Prevalence rates of epilepsy ranges from 0.9 to 57 per 1,000 population.[1‑3] There are some differences in the reported prevalence rates. The World Health Organization research protocol for neurological disorders in developing countries[4] has been a major advance in epidemiological research on epilepsy.[5] Epilepsy is the neurological diseases and is very widespread worldwide, affecting >50 million human life.[6] The extensiveness of epilepsy is 6.54 per 1,000 in Saudi Arabia.[5] In developing countries the frequency of epilepsy is greater compared with developed countries.[7] There is lack of knowledge and awareness about epilepsy in the common population and even in healthcare professionals.[8,9] Epilepsy patient face many problems in daily life including employment, education, and social status,[10,11] due to lack of awareness and false beliefs about epilepsy that reflect the social survival of epilepsy patient.[12,13] The worldwide healthcare burden related to cost and statistics of epilepsy is similar to that of breast or lung cancer.[14] Old traditions believe that epilepsy is an evil act.[15] Pathophysiology of epilepsy suggests transient dysfunction in the brain, fear, and ignorance leads to intolerance.[16‑20]

Methods

The collected data from male and female populations were analyzed in Tables 1 and 2 respectively. An organized 14 questionnaire was prepared to analyze public knowledge, attitudes, and believes about epilepsy. Study was conducted randomly in common public places in Shaqra City, Saudi Arabia, during the months of April and May 2016. Sample size includes 155 males and 130 females from Shaqra City of Saudi Arabia. Results: The study analyzed the 285 local public including 155 male and 130 female contributors. About 68.38% male contributors and 63.07% female contributors studied Diploma or Bachelor education program. Female contributors (71.53%) were aware about epilepsy as compared with male contributors (58.70%). Maximum number of female contributors (82.30%) believes that epilepsy is treated by medication as compared with male contributors (58.70%). Conclusion: The knowledge, awareness, and attitudes of the epilepsy are found to be much improved in local community of Saudi Arabia. In the modern era, people assume that epilepsy is still due to evil spirit. Many contributors think there should be restrictions on driving and getting jobs in epilepsy patient. Public awareness and educational campaigns should be included in modern methods of education to develop well-knowledged community, which will improve the quality of life of epileptic patients.

Keywords: Attitude, believes, epilepsy, knowledge
were selected by research team drafted in English and Arabic. The study sample was collected between April and May 2016. Study was conducted at the different scattered public areas of Shaqra area including hypermarkets, shopping malls, family gardens, college of education at Shaqra University, and at the Outpatient Department of Shaqra General Hospital, Shaqra, Kingdom of Saudi Arabia. Research proposal, study design, and questionnaire were reviewed and approved by the research unit at the college of medicine, Shaqra University. The aim of the study and questionnaire were described to the contributors. Medical students were assigned to conduct the study in the different places. The names of the contributors were kept confidential to encourage accurate response. Data were analyzed by statistical analysis system. Variables were assessed using Chi-square test. Statistical significance was defined as $P$ values of $<0.05$.

**Research approach: Quantitative research approach and research design**

Cross-sectional survey design was used to conduct this study.

**Research setting:** Study was conducted at the different scattered public areas of Shaqra area including hypermarkets, shopping malls, family gardens, college of education, Shaqra University, and at the Outpatient Department of Shaqra General Hospital.

**Population:** Male and female contributors from hypermarkets, shopping malls, family gardens college of education at Shaqra University and patients from Outpatient Department of Shaqra General Hospital.

**Sampling technique:** Stratified random sampling technique.

**Sample size:** 155 males and 130 females.

**Sample:** The study population included 285 individuals (males and females).

**Data collection period:** 8 weeks, from April 2016 to May 2016.

**Exclusion criteria:** Medical doctors and Medical students were excluded from this study.

**Inclusion criteria:** Male contributors and female contributors above the age of 16 years.

**Results**

The Study analyzed the 285 local public, including 155 male and 130 female contributors [Tables 3 and 4]. Most participants (55.48% from male contributors and 66.15% from female contributors) were aged 20–40 years [Tables 1 and 2; Figures 1 and 3]. About 68.38% male contributors and 63.07% female contributors studied Diploma or Bachelor education program [Tables 1 and 2; Figures 2 and 4]. Most female contributors (71.53%) reported having prior knowledge of epilepsy as compared with male contributors (58.70%). Source of awareness was public media (30.30% male and 43.07% female). Most female contributors (70.76%) believed that epilepsy is an organic disease as compared with 44.51% male contributors. The belief about epilepsy reflects the educational level. Educated contributors linked epilepsy to organic cause. However, 10.96% male and 9.23% female contributors also linked epilepsy to evil spirit. About 22.58% male and 31.53% female contributors accept that epilepsy is a psychiatric illness. Genetic cause of epilepsy was accepted by 28.38% male and 46.92% female contributors. Most of the respondents (70.96% male and 80.76% female contributors) thought to allow epileptic patients to live in society with other normal persons. Some of the contributors (34.83% male and 45.38% female) showed positive attitude about jobs of epilepsy.

![Figure 1: Age group of male population (contributors)](image)

| Table 1: Age group and academic level of male population (contributors) |
|---------------------------------------------------------------|
| **Frequency** | **Percentage** |
|----------------|----------------|
| Age group (years) |  |
| <20 | 53 | 34.19 |
| 20-40 | 86 | 55.48 |
| 41-60 | 12 | 7.74 |
| >60 | 4 | 2.58 |
| Academic level |  |
| Primary School or less | 5 | 3.22 |
| Intermediate or High School | 39 | 25.16 |
| Bachelor or Diploma | 106 | 68.38 |
| Master or PhD | 5 | 3.22 |

| Table 2: Age group and academic level of female population (contributors) |
|---------------------------------------------------------------|
| **Frequency** | **Percentage** |
|----------------|----------------|
| Age group (years) |  |
| <20 | 33 | 25.38 |
| 20-40 | 86 | 66.15 |
| 41-60 | 11 | 8.46 |
| >60 | Nil | Nil |
| Academic level |  |
| Primary School or less | 4 | 3.07 |
| Intermediate or High School | 36 | 27.69 |
| Bachelor or Diploma | 82 | 68.07 |
| Master or PhD | 8 | 6.15 |
patients without any restrictions. Only few contributors (24.51% male and 26.15% female) allowed epileptic patient to drive. About 26.45% male and 23.07% female contributors agreed that epileptic patients should not tell his diagnosis to the others to avoid social stigma. About 10.32% male and 6.92% female contributors believed that epileptic patients are usually having low IQ. Maximum number of female contributors (82.30%) than male contributors (58.70%) believed that epilepsy can be treated by medication. About 50.32% male and 76.15% female contributors agreed that Neurology deals with the diagnosis and treatment of epilepsy.

**Discussion**

The knowledge, awareness, and attitudes of the epilepsy are much improved in local community of Saudi Arabia.
Table 4: Questionnaires on epilepsy and percentage of female response

| Questions                                                                 | Response | Female Frequency | Percentage |
|---------------------------------------------------------------------------|----------|------------------|------------|
| Have you ever heard or read about epilepsy?                               | Yes      | 93               | 71.53      |
|                                                                           | No       | 22               | 16.92      |
|                                                                           | Not sure | 15               | 11.53      |
| If Yes, where did you obtain information about epilepsy?                   |          |                  |            |
|                                                                          | Public Media | 56             | 43.07      |
|                                                                          | Health Awareness Program | 30     | 23.07      |
|                                                                          | Doctors or Health Professionals | 03 | 2.30       |
|                                                                          | Patients or relatives of epileptic patients | 41 | 31.53      |
|                                                                          | Research studies | 07 | 5.38       |
| Epilepsy is an organic disease?                                           | Agree    | 92               | 70.76      |
|                                                                          | Disagree | 12               | 9.23       |
|                                                                          | Do not know | 27             | 20.76      |
| Epilepsy is nonorganic condition caused by possession of evil spirit or others? | Agree    | 12               | 9.23       |
|                                                                          | Disagree | 90               | 69.23      |
|                                                                          | Do not know | 28             | 21.53      |
| Epilepsy is a psychiatric illness (nonorganic)                            |          |                  |            |
|                                                                          | Agree    | 41               | 31.53      |
|                                                                          | Disagree | 59               | 45.38      |
|                                                                          | Do not know | 31        | 23.84      |
| Majority of epilepsy cause are genetic or hereditary in origin?           | Agree    | 61               | 46.92      |
|                                                                          | Disagree | 22               | 16.92      |
|                                                                          | Do not know | 50        | 38.46      |
| Do you think that epileptic patients can live in the society like other normal persons? | Yes | 105 | 80.76 |
|                                                                          | No       | 11               | 8.46       |
|                                                                          | Not sure | 14               | 10.76      |
| Do you think that epileptic patients can join any job without restrictions? | Yes | 65 | 54.38 |
|                                                                          | No       | 48               | 36.92      |
|                                                                          | Not sure | 23               | 17.69      |
| Do you think that epileptic patients can obtain driving license and drive without restrictions? | Yes | 34 | 26.15 |
|                                                                          | No       | 48               | 36.92      |
|                                                                          | Not sure | 40               | 30.76      |
| Do you agree that epileptic patients should not tell his diagnosis to the others to avoid social stigma? | Yes | 30 | 23.07 |
|                                                                          | No       | 69               | 53.07      |
|                                                                          | Not sure | 31               | 23.84      |
| Do you think that epileptic patients are usually having low IQ?           | Yes | 9 | 6.92 |
|                                                                          | No       | 80               | 61.53      |
|                                                                          | Not sure | 41              | 31.53      |
| Epilepsy is treated by                                                     | Medications | 107           | 82.30      |
|                                                                          | Surgery | 4                | 3.07       |
|                                                                          | Herbal medicine | 10 | 7.69 |
|                                                                          | No cure  | 10               | 7.69       |
| The branch of medicine primarily concerned with the diagnosis and treatment of epilepsy is | Neurology | 99 | 76.15 |
|                                                                          | Psychiatry | 8 | 6.15 |
|                                                                          | Alternative medicine | 8 | 6.15 |
|                                                                          | Do not know | 21        | 16.15 |

Maximum female contributors had prior awareness about epilepsy; they assumed that epilepsy is an organic disease as compared with male contributors. Source of knowledge is education and electronic media. However, 10.96% contributors think epilepsy is due to evil spirit possession. This is lower than the 40% rate that was reported earlier from the Saudi Arabia, United Arab Emirates (13.8%), and Kuwait (24%) study.[21‑23] About 19.35% contributors believes that there is no cure for epilepsy.

About 82.30% female contributors think that epilepsy is treated by medication as compared with 58.70% male contributors. One of the studies related to public awareness and attitude toward epilepsy indicates some improvement in public awareness and attitude toward epilepsy. However, 15% contributors in study think the cause of epilepsy is an evil act.[24]

Conclusion

The knowledge, awareness, and attitudes of the epilepsy are found to be much improved in local community of Saudi Arabia. In the modern era, people assumes that epilepsy is still due to evil spirit. Many contributors think restrictions on driving and getting jobs in epilepsy patient. Public awareness and educational campaigns should be included in modern methods of education to develop well-knowledge community that will improve the quality of life of epileptic patients.

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Conflicts of interest

There are no conflicts of interest.

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