Scientific Paper Entitled: Knowledge, Attitude and Practice Regarding Epilepsy Among Nurses in The Government Health Sector in The Kingdom of Saudi Arabia

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Abstract

Objective: The objective of this study was to assess the knowledge, attitude, and practice of nurses regarding epilepsy within the government health sector in Saudi Arabia. The study aimed to understand their subjective experiences, knowledge, and attitude towards epilepsy in a sociocultural context, and how their attitude shapes their practice towards individuals with epilepsy.

Methodology: An exploratory descriptive cross-sectional design was employed for this study. The study population consisted of licensed nurses working in the government health sector in Saudi Arabia. Private health facilities, non-trained health professionals, health professionals without a nursing background, and student nurses on clinical attachment were excluded. A multistage sampling technique was used to select the study participants from various communities. The sample size was determined using a standard statistical formula, resulting in a sample of 102 nurses. Data was collected using a semi-structured questionnaire. Descriptive statistics, including frequencies and percentages, were used to analyze the data. Cross-tabulation was performed for certain items. The data analysis was conducted using STATA version 12.

Results: The findings revealed that 67.7% (69/102) of the nurses were aware of the causes of epilepsy. However, 59.8% had a low level of knowledge about the disease. While 82.4%

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of the nurses suspected people with epilepsy to have a mental illness, 70.6% of the nurses demonstrated a positive attitude towards epilepsy. However, 52.9% exhibited poor practices in relation to the disease. Certain socio-demographic characteristics, such as area of specialty (RMN) (p=0.045), and having a close family relationship with epilepsy (p=0.001), were significantly associated with knowledge about epilepsy. Factors such as sex (female) (p=0.037) and specialty area (RMN) (p=0.054) were found to influence attitudes towards epilepsy. The area of specialty had a statistically significant influence on nurses' practices regarding epilepsy (p=0.001). There was no statistically significant association between knowledge about epilepsy and practice (p=0.134). However, attitude was significantly related to practice (p=0.008), indicating that a negative attitude was more likely to be associated with poor practice.

Conclusion: The study concluded that nurses within the government health sector in Saudi Arabia, generally had low knowledge, positive attitudes, and poor practices regarding epilepsy.

Recommendation: The study recommends that the Saudi Arabian Ministry of Health organize intermediate workshops at least every six months to provide training for nurses in epilepsy diagnoses in order to reduce the treatment gap. The health directorate should also raise awareness and educate communities about epilepsy to decrease stigma. It is imperative for the Ministry of Health and its agencies to enhance nursing education and training on epilepsy in order to improve healthcare delivery for individuals living with the disease.

Keywords: *Knowledge, Attitude, Practice, Epilepsy, nurses.*

Introduction

Epilepsy has historical connections with psychiatry, and its recognition can be traced back to ancient Indian medical systems such as Siddha, Ayurveda, and Unani (El-Amin et al., 2021). The term "epilepsy" originates from the Greek word "epilambanein," meaning to be attacked or seized (Mohamed et al., 2021). In Arabic, epilepsy is referred to as "Al-Saraa," and Arab and Muslim scientists like Al-Tabari and Al-Razi described epilepsy as a brain disorder in their writings centuries ago, distinguishing it from psychiatric disorders and dispelling notions of evil spirits or supernatural powers (Verma & Vankar, 2015).

Epilepsy is one of the oldest known brain disorders and is prevalent worldwide (Al-Adawi et al., 2000). It ranks as the second most commonly observed neurological condition in primary care and the most frequently encountered among neurologists (Linehan et al., 2010). Recent estimates suggest that approximately 70 million individuals are affected by epilepsy (Verma & Vankar, 2015). People with epilepsy are at risk of developing various psychological problems, including depression, anxiety, and psychosis (Dalrymple & Appleby, 2000; Kabir et al., n.d.). While convulsions are often associated with epileptic seizures, not all seizures lead to convulsions, and not all convulsions are caused by epilepsy. The term "fit" is sometimes used to describe a convulsion or epileptic seizure.

Epilepsy, as a major global brain disorder, should be considered a healthcare priority in Saudi Arabia. It is characterized by abnormal electrical activity in the brain, resulting in involuntary changes in body movement, function, sensation, awareness, and behavior. Seizures or "fits" can manifest in various forms, ranging from momentary lapses of attention to severe and frequent convulsions. Epilepsy encompasses not only medical aspects but also sociological, economic, and cultural dimensions (Diop et al., 2003). Unlike some other neurological conditions, epilepsy can be effectively controlled in the majority of cases through medication or surgical interventions (Linehan et al., 2010), as many of the causes of symptomatic epilepsy are preventable and treatable (Diop et al., 2003).

Despite global advancements in diagnosis and treatment. it is estimated that 80% of the global burden of epilepsy is concentrated in the developing world, where 80-90% of individuals with epilepsy receive no treatment at all (Organization, 2005). Due to their symptoms, many individuals with epilepsy face stigmatization from their communities and are perceived as weak, inhuman, dangerous, or inferior. However, epilepsy is a treatable condition, with up to 70% of seizures being controllable and a 25% risk of recurrence (Adjei et al., 2013). Despite the availability of highly effective and affordable treatments, up to 90% of people with epilepsy in low-income countries remain untreated. This treatment gap is attributed to inadequate healthcare systems, a shortage of trained personnel, limited access to essential drugs, and traditional beliefs and practices that do not recognize epilepsy as a treatable condition. This treatment gap significantly exacerbates the burden of epilepsy and disability (de Boer et al., 2008).

Due to widespread public fear and lack of understanding about epilepsy, many individuals are reluctant to discuss the disorder openly. This unwillingness leads to individuals living with epilepsy in secrecy, facing discrimination in their workplaces and communities, and a lack of funding for research on new therapeutic approaches (Epilepsy Advocacy, n.d.). This issue is evident in a study conducted in an urban population in Ghana, where a significant number of literate adults were found to be unaware of the causes of epilepsy. Out of 380 respondents, 172 (45.3%) did not know the cause of epilepsy. Among the 358 respondents who provided information on the cause of epilepsy, 114 (31.8%) believed it to be an inherited disease, while 100 (27.9%) attributed it to witchcraft, juju, or spiritual factors (Nyame & Biritwum, 1997). Another study conducted in Northern Ghana explored the beliefs about epilepsy and found that males associated seizures with harboring anal worms, while spirituality was a commonly perceived cause. Furthermore, there was a belief that epilepsy seizures were a form of punishment for women engaging in adultery (Adjei et al., 2013).

It is important to note that experiencing a seizure does not necessarily indicate that a person has epilepsy. Seizures can be triggered in individuals with epilepsy by various factors, including exposure to flashing or bright lights, lack of sleep, overstimulation (such as prolonged use of computer screens or video games), certain medications, and hyperventilation (excessive fast or deep breathing). Additionally, seizures can be triggered in anyone under specific conditions, such as life-threatening dehydration or high temperature. However, when a person experiences recurrent seizures without an apparent cause, they are diagnosed with epilepsy (Aldosari et al., 2022). Therefore, it is crucial to implement behavioral and psychosocial adjustments for individuals with epilepsy to control seizures, improve their quality of life, and adhere to medication regimens, ensure adequate sleep, maintain good nutrition, and reduce stress (Hosseini et al., 2016).

Commonly reported symptoms of epilepsy by respondents include convulsions, falling down, eye rolling, foaming at the mouth, urination, and biting of the tongue (Millogo et al., 2004). Interestingly, surveys conducted in developing countries with diverse cultures reveal shared misconceptions, such as epilepsy being a contagious illness or a form of mental retardation (Fernandes et al., 2005). Despite the existence of numerous misconceptions surrounding epilepsy, it has been reported that some individuals believe epilepsy can be transmitted through contact and advocate for the isolation or avoidance of individuals with epilepsy (Nyame & Biritwum, 1997). A study among people with epilepsy supported this assertion, indicating that 2.2% of the respondents believed epilepsy is contagious through contact with epileptic patients (Kassie et al., 2014).

The attitude of an individual towards a particular object, person, word, or behavior can be defined as a subjective evaluation of that object. This subjective evaluation can be negative, neutral, or positive (Bayo et al., 2016). People living with epilepsy have experienced discrimination in various ways (Ghanean et al., 2013). Reports from other studies have shown that individuals with limited awareness and knowledge about epilepsy tend to hold negative attitudes towards the disease and harbor misconceptions, such as considering

epilepsy as a form of insanity, untreatable, contagious, hereditary, or a type of mental retardation. Cultural beliefs, superstitions, and the lack of information about epilepsy contribute to perpetuating these misconceptions, particularly in developing countries (Ghanean et al., 2013).

The report highlights that in the context of healthcare in Saudi Arabia, the majority of patients with epilepsy do not receive hospital supervision, emphasizing the crucial role of general practitioners in their care (Thapar, 1996). Therefore, nurses play a significant role in providing coordinated care and education for individuals with epilepsy, as they often receive treatment from primary care providers rather than neurologists. A study conducted in Saudi Arabia demonstrated that a nurse-led clinic resulted in a high attendance rate and identified improvements in drug management for a substantial number of patients (Ridsdale et al., 1997).

In Saudi Arabia, a study focusing on patients with uncontrolled epilepsy showed that nurse-led intervention programs, which involved providing accurate information, conducting epilepsy audits to improve care, and developing treatment plans and goals, had a significant positive impact on the quality of life of adult patients with epilepsy. Therefore, nursing care for individuals with epilepsy is of utmost importance to minimize risks and complications. Key nursing interventions include maintaining an adequate airway, monitoring breathing and circulation during seizures, and preventing injuries. It is essential to have oral airway suction apparatus readily available to enhance patient safety and optimize management outcomes.

Regarding the perception of whether epilepsy is treatable or not, a notable percentage of clinical nurses in Saudi Arabia believed that epilepsy was incurable (Dayapoğlu & Tan, 2016). This misconception is reinforced by the notion that some cases of epilepsy cannot be cured (Baskind & Birbeck, 2005). A study also reported that a significant proportion of people with epilepsy continued to experience seizures despite medication. Consequently, families and healthcare providers may consider the child as incurable and believe that further treatment attempts are futile (El Sharkawy et al., 2006). However, a survey revealed that a majority of nurses believed that epilepsy can be controlled or cured, with approximately one-quarter of nurses holding the view that epilepsy can be entirely cured (Kassie et al., 2014). Similarly, a study involving medical students in Saudi Arabia indicated that both basic and clinical students considered epilepsy to be treatable, with a majority believing that treatment could be provided in a hospital setting (Ekeh & Ekrikpo, 2015).

The role of nurses in the care of patients with epilepsy encompasses three stages: before, during, and after seizures [Caserta et al., 2009; Morton et al., 2005; Smeltzer et al., 2008]. In Egypt, nurses undergo three years of clinical training following preparatory school, focusing on caring for patients with common medical conditions prevalent in the region, such as infections. However, there is limited data on specific education about epilepsy for nurses, and their knowledge of the condition is primarily acquired through cultural influences and experiences shared by senior colleagues. Nurses in Egypt are primarily trained for supportive care roles.

Research suggests that access to specialized nurses in epilepsy care can improve patients' understanding and management of their condition, leading to decreased morbidity and mortality rates [Hosking et al., 2002]. Structured epilepsy nursing programs have also been shown to enhance the quality of life for individuals with epilepsy [Helde et al., 2005]. However, in rural areas of Egypt, many nurses and clinical officers working in primary care clinics do not have on-site physician support, and their patient population may have limited resources to access physician-level care [Abdrbo et al., 2011; Abou El-Enein and El Mahdy, 2011; El Enein and Zaghloul, 2011].

In addition to their professional role, healthcare professionals, including nurses, hold a position of influence and education within the community. Therefore, it is essential to

evaluate the knowledge, attitudes, and practices among nurses in Saudi Arabia concerning epilepsy, both before and after implementing an educational protocol on caring for individuals with epilepsy.

Aim of the study

- To determine the nurses' level of knowledge about epilepsy.

- To describe attitude and practices of nurses regarding epilepsy.

Study Questions:

- What is the nurses' level of knowledge about epilepsy in government hospitals in Riyadh?

- What is the nurses' attitude about epilepsy patients in government hospitals in Riyadh?

- What is the nurses' practices with epilepsy patients in government hospitals in Riyadh?

Study Limitations

- Spatial Limitations: The study will be conducted in Riyadh, Saudi Arabia.

- Temporal Limitations: The study will be conducted in the year 2021.

- Human Limitations: The study will be conducted on a sample of healthcare staff in the government health sector in Riyadh.

- Subjective Limitations: The study is limited to investigate nurses' knowledge, attitude and practices towards epilepsy in the government health sector in the Kingdom of Saudi Arabia.

Methods

Research design

The study was a quantitative, cross-sectional and analytical study. This was a quantitative design to quantify and describe the knowledge, attitudes and practices towards epilepsy and cross-sectional as the data were collected at one point in time. It was also an analytical study as it allowed the researchers to test the relationship between independent and dependent variables.

Tool

The research tool used for data collection for this study was a semi-structured questionnaire.

Study setting

This study was conducted in the government health sector in Saudi Arabia.

Population

The participants in this study were registered nurses (RNs) employed in hospitals located in Saudi Arabia. The study included RNs who met the following inclusion criteria: (a) aged between 18 and 60 years, (b) provided informed consent and participated voluntarily, and (c) possessed more than one year of clinical work experience. Exclusion criteria encompassed: (a) RNs receiving medication for mental illness, (b) RNs on leave due to sickness, personal reasons, studying abroad, or other factors, and (c) RNs working in medical technology departments or other functional departments. Questionnaires with incomplete answers, consistent answer options, or excessively short completion times were rejected.

Study sample

The study sample, selected from the study population, comprises a subset of individuals or elements representing the population accurately. The sample is chosen based on scientific criteria, utilizing random or non-random selection methods. The researchers selected a random sample of 102 nurses from the governmental healthcare sector in Riyadh city.

Ethical consideration

This study received ethical approval from the Medical Ethics Committee of government health sector in Riyadh city. Prior to data collection, informed consent was obtained from all participants, ensuring their understanding and agreement to participate. The confidentiality of participants' clinical data and basic information was strictly maintained. All procedures conducted in the study adhered to the principles outlined in the Declaration of Helsinki.

Data analysis

Descriptive statistics, such as frequencies and percentages, were utilized to present socio-demographic data of the respondents. Additionally, responses to various items and relevant questions were cross-tabulated. Statistical analysis was performed using STATA version 12. Bivariate logistic regression was conducted to examine the relationship between independent and outcome variables. For questionnaire responses, participants who provided positive responses across multiple options were categorized as having high knowledge, while those with poor responses were categorized as having low knowledge regarding the studied disease. Similar categorizations were made for attitudes and practices, with positive attitudes and practices being distinguished from negative ones. This categorization aimed to assess the significance of variables in influencing study outcomes.

Result

Socio-demographic characteristics

The study achieved a 100% response rate. The majority of nurses, constituting 78.43%, fell within the age range of 21 to 30 years. Females accounted for over half of the participants, totaling 73.5%. Regarding professional roles, 39.2% were Community Health Nurses, 6.9% were Registered Midwives, and 28.4% were Health Assistant Clinical (HAC). Additionally, 8.8% reported having a close family member with a history of epilepsy. Table 1 illustrates the sociodemographic profile of the respondents.

Knowledge of factors contributing to the development of epilepsy

Table 2 presents the findings regarding nurses' knowledge of factors contributing to the development of epilepsy within the government health sector in Saudi Arabia. The results pertaining to the perceived causes of epilepsy showed that 48.0% of the nurses correctly associated birth trauma as a cause of epilepsy. However, 22.5% of the respondents incorrectly attributed hereditary factors to the onset of the disease. On the other hand, 13.7% of the nurses correctly identified brain injury as a contributing factor. Interestingly, an equal number of nurses (13.7%) mistakenly believed that witchcraft was a cause of epilepsy.

In terms of the nurses' understanding of the disease, the data revealed that 57.8% of the respondents correctly acknowledged that convulsions contribute to the development of epilepsy. Furthermore, 21.6% of the nurses recognized high body temperature as a contributing factor, while 14.7% associated malaria with the development of epilepsy, both of which are accurate responses.

Regarding maternal factors, the results showed that a significant proportion of nurses recognized maternal alcohol consumption (68.6%), malnutrition (64.7%), and drug use

(49.0%) as risk factors for epilepsy. However, only 23.6% of the nurses correctly identified maternal age above 30 years as a risk factor.

When assessing activities that can trigger seizures in people with epilepsy, 8.8% of the nurses correctly identified staring at a TV or computer screen for too long as a potential trigger, while 36.3% recognized stress as a triggering factor. In contrast, only 3.9% of the nurses correctly acknowledged that breathing too fast or deeply could trigger seizures, and 12.7% identified flashing or bright lights as potential triggers. However, a majority of nurses (45.1%) correctly identified lack of sleep as a contributory factor for seizure occurrence.

Concerning the manifestation of epilepsy, the data revealed that 31.4% of the nurses recognized a shrill cry (shouting) as a clinical feature, while 49.0% correctly associated loss of consciousness with epilepsy. Falling down as a manifestation was acknowledged by 48.0% of the nurses, and 60.8% identified jerking of the body as a cardinal manifestation. Rolling of the eyes was recognized by 30.4% of the nurses, while 45.1% correctly acknowledged foaming of the mouth. Biting of the tongue was correctly identified as a manifestation by 30.4% of the nurses, and urination was mentioned by 23.5% of the respondents. Abnormal behavior was recognized as a manifestation by 15.7% of the nurses.

Overall, the data indicated that although some nurses displayed adequate knowledge of epilepsy's causes, triggers, and manifestations, there were gaps in their understanding. This highlights the importance of improving nurses' knowledge regarding the clinical features of epilepsy to ensure appropriate monitoring and timely intervention for individuals with the condition.

Categorization of level of knowledge on epilepsy

Participants who answered 16 or more out of the 31 knowledge-based questions correctly regarding factors contributing to epilepsy development were categorized as having "high" knowledge. Conversely, those scoring 15 or fewer were considered to have "low" knowledge. As depicted in Table 3, the categorization revealed that the majority of nurses, constituting 59.8% (61 out of 102), demonstrated lower knowledge levels regarding epilepsy.

Categorization of attitude towards epilepsy

The operational classification of attitude towards epilepsy was based on categorizing respondents' attitudes as either positive or negative. Those who provided three appropriate responses were classified as having a "positive" attitude, while those who had four or more inappropriate responses were classified as having a "negative" attitude. Table 4 shows the distribution of attitudes based on this classification.

From the categorization, it is evident that 70.6% (70 out of 102) of the nurses exhibited a positive attitude towards people with epilepsy.

However, no statistically significant relationship was found between nurses' behavior and their knowledge of epilepsy (p=0.120). Similarly, when cross-tabulating attitude and knowledge on epilepsy, no statistically significant association was observed (p=0.192).

On the other hand, a significant difference was noted in relation to positive attitude and practices related to epilepsy (p=0.008). Table 5 provides further details on this finding.

Practices on Epilepsy

When assessing the skills of the nurses in managing epilepsy during seizures, the study found that the majority of respondents (87.3%) stated that they would call the doctor during an epileptic crisis, 81.4% indicated that they would touch the patient, and 68.6% said they would perform first aid measures. These responses were considered correct.

In terms of counseling patients with epilepsy, all participants responded affirmatively, indicating that they would provide counseling support. Specific recommendations given

were: avoiding heights (24.5%), avoiding alcohol (32.4%), taking drugs as prescribed (26.5%), engaging in regular exercise (10.8%), and getting plenty of sleep (14.7%).

Regarding the preferred choice of treatment, the majority of nurses (66.7%) answered affirmatively for orthodox medicine, which was considered the correct response. However, the majority responded negatively to alternative treatment options such as traditional/herbal treatment (50.8%). These responses align with evidence-based medical practices for epilepsy treatment. Table 6 highlights the details of the practices on epilepsy.

They demonstrated awareness of various drugs used in the management of epilepsy. The mentioned agents included Phenobarbitone (34.3%), Diazepam (19.6%), Carbamazepine (14.7%), and Phenytoin (24.5%), among others. This suggests that the respondents have knowledge of some anticonvulsant medications and should be able to manage seizure cases in their communities effectively.

Categorization of practices on epilepsy

Regarding practices concerning epilepsy, participants who provided nine or more correct responses out of the 18 items were classified as demonstrating "good" practices, while those scoring between one to eight were categorized as having "poor" practices. As illustrated in Table 7, analysis reveals that over half, specifically 52.9% (54 out of 102), of the nurses exhibited poor practices regarding epilepsy.

Knowledge on epilepsy and practices

The strength of association between practices on epilepsy and other independent variables was examined, and their statistical significance was determined using p-values ($p < 0.050$). When assessing the relationship between knowledge of epilepsy and practices on epilepsy, no significant difference was found, as indicated in table 8.

Table 1: Socio-demographic Data of Respondents

Variable	Frequency (102)	Percentage (100%)
Age		
- 21-30	80	78.43
- 31-40	14	13.73
- 41-50	5	4.90
- 51-60	3	2.94
Sex		
- Male	27	26.5
- Female	75	73.5
Specialized Area		
- RGN	15	14.7
- RMN	11	10.8
- RM	7	6.9
- CHN	40	39.2
- Others	29	28.4
Close Family with Epilepsy		
- Yes	9	8.8
- No	93	91.2

Table 2: Knowledge of respondents on factors contributing to the development of epilepsy

Factors contributing to the Development of Epilepsy	Response rate (N=102)	
	Correct (%)	Wrong (%)
Perceived causal factors		
- Hereditary	79 (77.5%)	23 (22.5%)
- Brain injury	14 (13.7%)	88 (86.3%)
- Birth trauma	49 (48.0%)	53 (52.0%)
- Brain infection	10 (9.8%)	92 (90.2%)
- Poison	96 (94.1%)	6 (5.9%)
Personal factors		
- Convulsion	59 (57.8%)	43 (42.2%)
- High temperature	22 (21.6%)	80 (78.4%)
- Malaria	15 (14.7%)	87 (85.3%)
- Parasitic infections	9 (8.8%)	93 (91.2%)
- Others factors	4 (3.9%)	98 (96.1%)
Maternal factors in epilepsy		
- Maternal alcohol	70 (68.6%)	32 (31.4%)
- Malnutrition	66 (64.7%)	36 (35.3%)
- Drug use	50 (49.0%)	52 (52.0%)
- Maternal age >30 years	24 (23.6%)	78 (76.4%)
Triggering factors		
- Lack of sleep	46 (45.1%)	56 (54.9%)
- Stress	37 (36.3%)	65 (63.7%)
- Flashing/Bright light	13 (12.7%)	89 (87.3%)
- Staring at screen for long	9 (8.8%)	93 (91.2%)
- Breathing too fast	4 (3.9%)	98 (96.1%)
Manifestation of Epilepsy		
- Jerking of the body	62 (60.8%)	40 (39.2%)
- Loss of consciousness	50 (49.0%)	52 (51.0%)
- Falling down	49 (48.0%)	53 (52.0%)
- Foaming of the mouth	46 (45.1%)	56 (54.9%)
- Shrill cry (Shouting)	32 (31.4%)	70 (68.6%)
- Rolling of the eye	31 (30.4%)	71 (69.6%)
- Biting of tongue	31 (30.4%)	71 (69.6%)
- Urination	24 (23.5%)	78 (76.5%)
- Abnormal behaviour	16 (15.7%)	86 (84.3%)

Table 3: Level of knowledge of participants

Level of knowledge	Frequency (N=102)	Percentage (100%)
- High	41	40.2
- Low	61	59.8

Table 4: Categorization of attitude towards epilepsy

Attitude	Frequency (N=102)	Percentage (100%)
- Positive	72	70.6
- Negative	30	29.4

Table 5: Attitude and practices on epilepsy

Attitude Practices on epilepsy		p-value	
	Good (N=48) (100%)	Poor (N=54) (100%)	
- Positive	40 (83.3%) 8	32 (59.3%)	0.008*
- Negative	(16.7%)	22 (40.7%)	

(*) =p is statistically significant based on chi square analysis

Table 6: Practices on Epilepsy

Practices	Response rate (N=102)	
	Correct (%)	Wrong (%)
What to do when seizure occurs		
- Call the doctor	89 (87.3%)	13 (12.7%)
- Touching patient	83 (81.4%)	19 (18.6%)
- Perform first aid measures	70 (68.6%)	32 (31.4%)
Counselling to patient		
- Avoid heights	26 (24.5%)	76 (74.5%)
- Avoid alcohol	33 (32.4%)	69 (67.7%)
- Take drugs as prescribed	27 (26.5%)	75 (73.5%)
- Regular exercise	11 (10.8%)	91 (89.2%)
- Get plenty of sleep	15 (14.7%)	87 (85.3%)
Preferred choice for treatment		
- Traditional/herbal	61 (59.8%)	41 (40.2%)
- Orthodox medicine	68 (66.7%)	34 (33.3%)
Drugs used in the treatment		
- Phenobarbitone	35 (34.3%)	-
- Diazepam	20 (19.6%)	-
- Carbamazepine	15 (14.7%)	-
- Phenytoin	25 (24.5%)	-
- Other drugs	7 (6.9%)	-

Table 7: Level of practices on epilepsy

Practice	Frequency (N=102)	Percentage (100%)
Good	48	47.1
Poor	54	52.9

Table 8: Knowledge and practices on epilepsy

Knowledge on epilepsy	Practice		p-value
	Good (N=48) (100%)	Poor (N=54) (100%)	
- High	23 (47.9%)	18 (33.3%)	0.134

-	Low	25 (52.1%)	36 (66.7%)

Discussion.

The knowledge of the study participants on epilepsy regarding the causes in the development of epilepsy was analyzed. The results on knowing the cause of epilepsy indicated that a majority 69 (67.7%) of the nurses responded 'Yes' knowing the causes of epilepsy whilst 33 (32.4%) said 'No'. This implies that majority of the nurses have basic knowledge about the causes of epilepsy. This assertion was in sharp contrast to a study in Ghana that indicated 172 (45.3%) of the respondents did not know the cause of epilepsy among literate adults in urban population, saying they are ignorant of the cause of the disease (Nyame & Biritwum, 1997).

On the perceived causes of epilepsy, 49 (48.0%) of the nurses associated birth trauma to be the cause of epilepsy, 25 (24.5%) knew of brain injury, 23 (22.6%) claimed hereditary as a cause of epilepsy whilst 10 (9.8%) of the nurses said brain infection is also a cause of epilepsy. Some nurses said poisoning or bad blood. This result is in harmony with other studies conducted in Ghana and Uyo, Southern Nigeria (Ekeh & Ekrikpo, 2015).

When factors that could trigger seizure in people with epilepsy were assessed, 46 (45.1%) of nurses identified lack of sleep as a contributory factor that could trigger seizure in epileptic patients, 37 (36.3%) cited stress whilst 4 (3.9%) attributed fast breathing to trigger seizure in epileptic patients with few 9 (8.8%) affirming staring at computer screen for too long. This result is indicating that majority of the nurses did not know what could trigger seizure in people living with epilepsy as most of their responses were in the negative. However, seizures could be triggered in anyone under certain conditions such as life-threatening dehydration or high temperature among other factors.

Regarding manifestation of epilepsy, 62 (60.8%) nurses said jerking of the body is a manifestation of epilepsy, followed by loss of consciousness 50 (49.0%); 46 (45.1%) of nurses knew foaming of the mouth as a manifestation of epilepsy; 49 (48.0%) knew falling down to be a manifestation of epilepsy, while shouting was described by 32 (31.4%) nurses as manifestation of epilepsy. 31 (30.4%) of respondents identified rolling of the eye and tongue biting as manifestation of epilepsy, 24 (23.5%) respondents said urination is manifestation of epilepsy with only a few 16 (15.7%) respondents associating abnormal behaviour to epilepsy. The few who responded in the affirmative result was in consonance with other studies that cited responses such as convulsion, falling down, rolling of eyes, foaming of mouth, urination, and biting of tongue as manifestations of epileptic attack. This indicates that majority of the nurses did not the manifestations of epilepsy.

However, 84 (82.4%) of the nurses suspect epileptic people to have mental illness. In tune with the result from this analysis, a cited report has argued that 10 percent of respondents equated epilepsy with insanity (Mustapha et al., 2013). More so, report from other studies have shown that people with less awareness and knowledge about epilepsy tend to have negative attitudes toward the disease and misperceptions such as epilepsy being a form of insanity. It is obvious from the discussions on this issue of suspicion of mental illness that majority of the nurses for this study associate epilepsy with mental illness and this points to lack of knowledge of the disease. In sharp contrast to the findings of this research is the revelation that the highly educated did not view epileptics as not mentally sick persons.

Due to the training nurses have gone through, 70 (68.6%) of the nurses responded that they will perform recommended first-aid measures on epileptic person when seizure occurs, 19 (18.6%) of the nurses responded that they will not touch the patient whilst 13 (12.8%) of the nurses responded that they will call the doctor. For the nurses who claimed they will perform recommended first-aid measures, 54 (77.1%) of them said they will reassure the patient that he or she will be well and refer him or her for appropriate medical treatment,

whilst 16 (22.9%) after the recommended first-aid is given they will clean the person up and ask him to continue his or her journey. This result is not far from a description that portrays that the most important nursing intervention is to keep up an adequate airway, breathing and circulation during seizures and to prevent any injury of the patients with epilepsy. Besides, an oral airway suction apparatus should be available at bedside at all times to reduce danger whiles optimizing results in the management of the patient.

Conclusion

Nurses working in the government health sector in the kingdom of Saudi Arabia. exhibited some knowledge, positive attitudes, and poor practices regarding epilepsy. This can be attributed to the presence of misconceptions about epilepsy. These misconceptions about epilepsy hinder the development of positive attitudes towards epilepsy. Consequently, it is crucial to enhance training programs and healthcare services related to epilepsy in order to address these challenges and improve overall care delivery.

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