim ve Teknoloji Derg.*, vol. 8, pp. 1033–1041, 2020.

[14] T. Karenoğulları, "Lise öğrencilerinin kaderle ilgili kavramlara yükledikleri anlamlar (Hatay-İskenderun örneği)," *Adana*, 2019.

[15] P. Souza, L. A. Portes, R. K. Thomas, J. R. Bonito, M. Rua, F. J. Pacheco, *et al.*, "Knowledge about epilepsy in university health students: A multicenter study," *Epilepsy Behav.*, vol. 79, pp. 112–116, 2018.

[16] C. Vodougnon, D. Gérard, P.-E. Bruand, E. Auditeau, F. Boumediene, I. Y. Zohoun, *et al.*, "Knowledge, attitudes, and practices of health sciences students regarding epilepsy at the end of their curriculum in Benin," *Epilepsy Behav.*, vol. 92, pp. 165–170, 2019.

[17] E. Kiyak and N. Dayapoglu, "An evaluation of knowledge and attitudes toward epilepsy in Eastern Turkey," *Epilepsy Behav.*, vol. 75, pp. 241–245, 2017.

[18] S. M. Kariuki, A. K. Ngugi, M. Z. Kombe, M. Kazungu, E. Chengo, R. Odhiambo, *et al.*, "Prevalence and mortality of epilepsies with convulsive and non-convulsive seizures in Kilifi, Kenya," *Seizure*, vol. 89, pp. 51–55, 2021.

[19] D. Ding, D. Zhou, J. W. Sander, W. Wang, S. Li, and Z. Hong, "Epilepsy in China: major progress in the past two decades," *Lancet Neurol.*, vol. 20, pp. 316–326, 2021.

[20] J. Li, X. Zhang, N. Li, D. Zhao, G. Li, W. Lin, *et al.*, "Mortality rates in people with convulsive epilepsy in rural northeast China," *Front. Neurol.*, vol. 11, p. 1013, 2020.

[21] E. Beghi, "The epidemiology of epilepsy," *Neuroepidemiology*, vol. 54, pp. 185–191, 2020.

[22] D. J. Thurman, G. Logroscino, E. Beghi, W. A. Hauser, D. C. Hesdorffer, C. R. Newton, *et al.*, "The burden of premature mortality of epilepsy in high-income countries: A systematic review from the Mortality Task Force of the International League Against Epilepsy," *Epilepsia*, vol. 58, pp. 17–26, 2017.

[23] F. Levira, D. J. Thurman, J. W. Sander, W. A. Hauser, D. C. Hesdorffer, H. Masanja, *et al.*, "Premature mortality of epilepsy in low- and middle-income countries: a systematic review from the Mortality Task Force of the International League Against Epilepsy," *Epilepsia*, vol. 58, pp. 6–16, 2017.

[24] I. Ernawati and S. Wardah Rahmatul Islamiyah, "How to improve clinical outcome of epileptic seizure control based on medication adherence? A literature review," *Open Access Maced. J. Med. Sci.*, vol. 6, pp. 1174–1179, 2018.

[25] M. Vacca, M. Fernandes, M. Spanetta, F. Placidi, F. Izzi, C. Lombardo, N. B. Mercuri, and C. Liguori, "Depressive symptoms in patients with epilepsy and clinically associated features in a single tertiary center," *Neurol. Sci.*, 2021.

[26] M. Tombini, G. Assenza, L. Quintiliani, L. Ricci, J. Lanzone, M. Ulivi, *et al.*, "Depressive symptoms and difficulties in emotion regulation in adult patients with epilepsy:

Association with quality of life and stigma," *Epilepsy Behav.*, vol. 107, p. 107073, 2020.

[27] R. D. Kocalevent, L. Berg, M. E. Beutel, A. Hinz, M. Zenger, M. Härter, *et al.*, "Social support in the general population: standardization of the Oslo social support scale (OSSS-3)," *BMC Psychol.*, vol. 6, p. 31, 2018.

[28] T. Singh and R. K. Goel, "Epilepsy associated depression: an update on current scenario, suggested mechanisms, and opportunities," *Neurochem. Res.*, vol. 46, pp. 1305–1321, 2021.

[29] J. I. Byun, D. W. Kim, K. T. Kim, K. I. Yang, S. T. Lee, J. G. Seo, *et al.*, "Treatment of epilepsy in adults: Expert opinion in South Korea," *Epilepsy Behav.*, vol. 105, p. 106942, 2020.

[30] V. Gaus, H. Kiep, M. Holtkamp, S. Burkert, and F. Kendel, "Gender differences in depression, but not in anxiety in people with epilepsy," *Seizure*, vol. 32, pp. 37–42, 2015.

[31] Y. Yang, M. Yang, Q. Shi, and T. Wang, "Risk factors for depression in patients with epilepsy: A meta-analysis," *Epilepsy Behav.*, vol. 106, p. 107030, 2020.

[32] T. Ogundare, T. O. Adebowale, C. P. C. Borba, and D. C. C. Henderson, "Correlates of depression and quality of life among patients with epilepsy in Nigeria," *Epilepsy Res.*, vol. 164, p. 106344, 2020.

*Jihad Jawad Kadhim (Corresponding Author)
University of Kufa, Iraq
Email: jihadjalsudani@uokufa.edu

Rusul Jabbar Tauma
University of Kufa, Iraq
Email: rusuljalatabe@uokufa.edu.iq

Ammar Mahmood Al-Fatlawi
University of Kufa, Iraq
Email: ammarmalfatlawi@uokufa.edu.iq