

# Public Awareness towards Epilepsy in Buraydah Population

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**Abstract:** Epilepsy a disease that can affect any age, gender or race in the world. At least 50 million people in the world have epilepsy with prevalence rate of 6.5 per 1000 in Saudi Arabia.

**Objective:** This study was aimed to evaluate and investigate the knowledge, awareness and attitude of epilepsy among the population of Buraydah, Saudi Arabia.

**Methodology:** The study was cross-sectional based and consisted of a survey using a questionnaire of 11 questions. A questionnaire about knowledge, awareness and attitudes toward epileptics was applied after it has been translated into Arabic language.

**Results:** Of the 797 participants who completed the questionnaire, around (684) 85.9% of the study population have read or heard of epilepsy. About (396) 49.7% knew of at least one person with epilepsy. On witnessing a person with seizure, about 59.7% of participants have seen patients while seizure attacks. However, six hundred and sixty-five participants (83.5%) correctly thought that epilepsy is not a contagious disease, while 15.6% stated that they don't know whether it's contagious disease or not. About 40% believed epilepsy to be a psychiatric disorder as it would be type of insanity or madness, while 31% of them stated they have no knowledge if it was psychiatric disorder. majority of the population (40.15%) thought that epilepsy is a Brain disease. while only (17%) believed that epilepsy is inherited disorder, while the second majority (21.25%) believed that epilepsy is due to Mental or emotional disorders. A higher proportion of respondents (46.49%) thought that epilepsy attacks Convulsions manifested, and about 27% think that Foaming from the mouth is epilepsy manifestation.

**Conclusion:** Absence of awareness and knowledge may cause lack of confidences to epilepsy and might be an aspect discussing preconception. This research study was an essential tool to get precise details of the public awareness and knowledge about epilepsy, which has actually typically been subjected to misunderstanding, stigmatization and social misconception, eventually impacting the overall of the patients with epilepsy more than the epilepsy as disorder itself.

**Keywords:** Public Awareness, stigmatization and social misconception.

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## 1. INTRODUCTION

Epilepsy a disease that can affect any age, gender or race in the world. At least 50 million people in the world have epilepsy with prevalence rate of 6.5 per 1000 in Saudi Arabia<sup>1</sup>. Epilepsy is stigmatized among the population, even though it is one of the commonest neurological disorders.

There is discrimination and social stigma surrounding epilepsy worldwide, with variation from country to country, which is often more difficult to overcome than the seizures themselves. This stigma is reinforced by the societies due to the lack of public knowledge and awareness, imperceptive belief surrounding epilepsy and seizures, and negative behavior and attitude towards people with epilepsy. People who are affected can be discouraged from seeking therapy, out of fear of being identified with the disorder<sup>2</sup>. They can also suffer from serious consequences, including social anxiety, lower self-esteem, isolation, discrimination, and negative health outcomes<sup>3</sup>. They also experience problems with employment, education and social relationships<sup>4</sup>.

Stigma and reduced seizure control, reduced quality of life, and psychopathology has been suggested to have a relationship in some studies. Also associated with stigma are many of the psychosocial challenges experienced by people with epilepsy.<sup>3</sup>

The objective of this study was to find out how much awareness the population of Buraydah knows about epilepsy.

## 2. METHODOLOGY

The study was performed in Buraydah, Saudi Arabia from July 2016 till August 2016. Ethical approval of the study was obtained from Qassim university ethical committee and regional research ethics committee - Qassim province. The study was cross-sectional based and consisted of a survey using a questionnaire of 11 questions. The questionnaire was found to be reliable and valid in earlier studies.<sup>4,5</sup>The questionnaire was translated into Arabic language and validated by two-way translation method and feedback from a sample of the population “who were not included in the study”were tested post translation for easy interpretation of the questions. The survey was conducted as an interview by medical students after a period of training. The interviewers were instructed to only clarify any question to make it clear and not lead the respondents in their answers. The respondents were randomly selected at public places such as shopping malls, super markets, mosques, health clubs, and public parks. Subjects who were Saudi, 16 years or above, willing to participate in the questionnaire, and agreed to sign the consent form were recruited. The collected sample size is 797, considering  $\alpha$ , 95% confidence interval, with an expected population of 516079 in Buraydah with margin of error of  $\pm 3.47$ .<sup>6</sup> All data were recorded and analyzed by using SPSS 22 and  $p < 0.05$  was considered to be statistically significant.

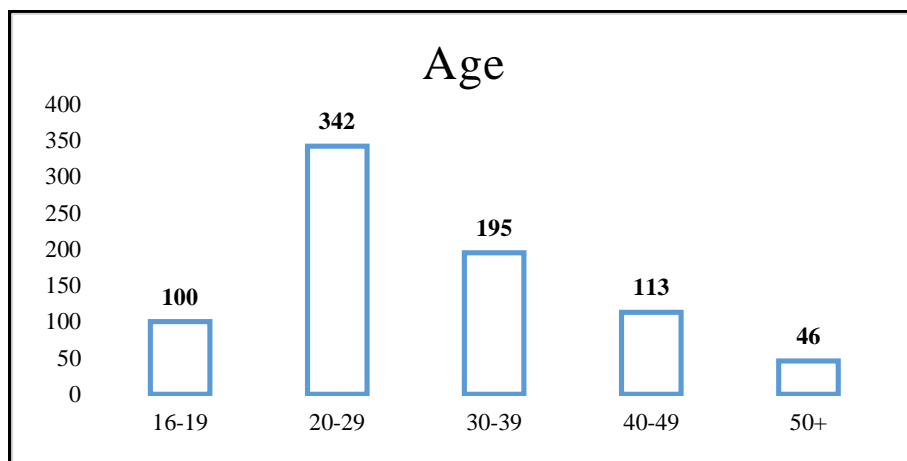
## 3. RESULTS

### Sociodemographic descriptive statistics profile:

Seven hundred and ninety-seven participated (study sample ( $n = 797$ )) in this study have completed the questionnaire, the mean age of participants was  $26.6 \pm 16.0$  years, ranging from 16 to 50+ years **Figure 1**. The (445) 55.9% were males and (351) 44.1% of total study sample were to female. Majority of respondents which 67.2% were from people carrying university degree, then come Secondary degree level of education which was (201) 25.3% of participants, further details are shown in **Table 1**.

**Table 1: Socio-demographic characteristics of sample respondents ( $n = 797$ ).**

Variable	Distribution	Count	Percentage (%)
<b>Sex</b>	Female	351	44.1
	Male	445	55.9
<b>Age</b>	16-19	100	12.6
	20-29	342	43.0
	30-39	195	24.5
	40-49	113	14.2
	50+	46	5.8
<b>Education</b>	Illiterate	13	1.6
	Primary Degree	13	1.6
	Middle School Degree	34	4.3
	Secondary Degree	201	25.3
	University Degree	535	67.2



**Figure 1: participants Age distribution**

**Population’s Knowledge and attitude:**

About the participant’s knowledge of epilepsy, participants were asked whether they had heard of epilepsy, around (684) 85.9% of the study population have read or heard of epilepsy. About (396) 49.7% knew of at least one person with epilepsy. On witnessing a person with seizure, about 59.7% of participants have seen patients while seizure attacks **Table2**.

**Table2: Knowledge of study participants regarding epilepsy**

NUM	QUESTIONS	NO(%)	YES (%)	MEAN	DIRECTION
1	Have you ever heard of or read about the disease called “epilepsy” or “convulsive seizures” (“fits”)	112 (14.1)	684 (85.9)	1.86	Yes
2	Did you know anyone who had epilepsy?	400 (50.3)	396 (49.7)	1.50	No
3	Have you ever seen anyone who was having a seizure?	321 (40.3)	475 (59.7)	1.60	Yes

Six hundred and sixty-five participants (83.5%) correctly thought that epilepsy is not a contagious disease, while 15.6% stated that they don’t know whether it’s contagious disease or not. About 28.4% believed epilepsy to be a psychiatric disorder as it would be type of insanity or madness, while 31.5% of them stated they don’t know if it was psychiatric disorder. Majority (76.4%) have stated that children with epilepsy can have normal successful education **Table3**.

**Table3: Attitude of participants regarding epilepsy**

NUM	QUESTIONS	NO(%)	DONTKNOW(%)	YES(%)	MEAN	DIRECTION
4	Is epilepsy a contagious disease?	665(83.5)	124(15.6)	7(0.9)	1.17	No
5	Is epilepsy a type of insanity or madness?	319(40.1)	251(31.5)	226(28.4)	1.88	Don’t Know
6	Can a child with epilepsy be successful in a normal class?	35(4.4)	153(19.2)	608(76.4)	2.72	Yes
11	Is there a role for surgical intervention for advanced epileptic cases?	173(21.7)	445(57.2)	168(21.1)	1.64	Don’t Know

Concerning question number 7 in the questionnaire related to this study, when participants were asked about the cause behind epilepsy results showed, majority of the population (40.15%) thought that epilepsy is a Brain disease. while only (17%) believed that epilepsy is inherited disorder, while the second majority (21.25%) believed that epilepsy is due to Mental or emotional disorders **Table 4, Figure2**. A higher proportion of respondents (46.49%) thought that epilepsy attacks Convulsions manifested, and about 27% think that Foaming from the mouth is epilepsy manifestation. The response of the participants to a person having a seizure is showed in **Table 4**. Three hundreds eighty-eight participants (34.8%) stated that they should take the patient with epileptic attack from danger, while around (30%) chooses to put clothes material in patient’s mouth to protect patient’s teeth and tongue.

**Table4: Questionnaire analysis of Awareness about Epilepsy causes and responsiveness toward patient with epileptic attack.**

Num	Questions	Answer	Count	Percentage (%)
7	What do you think is the cause of epilepsy?	-Brain disease	548	40.15
		-Mental or emotional stress disorder	290	21.25
		-Hereditary	232	17.00
		-I do not know	148	10.84
		-Blood disorder	74	5.42
		-Birth defect	73	5.35
8	What do you think is the manifestation of an epileptic attack?	-Convulsions	668	46.49
		-Foaming from the mouth	398	27.70
		-Screaming	173	12.04
		-Changes in behavior	144	10.02
		-I do not know	54	3.76
9	What would you do if someone were having a seizure	-Take them away from danger	388	34.80
		-Put a cloth in the patients mouth	341	30.58
		-I do not know	228	20.45

	attack?	-Hold or tie them down	123	11.03
		-Force some medicine down the patient	35	3.14
10	If your relatives or friends have epilepsy, what kind of treatment would you suggest?	-Ask a doctor	695	53.54
		-Read Quran	446	34.36
		-Get medicine from drug store	57	4.39
		-Think epilepsy is untreatable	42	3.24
		-Ask for a herbal medicine	32	2.47
		-Acupuncture	18	1.39
		-No need for treatment	8	0.62

Concerning the participants treatment suggestion to any of their relatives having epilepsy, majority participants which are (53.54%) suggest that asking a specialist is the correct way for treatment that they could suggest for their relatives with epilepsy, while 34.36% would suggest reading Quran can help in relieving the symptoms of epilepsy **Table 4** above.

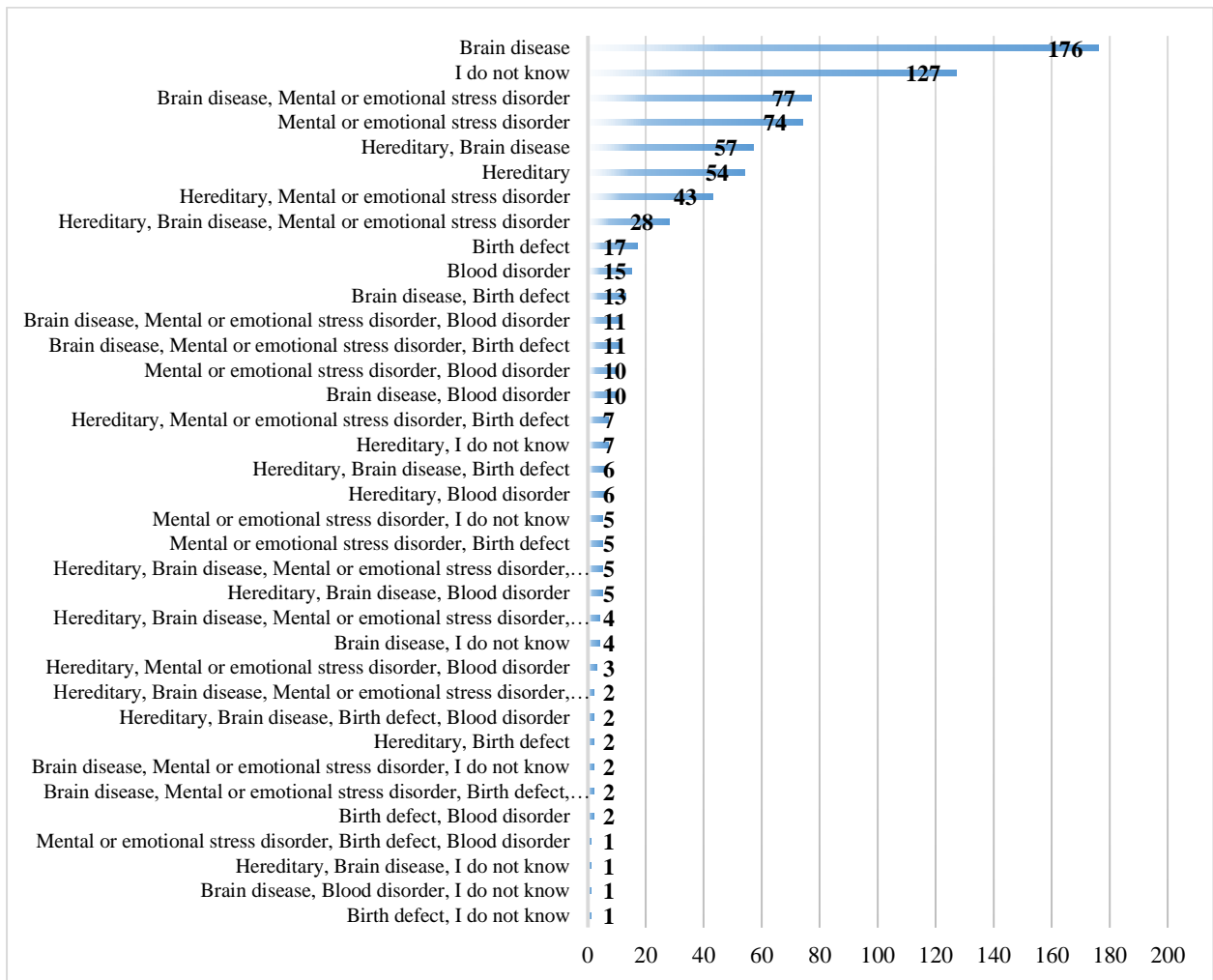


Figure2: Question 7 detailed analysis

We finally tried to find whether there is a different between males and females in their knowledge about epilepsy using Mann-Whitney Test. Since the test showed  $P < 0.01$  we have High statistical evidence to say, there is difference between male and female in Knowledge **Table 5**

Table 5

MANN-WHITNEY TEST	
TEST STATISTIC	66328.00
Z.SCORE	-3.846
P.VALUE	0.000

#### 4. DISCUSSION

The study showed the knowledge of the participants varies in different questions than other population of similar studies. The knowledge of the individuals in the early academic level less than the knowledge of the majority of undergrads and as we pointed out formerly that there is a different attitude level in between males and female individuals. Our research study validates spaces in knowledge and a lack of confidence about different elements of epilepsy; these results remained in contrast with a previous research study carried out in Bandung, Indonesia where the awareness level among public was reported to be high<sup>7</sup>. There was nevertheless, a great deal of misconstruing about the nature of epilepsy which might result in unfavorable attitudes<sup>7</sup>. Another research study amongst Iranian ethnic had actually likewise recorded a high level of awareness about epilepsy<sup>8</sup>. Previous research studies performed by Lim et al.<sup>9</sup> likewise reported a high awareness of epilepsy amongst Malaysian Chinese. Lai et al.<sup>10</sup> and Chung et al.<sup>11</sup> have actually discovered that the Chinese in both Henan and Taiwan knew epilepsy with understanding levels similar to research studies in other nations. The mindsets to epilepsy were much more unfavorable in Henan<sup>10</sup> and less so in Taiwan<sup>11</sup>. An absence of knowledge about epilepsy has actually been thought about to be an essential determinant consider the lack of confidences to individuals with this medical condition<sup>12</sup>. Absence of knowledge about epilepsy has actually been revealed in a big part of the populations throughout the world<sup>13</sup>. These findings appeared to recommend that the public's mindsets to epilepsy clients and the illness itself internationally require significant enhancements. Research study was amongst the Brazil college student by Tedrus et al<sup>14</sup>. Info projects must target the young age as the misperceptions prevail in them, as is the chance to alter them. Destigmatization projects must be offered to remedy trainees' info and degrees of preconception towards individuals with epilepsy and supply proper education<sup>15</sup>. It is necessary to impart in moms and dads and school instructors awareness and knowledge relating to epilepsy as they play the essential function in supplying the proper info to the trainees. Surveys conducted among the schoolteachers in Indonesia and Sudan has shown that a significant proportion of them had a negative attitude toward and considerable misunderstanding of epilepsy<sup>16,17</sup>. It has been indicated that lack of knowledge about causes of epilepsy is the main factor affecting participants' attitudes<sup>18</sup>. Public awareness, knowledge and attitudes level towards epilepsy varied between different communities in different countries.

#### 5. CONCLUSION

Absence of awareness and knowledge may cause lack of confidences to epilepsy and might be an aspect discussing preconception. This research study was an essential tool to get precise details of the public awareness and knowledge about epilepsy, which has actually typically been subjected to misunderstanding, stigmatization and social misconception, eventually impacting the overall of the patients with epilepsy more than the epilepsy as disorder itself. Improved awareness, knowledge and mindsets of this brain condition(epilepsy), its symptoms, problems, correct management methods and the social influence on people coping with epilepsy, amongst public would lower worry and increase the neighborhood awareness towards those who suffer epilepsy along with reduce stigmatization to such individuals.

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