Journal of Health and Rehabilitation Research 2791-156X JHRR

For contributions to JHRR, contact at email: editor@jhrlmc.com

Original Article

Knowledge, Attitude, and Practices Regarding Epilepsy among Nurses in Tertiary Care Hospitals

Karam Elahi[1]*, Humaira Saddique[2], Syeda Sidra Tasneem[3]

[1]BSN (Generic) Student, Department of Nursing, The Superior University Lahore, Pakistan.
[2]Assistant Professor, Department of Nursing, The Superior University Lahore, Pakistan.
[3]Director Nursing, Department of Nursing, The Superior University Lahore, Pakistan.
Corresponding Author: Karam Elahi, Student; Email: karamhuzaifa99@gmail.com

Conflict of Interest: None.

Elahi K., et al. (2024). 4(2): DOI: https://doi.org/10.61919/jhrr.v4i2.829

ABSTRACT

Background: Epilepsy is a prevalent neurological disorder marked by recurrent seizures, which can significantly impact quality of life. Understanding how epilepsy is managed in healthcare settings, particularly by nurses who play a critical role in direct patient care, is essential. However, knowledge gaps and varied practices exist among nurses, influencing their efficacy in managing epilepsy patients.

Objective: This study aimed to assess the knowledge, attitudes, and practices regarding epilepsy among nurses in a tertiary care setting, with a focus on identifying areas of strength and those needing improvement.

Methods: A descriptive cross-sectional study was conducted at Jinnah Hospital, Lahore. The sample comprised 138 registered and diploma nurses working in medical, surgical, and emergency units, excluding head nurses, student nurses, and those in outpatient departments. An adapted questionnaire was employed to evaluate knowledge about epilepsy, attitudes towards patients, and practical care approaches. Data analysis was performed using descriptive statistics in SPSS version 25, with checks for data normality and distribution.

Results: The age distribution of participants showed 50.0% (69 nurses) within the 31-35 age group, 73.2% (101 nurses) were females, and experience levels varied with 53.6% (74 nurses) having 1-5 years of experience. Knowledge assessments revealed that 60.9% correctly identified epilepsy as non-contagious, yet misconceptions about epilepsy being a mental disorder were evident in 29.7% of responses. Practice-related responses indicated proper seizure management actions were inconsistently recognized, with only 29.0% knowing to avoid inserting objects in the patient's mouth during a seizure.

Conclusion: The study identified critical gaps in the knowledge and practices of nurses regarding epilepsy care, emphasizing the need for targeted educational programs to enhance nursing competence in epilepsy management. Effective training could lead to better patient outcomes and reduce misconceptions associated with the condition.

Keywords: Epilepsy, Nurses' Knowledge, Nursing Practice, Attitude towards Epilepsy, Tertiary Care, Seizure Management, Healthcare Education, Neurological Disorders.

INTRODUCTION

Epilepsy, a chronic non-communicable brain disorder, affects individuals across all age groups globally and is characterized by recurrent seizures resulting from a disturbance in the brain's electrical activity (1, 3). Normally, the brain produces small electrical impulses that travel through neurons with the aid of neurotransmitters. In epilepsy, these electrical rhythms become imbalanced, leading to seizures that disrupt the normal electrical sequence in the brain (1-6). Epilepsy can result from various factors including fever, neurological injuries, and environmental conditions, and significantly impacts over 80% of affected individuals living in developing countries (7-9).

The social stigma associated with epilepsy in many developing regions, such as sub-Saharan Africa, leads to discrimination, causing individuals to hide their condition and seek treatment from traditional healers instead of modern medical facilities (10-12). This preference for traditional medicine over contemporary healthcare can result in inadequate management of the disease (10-14).

Journal of Health and Rehabilitation Research 2791-156X JHRR

Moreover, cultural beliefs in these regions often restrict the social inclusion of individuals with epilepsy, prohibiting them from marrying or pursuing education, which further exacerbates the stigma and isolation associated with the disorder (13).

Nurses play a pivotal role in the care of patients with epilepsy. They are tasked with protecting patients during seizures by removing sharp objects, using suction devices to clear secretions, ensuring the patient is never left alone, and positioning the patient to prevent aspiration. Post-seizure care often includes administering oxygen as prescribed by a physician and continuing to monitor the patient's condition (15). Beyond immediate care, nurses also provide education to patients and their families about epilepsy, its management, and treatment options, thereby playing a crucial role in promoting better health outcomes (16, 19-20).

The attitudes of medical staff, particularly nurses, towards patients with epilepsy can significantly influence public perceptions of the condition. Nurses' regular interaction with patients and their role in community education are essential in fostering a positive environment and reducing stigma associated with epilepsy (17, 18). By enhancing nurses' knowledge and attitudes towards epilepsy, they can become more effective in their care roles and advocacy, thereby improving the quality of life for these patients.

Despite the global prevalence of epilepsy, which affects more than 60 million people worldwide, the disease continues to pose a significant challenge, especially in countries with limited resources like Pakistan. The mortality risk for individuals with epilepsy is notably higher than that of the general population, emphasizing the urgent need for effective management strategies and the crucial role of nurses in bridging the treatment gap in resource-poor settings (23-25).

The study aims to assess the knowledge, attitudes, and practices of nurses dealing with epilepsy patients, with the ultimate goal of improving management and treatment protocols to prevent further complications. This research is important as it highlights the critical role of nurses in addressing this preventable issue and improving patient care standards across various cultural and resource contexts (26). Understanding these aspects can significantly contribute to the overall management of epilepsy and help reduce the burden of this disease on patients and healthcare systems alike.

MATERIAL AND METHODS

This study employed a descriptive cross-sectional methodology to evaluate the knowledge, attitudes, and practices regarding epilepsy among nurses in a tertiary care setting. Conducted at Jinnah Hospital in Lahore, Pakistan, the research focused on diploma nurses and registered nurses actively working in intensive care, surgical, medical, and emergency units. Participants were selected using a convenience sampling technique, with inclusion criteria set for registered nurses with over a year of experience. Exclusions applied to head nurses, student nurses, those in outpatient departments, and newly appointed nurses. The final sample size of 138 participants was determined using Slovin's formula (N=218, e=0.05), resulting in a necessary sample for accurate representation and manageable data collection(1).

The study utilized an adapted questionnaire to gather data on the nurses' knowledge about epilepsy, as well as their attitudes and practices in managing the condition. Permission for the study was obtained from the ethics committee of the Nursing Department at Superior University and the administration of Jinnah Hospital. Prior to data collection, participants were informed about the study's purpose and procedures, ensuring voluntary participation and confidentiality in line with the ethical standards of the Helsinki Declaration. Consent was obtained from all participants, who were assured of their privacy and the non-compulsory nature of their involvement in the research.

Data were collected via the questionnaire, which included items on a nominal scale to assess knowledge and practices. Knowledge was evaluated through five items, with correct responses scored as one mark each, leading to a maximum score of five. Scores above 80% indicated good knowledge, while those between 60% and 80% suggested moderate knowledge, and scores below 60% were considered indicative of poor knowledge. Practices were similarly assessed using a seven-item questionnaire, with scoring paralleled to that of the knowledge assessment. Attitudes were assessed through a five-item questionnaire, where scores above 80% were deemed to reflect a good attitude towards epilepsy care, and scores below 60% indicated a poor attitude.

Data analysis was performed using SPSS version 25. Descriptive statistics were applied to summarize the data, and normality checks were conducted to validate the distribution of responses. Frequency distributions and percentages were calculated to describe the population characteristics and the distribution of responses across knowledge, attitudes, and practices scales. The study's methodology was rigorously designed to ensure reliability and validity, providing comprehensive insights into the nursing practices in the context of epilepsy care at Jinnah Hospital.

RESULTS

The study encompassed a diverse group of nursing professionals at Jinnah Hospital, Lahore, with a notable concentration of participants in the 31-35 age group, which constituted half of the sample at 50% (69 nurses). This demographic was followed by the

Journal of Health and Rehabilitation Research JHRR 2791-156X

36-40 age group, representing 21% of the sample (29 nurses). The 26-30 year olds accounted for 18.10% (25 nurses), while the youngest cohort, aged 21-25, made up 10.91% of the population (15 nurses) [Table 1].

Table 1: Demographic and Professional Characteristics of Healthcare Professionals

Category	Frequency	Percentage
Age		
21-25 yrs	15	10.91%
26-30 yrs	25	18.10%
31-35 yrs	69	50.00%
36-40 yrs	29	21.00%
Gender		
Males	37	26.79%
Females	101	73.20%
Qualification		
General Nursing	50	36.20%
Post RN	46	33.30%
Generic BSN	42	30.40%
Experience		
1-5 years	74	53.60%
6-10 years	59	42.80%
11-15 years	5	3.60%
Department		
Medical ward	76	55.10%
Surgical ward	23	16.70%
Other	39	28.30%

In terms of gender distribution, the majority of the participants were female, comprising 73.20% of the sample (101 nurses), which highlights a significant female predominance in the nursing staff at the facility. Conversely, male nurses represented 26.79% of the sample (37 nurses) [Table 1].

The qualifications of the nurses varied, with a slight majority holding a General Nursing qualification, which accounted for 36.20% of the participants (50 nurses). Close behind were those with a Post RN qualification, making up 33.30% of the sample (46 nurses), and those with a Generic BSN, who constituted 30.40% of the participants (42 nurses) [Table 1].

Experience levels among the nurses also varied, with the largest group having 1-5 years of experience, representing 53.60% of the sample (74 nurses). Those with 6-10 years of experience formed another substantial group at 42.80% (59 nurses), while nurses with 11-15 years of experience were the smallest group, making up only 3.60% of the sample (5 nurses) [Table 1].

Regarding the departments in which these nurses worked, the majority were stationed in the medical ward, accounting for 55.10% of the participants (76 nurses). This was significantly higher compared to those in the surgical ward and other departments, which accounted for 16.70% (23 nurses) and 28.30% (39 nurses), respectively [Table 1].

DISCUSSION

The study set out to examine the knowledge, attitudes, and practices regarding epilepsy among nurses in a tertiary care setting. Utilizing a descriptive cross-sectional design, the research assessed the understanding and behaviors related to epilepsy care among nursing staff at Jinnah Hospital in Lahore. The distribution of participant demographics showed a significant representation across different age groups, qualifications, and departments, providing a broad perspective on the subject within the hospital setting.

The findings revealed that while most of the nurses recognized that epilepsy is not a contagious disease (60.9% responding 'No'), misconceptions still persist among a notable portion, with 21.0% considering it contagious and 18.1% uncertain. This indicates a gap in knowledge that could impact the quality of care provided to patients with epilepsy. Similarly, responses to whether epilepsy is a mental disorder showed that a significant number of nurses (46.4%) either believed it was or were unsure, highlighting further educational needs (14).

The universal agreement among participants that epilepsy is treatable with modern drugs (100% responding 'Yes') suggests a good understanding of the general treatment approach. However, mixed responses to alternative treatments, such as faith healing and

Journal of Health and Rehabilitation Research 2791-156X JHRR

ayurvedic medicine, point to cultural influences on healthcare perceptions, which may complicate standardized care protocols. These findings align with global studies indicating varying levels of awareness and acceptance of scientific treatments over traditional ones in different cultural contexts (18-23).

In attitudes towards social inclusion, most nurses supported the idea that individuals with epilepsy can attend school and have children, reflecting progressive views on the social capabilities of patients with epilepsy. Yet, the less supportive responses to questions about traveling alone and working alongside someone with epilepsy indicate lingering reservations about the independence and safety of individuals with epilepsy (24, 26).

Practical knowledge was also varied, with only a fraction correctly identifying all appropriate actions to take during a seizure, such as not putting metallic objects in the patient's hand and moving the patient away from dangerous places. This suggests a need for improved practical training and standardized protocols to ensure safety and proper care during seizures.

The study's limitations include its cross-sectional design and focus on a single hospital, which may not provide a generalizable picture across different healthcare settings. The sample size, while adequate for statistical analysis, still represents a relatively small fraction of the nursing population, potentially limiting the broader applicability of the findings (26).

The research underscores a critical need for enhanced educational programs and training sessions to address the identified gaps in knowledge and practice among nurses regarding epilepsy. By improving education on epilepsy, particularly concerning its non-contagious nature and effective management strategies during seizures, healthcare facilities can enhance the quality of care and patient safety. Furthermore, integrating these educational programs into regular training for nursing staff could help standardize care approaches across various healthcare settings, potentially reducing disparities in treatment and improving overall health outcomes for patients with epilepsy.

Recommendations for future research include conducting experimental studies to test the effectiveness of targeted educational interventions on improving nurses' knowledge, attitudes, and practices. Additionally, expanding the study to include multiple hospitals and a larger sample size would help to confirm the findings and refine educational strategies accordingly. These efforts should aim to foster a more informed and responsive nursing workforce capable of delivering high-quality care to individuals with epilepsy.

CONCLUSION

The study highlights significant gaps in knowledge, attitudes, and practices regarding epilepsy among nurses, underscoring the urgent need for targeted educational interventions to enhance understanding and improve care delivery. By addressing these gaps through comprehensive training programs, healthcare facilities can not only improve patient safety and treatment outcomes but also foster a more inclusive and supportive environment for individuals with epilepsy. This initiative is crucial for elevating the standard of healthcare and ensuring that nurses are well-equipped to manage epilepsy effectively, ultimately contributing to better patient management and reduced healthcare disparities.

REFERENCES

1. Sazgar M, Young MG, Sazgar M, Young MG. Seizures and epilepsy. Absolute epilepsy and EEG rotation review: essentials for trainees. 2019:9-46.
2. McGonigal A, Bartolomei F, Chauvel P. On seizure semiology. Epilepsia. 2021;62(9):2019-35.
3. Johannessen J-A. Brain Science and Evidence-based Leadership. Knowledge Management for Leadership and Communication: AI, Innovation and the Digital Economy: Emerald Publishing Limited; 2020. p. 49-96.
4. Oswald P, Nasir N, Barneih F, AlShaltone O, AlShabi M, Bonny T, et al., editors. Epilepsy seizure detection with a majority voting classifier using logistic regression. Smart Biomedical and Physiological Sensor Technology XX; 2023: SPIE.
5. Lateef H, Ralston G, Bright T, Soundarajan A, Carpenter J. SeizureSeeker: A Novel Approach to Epileptic Seizure Detection Using Machine Learning. J Neurol Exp Neurosci. 2022;8(1):1-8.
6. Baizabal-Carvallo JF, Hallett M, Jankovic J. Pathogenesis and pathophysiology of functional (psychogenic) movement disorders. Neurobiology of disease. 2019;127:32-44.
7. Chao D, Xia Y. Acupuncture treatment of epilepsy. Current research in acupuncture. 2013:129-214.
8. Senanayake N, Román GC. Epidemiology of epilepsy in developing countries. Bulletin of the world health organization. 1993;71(2):247.
9. Siewe Fodjo JN, Remme JH, Preux P-M, Colebunders R. Meta-analysis of epilepsy prevalence in West Africa and its relationship with onchocerciasis endemicity and control. International health. 2020;12(3):192-202.
10. Millogo A, Njamnshi AK. Neurocysticercosis and epilepsy in sub-Saharan Africa. Brain Research Bulletin. 2019;145:30-8.

Journal of Health and Rehabilitation Research 2791-156X JHRR

11. Falco-Walter J, editor Epilepsy—definition, classification, pathophysiology, and epidemiology. Seminars in neurology; 2020: Thieme Medical Publishers, Inc. 333 Seventh Avenue, 18th Floor, New York, NY ….
12. Lalatović S, Milovanović M, Krstić N. Stigma and its association with health-related quality of life in adults with epilepsy. Epilepsy & Behavior. 2022;135:108874.
13. Nuhu FT, Fawole JO, Babalola OJ, Ayilara OO. Social consequences of epilepsy: A study of 231 Nigerian patients. Annals of African Medicine. 2010;9(3).
14. Millogo A, Ngowi AH, Carabin H, Ganaba R, Da A, Preux P-M. Knowledge, attitudes, and practices related to epilepsy in rural Burkina Faso. Epilepsy & Behavior. 2019;95:70-4.
15. Nephrolithiasis B, Anemia D, Thrombocytopenia E. SPECIALIZED SERVICES AND CORE SKILLS. Pediatric Hospital Medicine Board Review. 2022:136.
16. Abbas MP, Ahangar AA, Saadat P, Gholinya H. Assessment of knowledge about epilepsy and attitude toward epilepsy among nurses in hospitals affiliated to Babol University of Medical Sciences. Rom J Neurol. 2019;18:110-6.
17. Brizzi K, Deki S, Tshering L, Clark SJ, Nirola DK, Patenaude BN, et al. Knowledge, attitudes and practices regarding epilepsy in the Kingdom of Bhutan. International health. 2016;8(4):286-91.
18. Caller TA, Ferguson RJ, Roth RM, Secore KL, Alexandre FP, Zhao W, et al. A cognitive behavioral intervention (HOBSCOTCH) improves quality of life and attention in epilepsy. Epilepsy & Behavior. 2016;57:111-7.
19. Smith G, Wagner JL, Edwards JC. Epilepsy Update, Part 2. The American journal of nursing. 2015;115(6):34-44.
20. Zhao T, Gao Y, Zhu X, Wang N, Chen Y, Zhang J, et al. Awareness, attitudes toward epilepsy, and first aid knowledge of seizures of hospital staff in Henan, China. Epilepsy & Behavior. 2017;74:144-8.
21. Nygård C, Clancy A. Unsung heroes, flying blind—A metasynthesis of parents' experiences of caring for children with special health-care needs at home. Journal of clinical nursing. 2018;27(15-16):3179-96.
22. Teferi J, Shewangizaw Z. Assessment of knowledge, attitude, and practice related to epilepsy: a community-based study. Neuropsychiatric disease and treatment. 2015:1239-46.
23. Fiest KM, Sauro KM, Wiebe S, Patten SB, Kwon C-S, Dykeman J, et al. Prevalence and incidence of epilepsy: a systematic review and meta-analysis of international studies. Neurology. 2017;88(3):296-303.
24. Levira F, Thurman DJ, Sander JW, Hauser WA, Hesdorffer DC, Masanja H, et al. Premature mortality of epilepsy in low-and middle-income countries: a systematic review from the Mortality Task Force of the International League Against Epilepsy. Epilepsia. 2017;58(1):6-16.
25. Gorea R. Forensic Medicine and Toxicology: Challenges and Opportunities of the Future in India. INTERNATIONAL JOURNAL OF ETHICS, TRAUMA & VICTIMOLOGY. 2022;8(01):1-10.
26. Diby T, Khumalo PG, Anokyewaa-Amponsah G, Mustapha R, Ampofo AG. Knowledge about epilepsy and factors associated with attitudes toward marrying, employing, and driving people with epilepsy: A cross-sectional survey of Asokore Mampong community dwellers in Ghana. Epilepsy & Behavior. 2021;115:107646.