

Effect of habits, traditions, and beliefs on seizure diagnosis and provide first aid in Taif city, KSA

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ABSTRACT

Aim: To determine the effect of habits, traditions, and beliefs on seizure diagnosis and provide first aid in Taif city, KSA. **Methods:** A cross-sectional study was conducted on 297 participants from Taif, KSA. An Arabic self-administrated electronic questionnaire was used that included different parts to collect the information from participants; characters, previous history of seizures, habits, beliefs and traditions about the seizures and first aid. **Results:** Most of the participants had an average level of knowledge by 20.88, 47.14 and 31.99% of the participants had a poor, average and good level of knowledge about seizures and epilepsy. 70.0% of our participants knew that seizure is a symptom associated with many diseases; 40.7% knew that hypoglycemia can cause a seizure, while 37 and 32.3% did not know seizure treatment and whether Hijama and Cupping therapy were enough to treat seizure; 26.9 and 35.4% of the participants responded by neither putting something hard on the patient's mouth nor opening the patient's mouth by force to protect him from swallowing his tongue, respectively. Only 17.2% agreed on not calling the ambulance for all seizure cases. Participants aged between 20 and 29 and single had a significant higher percent of good knowledge with no significant association between gender, income and educational level and the participant's level of knowledge. **Conclusion:** There is a lack of knowledge and misconceptions about aspects related to seizures among the studied participants. It is recommended to raise awareness and correct false misconceptions about providing first aid to seizure patients.

Keywords: Aid, first, habits, seizure, Taif, traditions

Introduction

Epidemiological studies on epilepsy in Saudi Arabia show a prevalence of 6.54 per 1,000.^[1] Epilepsy is a chronic illness and has serious complications that affects the individual in many aspects of life.^[2]

It is basically a persistent brain condition characterized by periodic disturbances of the nervous system due to immediate exaggerated disorderly discharge of the cerebral cells. The discharge leads to immediate disturbance to the sensations, losing of consciousness or psychological function, convulsive actions or some combined actions of these. Many factors related to the culture, religion and lack of knowledge and awareness about epilepsy have significant negative psychological and social consequences for individuals with epilepsy, such as discriminating social behavior, shame, fright, restrictions in their interaction with others and limited activities.^[2]

In education, employment and social situations,^[3] the misconceptions and false beliefs increase among communities

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with lower rates of education. Furthermore, some old traditions think that epilepsy is an evil.^[4] Those patients are vulnerable to physical traumas after this disease. First aid measures attempt to protect these individuals from getting harmed during the attack. Lack of knowledge and misunderstandings about first aid measures raise the chance of not taking effective measures or taking dangerous measures while observing a seizure.^[4] Further, to recognize educational requirements of the community, public understanding and first aid measures require to be evaluated.

To secure proper managing of epilepsy, it is essential to have a realistic understanding of the community behavior and beliefs toward the condition. The aim of the study is to establish the understandings, behaviors and attitudes of adults concerning the factors, manifestations and management options of epilepsy in traditional Saudi Arabia.^[5]

Seizures can be an altered state of consciousness, leaving the individual vulnerable to injury. So, the main aspect that must be stressed upon is providing first aid for seizures to protect the person from harm.^[6]

Most of the seizures do not require the intervention of emergency medical services because most of the seizures will cease on their own. However, prolonged duration or continuous convulsive seizures, when consciousness is not regained in between episodes, indicate status epileptics. The goal of the therapy for status epileptics is to prevent or protect against the development of status epileptics or to shorten its duration to minimize morbidity and mortality.^[6]

As the false beliefs and wrong first aid of seizures can affect the community in different aspects, we aimed, in this study, to determine the effect of habits, traditions and beliefs on seizure diagnosis and provide first aid in Taif city, KSA, to raise the level of awareness of seizure first aid in the community.

Methods

This cross-sectional study was conducted at Taif city, Saudi Arabia, over a period of 12 months from 2019 to 2020 to determine the effect of habits, traditions and beliefs on seizures diagnosis and its first aid. The study was approved by the research ethics committee of Taif University.

It included 457 participants with inclusion criteria of age between 20 and 50 years educated males and females from Taif city and without any specific exclusion criteria.

An Arabic self-administrated electronic questionnaire was used to collect the data. The questionnaire consisted of three parts—the first part was about the demographic data which included age, gender, city of residence, marital status, educational level, economic status and the medical history of some diseases. The second part was about the previous history of the seizures and the last part contained questions that explored the habits, beliefs and

traditions about the seizures and first aid. The participants were informed about the purpose of the research at the beginning of the questionnaire. Microsoft Excel was used for data entry while the statistical analysis was performed by using statistical package for social sciences (SPSS). Number and percentages together with Pearson Chi-square were used for analysis.

Results

Out of the 457 participants, only 297 were from Taif city, which is our focus in this study. Females were 204 out of 297 while the remaining 93 were male. The distribution of our sample along different variables is shown in Table 1. However, 137 of the participants were in their twenties. Furthermore, 78.79% of the participants graduated from or were currently studying in a university. Furthermore, 2, 2.7, 3.4, 8.1 and 3.7% of our sample complained of epilepsy, migraine, psychiatric disorder, hypertension and diabetes mellitus, respectively, while only 6.1% had experienced seizure attack before.

It is clear from the information given in Figure 1 that most of our participants have an average level of knowledge by 47.14 and 31.99% of the participants had a good level of knowledge about seizures and epilepsy. Interestingly, the poor level of knowledge has been found only in 20.88% of the responders.

We looked for the participants' awareness from three different aspects—their general knowledge about seizures and epilepsy,

Table 1: Distribution of the participants according to their characters

| Variable | Frequency | Percent |
|-----------------|-----------|---------|
| Gender | | |
| Female | 204 | 68.7 |
| Male | 93 | 31.3 |
| Age | | |
| Younger than 20 | 48 | 16.2 |
| 20-29 | 137 | 46.1 |
| 30-39 | 39 | 13.1 |
| 40-49 | 35 | 11.8 |
| 50-59 | 32 | 10.8 |
| Older than 60 | 6 | 2.0 |
| Income | | |
| <8000 | 171 | 57.6 |
| 8000-13000 | 69 | 23.2 |
| More than 13000 | 57 | 19.2 |
| Education | | |
| Primary school | 2 | 0.7 |
| Middle school | 9 | 3.0 |
| High school | 52 | 17.5 |
| University | 222 | 74.7 |
| Higher degree | 12 | 4.0 |
| Marital Status | | |
| Single | 180 | 60.6 |
| Married | 104 | 35.0 |
| Divorced | 9 | 3.0 |
| Widowed | 4 | 1.3 |

first aid and when to call the ambulance. Figure 2 shows their general knowledge about seizures like the causes and treatment while exposing some cultural fact. As shown in Figure 2, 70.0 % knew that seizure is a symptom that is associated with many diseases, while only 40.7% knew that hypoglycemia can cause a seizure. However, 37 and 32.3% of the participants responded with “I do not know” when asked about seizure treatment and whether Hijama and Cupping therapy were enough to treat seizure or if seizure medications are dangerous.

Figure 3 shows the first aid practice for the patient with a seizure. Unfortunately, only 26.9 and 35.4% of the participants showed a positive attitude toward the patient in seizure by neither putting something hard on the patient’s mouth nor open the patient’s mouth by force to protect him from swallowing his tongue, respectively.

Also, as shown in Figure 4, only 17.2% of the participants agreed on not calling the ambulance for all seizure cases. However, most of the participants showed a correct attitude when calling the ambulance.

Table 2 shows that there is a significant association between age and the level of knowledge with *P* value (<0.001). Ages between 20 and 29 have the highest level of good knowledge by 48.2% while the highest level of poor knowledge has been found in

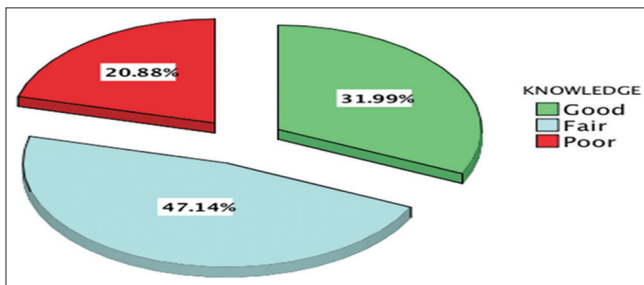


Figure 1: Knowledge distribution of the participants

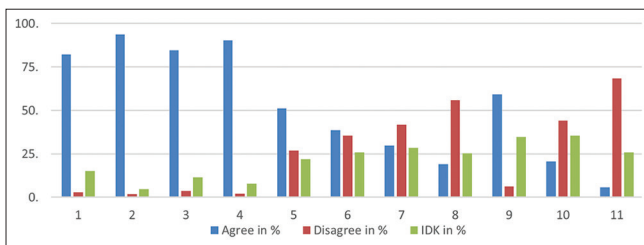


Figure 3: Participant’s attitude toward first aid for patient on seizure. (1) Ease the patient on the floor; (2) Keep all dangerous things away from the patient; (3) Put something soft and flat, like a folded jacket, under the head; (4) Remove eyeglasses and loosen ties or anything around the neck; (5) Open the patient’s mouth and put something hard in his mouth; (6) The patient may swallow his tongue so try to open his mouth by force; (7) Hold the patient on the floor with your hands and prevent them from moving; (8) Start mouth-to-mouth breath like CPR; (9) Turn the patient gently onto one side and put their hand under the head while keeping the head tilted and mouth open after the seizure ends; (10) Give water or food as soon as they wake up; (11) Try to feed the patient with water or other things during the seizure

ages between 50 and 59 (37.5%). Unfortunately, participants aged less than 20 have a high level of poor knowledge by 33.3%, and participants aged between 30 and 39, 40 and 49, and more than 60 report an average level of knowledge. Furthermore, there is a significant association between marital status and the level of knowledge with *P* value (0.001). Approximately, 40.6% of the singles show a good level of knowledge, 53.8% of the married report an average level of knowledge, 55.6% of the divorced have a poor level of knowledge, and 75.0% of the widowed with an average level of knowledge as shown in Table 2.

Regarding the relation between gender and the level of knowledge, our results show that there is no significant association between them. Also, there is no significant association between income and educational level with the level of the participant’s knowledge.

Discussion

The high level of awareness and knowledge about seizures and first aid are important to prevent many harmful events that could affect the community.

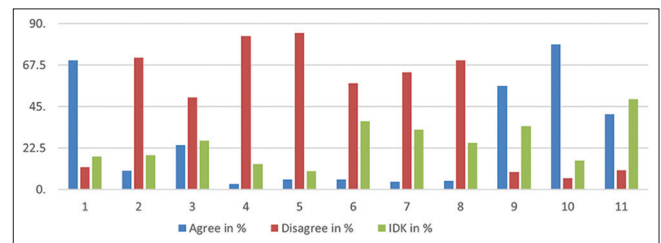


Figure 2: Participants general knowledge about seizure. (1) Seizure is a neurological symptom, comes with specific diseases; (2) Seizure associated only with epilepsy; (3) Seizure is a disease not a symptom; (4) Seizure is not a symptom but demonic possession; (5) No need for medical treatment in seizure and Roquah is enough; (6) Hijama, Cupping therapy and Ironing therapy are basics and important in seizure treatment; (7) Seizure medications are dangerous and better to avoid; (8) Seizure medications are not beneficial; (9) Head injury can cause seizure; (10) High fever, especially in children, can cause seizure; (11) Hypoglycemia can cause seizure

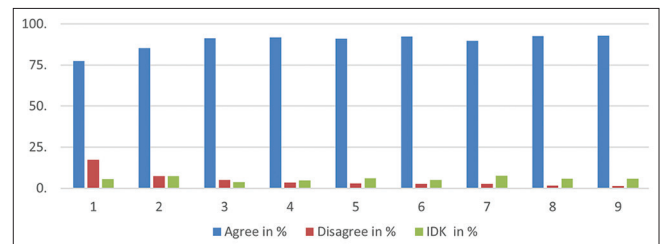


Figure 4: Participants’ response for when to call the ambulance. (1) Seeing anyone having seizure; (2) The person has seizure for the first time in his life; (3) The person has difficulty breathing or waking up after the seizure; (4) The seizure lasts for more than 5 min; (5) The person has another seizure soon after the first one; (6) The person is hurt or gets injured during the seizure; (7) The seizure happens in water like sea or pool; (8) The person has a health condition like diabetes or heart disease; (9) : Seizure happens in pregnant woman

Table 2: Relationship between participants' level of knowledge and their characters

| Variable | Knowledge level | | | Total | Pearson Chi-Square | P |
|--------------------|-----------------|------------|-----------|------------|--------------------|--------|
| | Good | Fair | Poor | | | |
| Age | | | | | 40.430 | <0.001 |
| <20 | 7 (14.6) | 25 (52.1) | 16 (33.3) | 48 (16.2) | | |
| 20-29 | 66 (48.2) | 54 (39.4) | 17 (12.4) | 137 (46.1) | | |
| 30-39 | 8 (20.5) | 22 (56.4) | 9 (23.1) | 39 (13.1) | | |
| 40-49 | 7 (20.0) | 21 (60.0) | 7 (20.0) | 35 (11.8) | | |
| 50-59 | 7 (21.9) | 13 (40.6) | 12 (37.5) | 32 (10.8) | | |
| >60 | 0 (0.0) | 5 (83.3) | 1 (16.7) | 6 (2.0) | | |
| Gender | | | | | 4.163 | 0.100 |
| Female | 72 (35.3) | 95 (46.6) | 37 (18.1) | 204 (68.7) | | |
| Male | 23 (24.7) | 45 (48.4) | 25 (26.9) | 93 (31.3) | | |
| Marital status | | | | | 22.090 | 0.001 |
| Single | 73 (40.6) | 77 (42.8) | 30 (16.7) | 180 (60.6) | | |
| Married | 22 (21.2) | 56 (53.8) | 26 (25.0) | 104 (35.0) | | |
| Divorced | 0 (0.0) | 4 (44.4) | 5 (55.6) | 9 (3.0) | | |
| Widowed | 0 (0.0) | 3 (75.0) | 1 (25.0) | 4 (1.3) | | |
| Education level | | | | | 11.799 | 0.160 |
| Primary school | 0 (0.0) | 1 (50.0) | 1 (50.0) | 2 (0.7) | | |
| Middle school | 2 (22.2) | 4 (44.4) | 3 (33.3) | 9 (3.0) | | |
| High school | 13 (25.0) | 23 (44.2) | 16 (30.8) | 52 (17.5) | | |
| University | 78 (35.1) | 107 (48.2) | 37 (16.7) | 222 (74.7) | | |
| Higher degree | 2 (16.7) | 5 (41.7) | 5 (41.7) | 12 (4.0) | | |
| Income (SAR/Month) | | | | | 2.262 | 0.688 |
| <8000 | 59 (34.5) | 78 (45.6) | 34 (19.9) | 171 (57.6) | | |
| 8000-13000 | 21 (30.4) | 35 (50.7) | 13 (18.8) | 69 (23.2) | | |
| >13000 | 15 (26.3) | 27 (47.4) | 15 (26.3) | 57 (19.2) | | |

Regarding the overall knowledge about seizures and epilepsy, a study done in the Al Qassim region found that 77.2% of their participants had good knowledge^[2] which is higher compared to our results that showed only 31.99% of our responders with good knowledge. We believe that the cause of the high level of knowledge in the Al Qassim region is due to the presence of many education programs and campaigns about epilepsy in the Al Qassim region.

In contrast, only 3% of our participants agreed that the cause of seizures is due to the evil spirit possession which is much lower than what had been reported in Riyadh (15%), Al Qassim (11.3%) and Majmaah (10%).^[2,7,8]

Surprisingly, 70% in our study believed that the seizures are treatable while only 28.9% was reported in Al Qassim's study.^[2] These findings suggest an improvement in the knowledge and awareness of the community. Furthermore, 70% in our study recognized that seizures are neurological symptoms that come with a specific disease, which is similar to the results of studies conducted in Makkah (85.7%) and Riyadh (52%).^[7,9]

About first aid of seizures, unfortunately, 51.2% of the participants agreed to open the patient's mouth and insert an object during the seizure which is near to the result of Makkah's study by 55%^[9] while only 17.7% reported that in a study of Majmaah.^[8] Also, only 41.8% answered with "disagree" to hold the patient on the floor and prevent him from moving during the seizure which is much lower in comparison with a study done in China which reported 84.9%.^[10] These results indicate a

poor knowledge about the first aid during seizures which needs to improve.

Regarding removing all dangerous things away from the patients during seizures, a majority of our participants agreed by 93.6 and 68.4% disagreed to try feeding the patient with water or other things during the seizure which is similar to China's results by 94.5 and 63%, respectively.^[10] Ninety-two percent answered to call the ambulance if the seizure lasts for more than 5 min and only 7% will do that in a study of Makkah.^[9] That presents a high knowledge in Taif city compared with Makkah city.

We found that there is a significant association between age and the level of knowledge, especially in young adults. This was also reported in a study of Al Qassim.^[2] The explanation for that is the easy access to the Internet and social media in these particular ages. Likewise, there is a significant association between marital status and the level of knowledge with a high percentage of good knowledge in singles which is matched with Al Qassim's study.^[2] On the other hand, there is no significant association between gender and level of knowledge in our study while Al Qassim's study believed that there is a significant association.^[2]

Limitations

The limitation of the present study is using a self-administered questionnaire that may have a recall bias. In addition, the cross-sectional study use could reveal the associations between variables but not the causal relationships.

Conclusion

Only 49.8% knew that seizure was a symptom associated with many diseases, and 40.7% knew that seizure could be caused by hypoglycemia, while 37 and 32.3% did not know seizure treatment and whether seizure treatment was appropriate for Hijama and Cupping. For all seizure cases, only 17.2% decided not to call an ambulance. Participants aged between 20 and 29 and single had a high percentage of good knowledge with no significant correlation between gender, income and level of education and the level of knowledge of the participant. There is a lack of knowledge and misconceptions about aspects related to seizures among the studied participants. It is recommended to raise awareness and correct false misconceptions about providing first aid to seizure patients.

Ethical considerations

An ethical approval for the study was obtained from the research ethics committee of Taif University, KSA.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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