Assess Awareness and Attitude among care givers of epileptic patients in Najran region, Saudi Arabia

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Abstract

Background:

There are several conflicting beliefs about epilepsy and public awareness about epilepsy that vary widely among the caregivers. **The aim:** was to assess awareness and attitude about epilepsy among epileptic caregivers in Najran region. **Design:** This cross-sectional, descriptive, community-based study **Subject and setting**: purposive sample was used to include 604 care givers of epileptic patients. **Data Collection methods:** socio-demographic questionnaire, epileptic knowledge questionnaire and attitude scale regarding epilepsy. **Results**: the current study revealed that 47.9% had satisfactory awareness while 61.2% had a positive attitude toward epilepsy. The main source of information was social media followed by T.V. There was also a statistical association between age, educational levels and occupation with the awareness level of epilepsy. There was significant positive correlation between total score of awareness and the total score of attitude where R .68 &P 0.0001. **Conclusion:** the current study revealed that the level of awareness was relatively low among the studied sample while about two thirds of them had positive attitude regarding epilepsy. The attitude score was influenced by age, educational level, occupation and the awareness. **Recommendations:** Public health education programs about epilepsy and modify misconceptions and to promote positive attitudes must be applied.

Keywords: Awareness and attitude regarding Epilepsy, Epileptic caregivers, Najran region

Introduction:

Epilepsy is common but stigmatized neurological disorder that is characterized by recurrent seizures. Epilepsy is a chronic neurological disorder impacts individual across all age groups. Globally, approximately 50 million people are affected by epilepsy rendering it one of the most prevalent neurological conditions. Alarmingly, nearly 80% of those afflicted reside in low- and middle-income countries. Despite this, effective diagnosis and treatment could potentially grant up to 70% of

individuals with epilepsy a seizure-free existence **(WHO, 2019).**

However, individuals with epilepsy have a noticeably higher chance of dying young—up to three times higher than the whole population. The frequency ranged from 3.3 to 7.8 cases per 1000 persons in Europe. Approximately 724,500 persons in the Arab world have been diagnosed with epilepsy; in Saudi Arabia, the frequency is 6.54 cases per 1,000 people (**Alsohibani et al., 2019)**. Lack of public knowledge about epilepsy increases the rate of stigma and discrimination (**Girma et al., 2022).**

Despite the fact that epilepsy has been recognized as an illness since antiquity, the general public's perception of the condition has not significantly altered since there is little information available **(Alawi et al., 2023)**. Serious, long-term neurological disorders like epilepsy are characterized by violent jerking fits and abnormal brain activity. The view of epilepsy in the community has a major role in determining the social acceptability of those with the condition, which is frequently a major issue for patients and their families. People with epilepsy are perceived negatively by the general society due to their powerlessness, sensitive nature, and dread of experiencing an epileptic seizure **(Al-Dossari et al., 2018**).

False beliefs regarding epilepsy have the potential to stigmatize and discriminate against those who have the illness. There are a lot of false beliefs regarding epileptic conditions. For instance, a research looking at how people in Majmaah, Saudi Arabia, felt about epilepsy was carried out. The study revealed that 10% of respondents believed that "jinn" or "fairies" were the primary cause of epilepsy, while 23% believed that "evil" was the reason (**Altowayan et al., 2018).**

Aim:

To assess awareness and attitude of care givers of epileptic patients toward epilepsy in Najran region, Saudi Arabia

This research will therefore answer the questions:

Research question:

1. What are the levels of awareness about epilepsy among caregivers in Najran, Saudi Arabia?
2. What are the prevailing caregivers' attitudes toward individuals with epilepsy in Najran, Saudi Arabia?
3. How does awareness of epilepsy differ among various demographic groups, including age, gender, and educational background, among caregivers in Najran, Saudi Arabia?

Subjects and methods

Study design:

The researcher used cross sectional design to achieve the aim of the study.

Study Setting:

The study was conducted in primary health care centers that had registered epileptic patients in Najran region Kingdom of Saudi Arabia.

Sample size and sample technique

Convenience sample technique was used to include 604 caregivers who accepted to participate in the study

from the period from Jan 2023 to August 2023.

Inclusion criteria and exclusion criteria:

1. Age of caregivers (18 years and older).
2. Caregivers who are directly responsible for providing care and support to the epileptic patient.
3. Caregivers who are currently residing in Najran region.
4. Caregivers who have provided consent to participate in the study.

Tool for data collection:

The data collection methods was developed by the researcher after reviewing the following studies **(Algahtani et al., 2019**; **Altowayan et al., 2018)**

I: socio-demographic questionnaire such as age, sex, marital status, nationality, educational level, function, family income.

II: Epileptic knowledge questionnaire. It was composed from 20 true and false questions to cover the following items; definition, pathphysiology, risk factors, first aides during and after fits. Examples of the questions that were used in the questionnaire; is Epilepsy a contagious disease, Epilepsy only affects children, It is safe to restrain someone having a seizure to prevent injury, If a person's seizure lasts longer than 5 minutes, it's considered a medical emergency etc. Each question was scored by 1 for correct answer and 0 for incorrect answer. The maximum score was 20. The awareness level is satisfactory if the total score was ≥60%.

III: Attitude scale about epilepsy. It was composed of 13 items on scale of three points agree (3), average (2) and disagree (1). The attitude level is positive if the total score was ≥60% and negative if less than 60%

There are some items that were used,

1. People with epilepsy should be treated no differently from anyone else in society.
2. Epilepsy is a condition that can be effectively managed with medication and proper care.
3. It's important for society to raise awareness and educate people about epilepsy to reduce stigma.
4. I feel comfortable providing first aid assistance to someone having a seizure.
5. I believe that individuals with epilepsy can lead fulfilling lives and pursue their goals.
6. I am open to learning more about epilepsy and how I can support individuals with the condition

Tools validity and reliability:

All tools were reviewed for content validity by a panel of (5) expertise in the field of Medical Surgical Nursing and Neurological physicians. The Cronbach's alpha test was 0.88.

Pilot study:

It was be carried out on 10% (61) of the participants (who was avoided from the test) to ascertain the clarity and the applicability of the tools then the necessary changes will be undertaken.

Field work:

Collecting data from caregivers for epileptic patients typically involves designing and administering questionnaires to gather relevant information.

- Design a survey instrument tailored to gather information from caregivers of

epileptic patients
- The researcher visited the primary health care centers and get list with epileptic patients and their caregivers.
- Data were collected through various ways as self-administered, electronic distribution and interviewing. Questionnaire was distributed to care givers in Najran region
- The study was performed between Jan and August 2023.
- The data was revised and coded for data entry.
- The researcher enters the data into a computerized database using software such as SPSS version 25.
- Clean the data by checking for any errors, missing values, or inconsistencies.

Ethical approval:

The research proposal approved from the ethical research committee at Najran University (reference No.: 012955-029277 -DS) and I am submitting a copy, before the commencement of the data collection. Informed consent was taken from every nurse and every patient after clarifying the procedures and the purpose to participate in the stud. All participants were ensuring about confidentiality and anonymity of their data as it is used only for research purpose.

Data analysis:

Quantitative survey data was revised coded and entered using Personal Computer (PC). Computerized data entry and statistical analysis were fulfilled using the Statistical Package for Social Sciences (SPSS) version 25.Data were represented using descriptive statistics in the forms of frequencies, percentages, means, and standard deviations. The chi-squared statistic was used for testing relationships between categorical variables. Correlation coefficients were used to measure how strong a relationship was between two variables, and statistical significance was determined at a threshold of $p<0.05$.

Results:

Table 1 shows the distribution of the studied sample in terms of their socio-demographic data. As shown in the table, the most common age group was 18 to 29 years (72%), and most of them were Saudi (95.9%) and female (92.7%). Most respondents (67.5%) had a university education, 61.6% were single, 47.1% were employed, and 71.9% of them reported having a sufficient family income.

Figure 1: distribution of the studied sample according to the main source of information. This figure shows the main source of information as reported by the studied sample. The social media was reported by 34.2% followed by T.V program by 31.9%.

Table 2 reveals the distribution of the studied sample regarding their total level of awareness. The results identified that 47.9% of the studied sample had satisfactory level while 52.1 had unsatisfactory level.

Table 3 reveals the distribution of the studied sample regarding their total level of attitude. The results revealed that 61.2 % of the studied sample had positive attitude while 38.8 had negative attitude.

Table 4: explores the association between the demographic characteristics of the studied sample and their awareness level of epilepsy.

The table revealed that there were significant associations between age, educational level and occupation with the total level of awareness among the studied sample where P less than 0.005.

Table 5 reveals the correlation between total level of awareness and total score of attitude among the studied sample. There was significant positive correlation between total score of awareness and the total score of attitude where R .68 &P 0.0001

Table 1: Demographic characteristics survey of the respondents (N=604)

Variable	Response	Frequency	Percent %
Age	18-29	435	72.0
	30-39	60	9.9
	more than 30	109	18.0
Nationality	Non-Saudi	25	4.1
	Saudi	579	95.9
Gender	Female	560	92.7
	Male	44	7.3
Education	High School	147	24.3
	Intermediate	35	5.8
	Read and Write	14	2.3
	University	408	67.5
Marital Status	Divorced	12	2.0
	Single	372	61.6
	Married	215	35.6
	Widower	5	0.8
Occupation	Employee	285	47.1
	I do not work	116	19.2
	Free business	203	36.6
Family Income	Enough	434	71.9
	Enough and more	85	14.1
	Not Enough	85	14.1

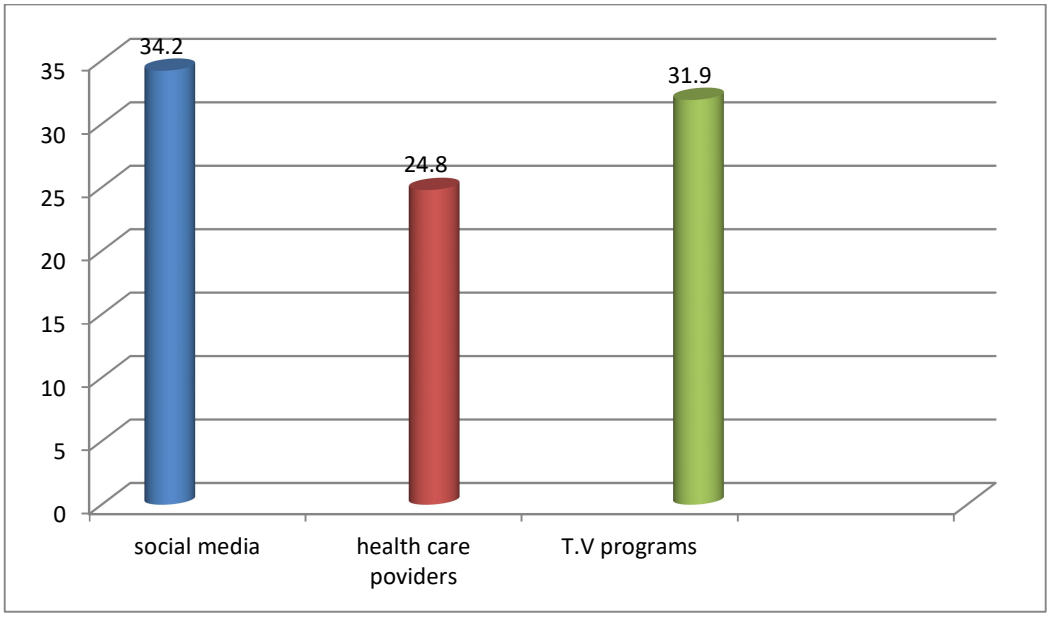

Figure 1: distribution of the studied sample according to the main source of information

Table 2 frequency distribution of the studied sample according to their total level of knowledge

Items	N	%
Satisfactory	289	47.9
Unsatisfactory	315	52.1

Table 3: frequency distribution of the studied sample according to their total levels of attitude

Items	N	%
Positive	370	61.2
Negative	234	38.8

Table 4: the association between the demographic characteristics of the studied sample and their awareness level of epilepsy.

Demographical characteristics			Awareness Level				X^2	P-Value
			Satisfactory (289)		Unsatisfactory (315)			
			N	%	N	%		
Age	18 to 29 years	435	220	50.5	215	49.5	6.7	**0.03**
	30 to 39 years	60	20	33.3	40	66.7		
	39> years	109	49	44.9	60	55.1		
Gender	Female	560	262	46.7	298	53.2	3.4	0.06
	Male	44	27	61.3	17	38.6		
Educational level	Read and Write	147	27	18.3	120	81.7	**98.1**	**0.0001**
	Intermediate	35	6	17.1	29	82.9		
	Secondary	14	4	28.5	10	71.5		
	University education	408	252	61.7	156	38.3		
Occupation	Employee	285	180	63.1	105	36.9	**50.6**	**0.0001**
	I do not work	116	40	34.4	76	65.6		
	Free business	203	69	33.9	134	66.1		

Table 5: correlation between total level of awareness and total score of attitude among the studied sample

Items	Attitude	
	R	P
Awareness	.68	0.0001

Discussion:

Epilepsy is one of the most stigmatizing disorders. The stigmas and negative attitudes associated with epilepsy are due to poor public awareness and knowledge (**Al-Dossari et al., 2018**). The current study aimed to assess awareness and attitude of care givers of epileptic patients toward epilepsy in Najran region, Saudi Arabia. The results of the present study revealed that about one third of the studied sample had heard about it through social media followed by T.V program by 31.9% and only 24.8 get there information from health care providers. The present study declared that about the half of the studied sample had unsatisfactory awareness level toward epilepsy, these results are consistent with other study that was conducted by **Al-Dossari et al., (2018)** to assess the public knowledge, awareness of and attitudes toward epilepsy were disagree with this study, However, the negative attitudes and misconceptions still exist. Another study by **Algahtani et al., (2019**) [(5)] revealed that The results of the present study suggest that awareness about epilepsy in the general public should be raised to avoid a negative impact on the patients, their families, their communities, and the healthcare system. On the other hand **Altowayan et al.,(2019)** found that two thirds of participants said anyone could develop epilepsy at any time, and most of them said that putting a spoon or cloth in the mouth when someone has an acute attack is not the correct behavior.

In the present study, more than half of the participants had a positive attitude toward epilepsy, this result in the same line with **Mohamed et al.,(2019)** and **Adewumi et al., (2020)**.The current study was in harmony with the study that was conducted by, **Al-Harbi et al., (2018)** [(9)] who found that two thirds of the participants had positive attitude with compassion toward them. In contrast, another study that was conducted by **Kiwanuka et al.,(2018)** showed that the majority of participants had a negative attitude toward epilepsy. Another study by **Molla et al.,(2021)** also revealed that about the half of the respondents had an unfavorable attitude about epilepsy, which matched a study conducted in Moscow. In Russia, the majority of the studied participants had negative attitudes towards those who have epilepsy **Kiwanuka et al., (2017**).However, there was relatively low stigma in a population sampled in the UK **Emily et al., (2019)**.

In our study, more than half of the participants had unsatisfactory toward total level awareness of epilepsy, and less than half of them had a high awareness level. This result matched that of another study **Algahtani et al., (2019**) which showed that most of the participants lacked awareness about epilepsy. Another study **Shihata et al., (2021)** also reported that most of the participants had a low awareness level of epilepsy. A study conducted in the Aseer region also concluded that the level of epilepsy awareness of the local population was relatively poor and needed improvement. **Adil et al., (2016)** Another study conducted in Majmaah, Saudi Arabia, concluded, that although knowledge about epilepsy is improving, it is still not adequate,

and the attitude toward epilepsy is poor **Aqeel et al.,(2016).**

In contrast, another study by **Al-Dossari et al.,(2018**) showed that public awareness of epilepsy was acceptable. Other studies also revealed that most of the participants had a high awareness level about epilepsy. **Alsohibani et al.,(2019) and Macit et al (2018**) A study conducted in Tehran showed that the knowledge and attitudes towards epilepsy were similar to those in Europe, but there was much lower acceptance regarding marriage to a person with epilepsy(**Helia et al., 2013).**

The current study showed there was a statistical correlation between the participants 'age, educational levels, occupations and awareness level of epilepsy, but awareness had no statistical correlation with nationality, gender, marital status, or family income. This result was agreed with that of another study, **Fehintola et al., (2019)** which found a statistical correlation between the educational level of participants and their awareness level of epilepsy. Another study by **Zeleke H et al.,(2018)** also reported a statistically significant relationship between the educational level of participants and their awareness level about epilepsy. However, another study by **Macit et al., (2018**) found that a vast majority of the participants were familiar with epilepsy.

Conclusion:

The current study revealed that the level of awareness was relatively low among the studied sample while about two thirds of them had positive attitude regarding epilepsy. The attitude score was influenced by age, educational level, occupation and the awareness.

Recommendations

1. Design and implement health education programs to disseminate accurate information about epilepsy.
2. Regular updates and refresher courses for healthcare providers and educators can ensure accurate and up-to-date information is disseminated to the public
3. involve the community in the design and implementation of these programs is essential to ensure cultural relevance and acceptance
4. To address the observed correlation between awareness and attitude, interventions should focus on improving knowledge levels. Additionally, media campaigns, both traditional and digital, can be leveraged to reach a broader audience and challenge existing stereotypes.

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Reference

Adewumi, T., Tomilola, O., Oladipo, E., Abiodun, O., & Adewuya. (2020). Public perception and attitude towards people living with epilepsy in Nigeria. Epilepsy & Behavior, 106, 107033. DOI: 10.1016/j.yebeh.2020.107033

Adil, A., Alqahtani, A., Abouelyazid, A., et al. (2016). Public awareness, knowledge, and attitudes toward epilepsy in the Aseer region, KSA. Epilepsy & Behavior, 63, 63-66. DOI:10.1016/j.yebeh.2016.07.041

Alawi, A., Omer, K., et al. (2023). Knowledge, attitudes and practices of the Saudi population toward people with epilepsy: narrow or wide? Acta Epileptologica, 5(Article number: 30), 1-8.

Al-Dossari, K., Al Ghamdi, S., Alzahrani, J., & Abdulmajeed, I. (2018). Public knowledge awareness and attitudes toward epilepsy in Al-Kharj Governorate Saudi Arabia. Journal of Family Medicine and Primary Care, 7(1), 184. DOI:10.4103/jfmpc.jfmpc_281_17

Algahtani, H., Shirah, B., & Alzahrani, A. (2019). Perception and attitude of the general population towards epilepsy in Jeddah, Saudi Arabia. Journal of Epilepsy Research, 9(1), 42-50. DOI: 10.14581/jer.19005

Al-Harbi, A., Alsaid, A., & Parameaswari, J. (2018). Primary school female teachers' knowledge, attitude, and practice toward students with epilepsy in Riyadh, Saudi Arabia. Journal of Family Medicine and Primary Care, 7(2), 331. DOI: 10.4103/jfmpc.jfmpc_58_18

Alsohibani, A., Alkhader, R., Alharbi, M., Alrasheedi, M., Alsoghair, M., & Alsuhibani, M. (2019). Public awareness, knowledge, and attitudes regarding epilepsy in the Qassim region, Saudi Arabia. Epilepsy & Behavior, 92, 260-264. DOI: 10.1016/j.yebeh.2019.01.014

Altowayan, R., Aldhwaifri, A., Yousif, E., et al. (2019). Level of awareness and attitudes toward epilepsy in Qassim, Saudi Arabia: A cross-sectional study. Epilepsy & Behavior, 90, 66-69. DOI:10.1016/j.yebeh.2018.10.044

Aqeel, A., Tahir, A., Wasqas, S., et al. (2016). Public knowledge and attitudes toward epilepsy in Majmaah. J Neurosci Rural Pract, 7(04), 499-503. DOI: 10.4103/0976-3147.188622

Emily, H., Siobhan, B., & Catrin, P. (2019). Attitudes towards epilepsy in the UK population: Results from a 2018 national survey. Seizure, 65, 12-19. DOI: 10.1016/j.seizure.2018.12.012

Fehintola, O., Samuel, A., Afolabi, T., et al. (2019). Knowledge of and attitude towards epilepsy among women in Ile-Ife, Nigeria. Sudan Journal of Medical Sciences, 14(1), 31-44. DOI: 10.18502/sjms.v14i1.4379

Girma, B., Nigussie, J., Tamir, T., & Bekele, E. (2022). Public knowledge toward epilepsy and its determinants in Ethiopia: A systematic review and meta-analysis. Epilepsy & Behavior, 133, 108764. https://doi.org/10.1016/j.yebeh.2022.108764

Guekht, A., Anna, G. A., Igor, K. C., Maria, M. B., Alexander, Y. D., & Alexander, S. E. (2017). Attitudes towards people with epilepsy in Moscow. Epilepsy & Behavior, 70, 182-186. DOI: 10.1016/j.yebeh.2017.03.020

Helia, G., Marzieh, N., & Lars, J. (2013). Public awareness and attitudes towards epilepsy in Tehran, Iran. Global Health Action Journal, 6(1). DOI: 10.3402/gha.v6i0.21618

Kiwanuka, F., & Olyet, C. (2018). Knowledge, attitude, and beliefs on epilepsy among adults in Erute South, Lira District, Uganda. Epilepsia Open, 3(2), 264-269. doi: 10.1155/2020/6801979

Macit, C., Clark, P. M., Taner, N., Bingol, C., Mercanolu, G., & Yukse. (2018). A survey on awareness, knowledge, and attitudes toward epilepsy in an urban community in Turkey. Nigerian Journal of Clinical Practice, 21(8). DOI: 10.4103/njcp.njcp_199_17

Mohamed A, Alrashdan Y, Alharbi A, Alshammari M, Albalawi G, AlShammari R, AlShammari A, Aloliqi G, Alrayya S. (2019). Public awareness and attitude toward pediatric epilepsy in Hail City, Saudi Arabia. International Journal of Medicine in Developing Countries, 3, 284-288. DOI: https://doi.org/10.17712/nsj.2022.4.20220045

Molla, A., Mekuriaw, B., Habtamu, E., & Mareg, M. (2021). Knowledge and attitude towards epilepsy among rural residents in southern Ethiopia: a cross-sectional study. BMC Public Health, 21(1), 1-9. DOI: https://doi.org/10.1186/s12889-021-10467-8

Shihata SS, Abdullah TS, Alfaidi AM, Alasmari AA, Alfaidi TM, Bifari AE, Jamal WH, Rizk HA. Knowledge, perception and attitudes toward epilepsy among medical students at King Abdulaziz University. SAGE Open Med. 2021 Jan 28;9:2050312121991248. doi: 10.1177/2050312121991248. PMID: 33614036; PMCID: PMC7871284. https://doi.org/10.1177/20503121219912 48

World Health Organization. (2019). Epilepsy. Available at https://www.who.int/news-room/fact-sheets/detail/epilepsy.

Zeleke H, Gualu T, Sharew Y, Alem G (2018) Knowledge, Practice and Attitude towards Epilepsy and Associated Factors among Adults in Goncha Siso Enesie Woreda Rural Kebeles, East Gojjam, Ethiopia 2016. Epilepsy J 4: 1000126. doi:10.4172/2472-0895.10001