



A STUDY TO ASSESS LEVEL OF KNOWLEDGE OF NURSING STUDENTS REGARDING CARE OF PATIENTS WITH HEPATIC ENCEPHALOPATHY

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ABSTRACT

Background/Aim

Hepatic encephalopathy (HE) is a significant complication of acute and chronic liver disease. It is crucial for nursing students to have knowledge of encephalopathy symptoms to enable prompt and effective responses when caring for such patients. Therefore, this study aimed to evaluate nursing students' HE knowledge in Alshifa College of Nursing in Malappuram, Kerala.

Methods

This cross-sectional analytical study was conducted with nursing students in Alshifa College of Nursing in Malappuram, Kerala. The sample size was 73 nursing students from fourth semester and they were selected by convenience sampling technique. Data were collected using a self-administered questionnaire, and 73 nurses participated in knowledge assessment. The data were coded and entered into SPSS version 21.0 for descriptive and inferential statistics. Information letters and consent forms were obtained from all the participants.

Results

The majority of nursing students (88.8%) were female, and 8.2% were married. The age range of participants was 19–21 years (89%). More than half (56%) of the nursing students demonstrated moderate HE knowledge, whereas over a quarter (28%) exhibited good knowledge. There was a highly statistically significant association between marital status, nationality, and level of nurses' knowledge regarding HE (P-value = 0.01, and 0.02, respectively).

Conclusion

The study concludes that nursing students in Alshifa college of nursing have an adequate knowledge levels ranging from moderate to good. This highlights the importance of tailored educational programs to enhance their understanding of HE symptoms and management. Furthermore, the marital status, and nationality have significant association with nursing students' knowledge.

Key words: hepatic encephalopathy, nursing students

INTRODUCTION

Hepatic encephalopathy (HE) stands as a substantial and intricate neurological complication arising from both acute and chronic liver diseases. It encompasses a range of neuropsychiatric abnormalities, varying from subtle cognitive deficits to severe manifestations, posing considerable challenges in patient care.¹ The beginning is

usually insidious and characterized by subtle and sometimes periodic changes in memory, cognition, associative higher intellectual functions, and altered personality.²

Nurses, positioned at the frontline of patient care, assume an indispensable role in the proactive identification and immediate intervention for HE.³ As the primary caregivers who maintain patient care, nurses are also responsible to observe the earliest signs of HE's intricate neurological manifestations. Their daily interactions with patients foster an intimate understanding of their baseline cognitive and behavioral states, making them adept at detecting any deviations that could be indicative of HE deterioration.^{4,5}

Nurses should be able to recognize the overdosing of some medications that metabolized in liver, because they may affect on pulmonary functions when used at higher doses. Bleeding in the digestive tract complicates further HE treatment, because proteins from the blood contribute to high levels of serum ammonia. Nurses should have the necessary work conditions and continuous education to enable effective and efficient care through nursing interventions and specific nursing care.⁶ Nurses need to know the symptoms of encephalopathy and, thus, be able to react promptly and adequately to taking care of such patients. HE can manifest acutely with a rapid deterioration of mental function leading to coma, with no previous symptomatology.⁷

Furthermore, nurses have the unique skills to provide holistic care that extends beyond medical management to the observation and diet of affected patients.⁸ Their expertise in building therapeutic association with patients and their families enables them to not only provide medical interventions but also offer emotional support and education.⁹⁻¹¹ In the case of HE, where patients may experience confusion, altered consciousness, and mood changes, nurses' empathetic communication can foster a sense of reassurance and facilitate patient cooperation in adhering to treatment plans.^{12,13}

This study provides baseline information regarding nursing students' knowledge level in HE which is a critical aspect of cirrhosis management, including diet, over-the-counter medications, and important health maintenance activities, signs, and symptoms. Therefore, this study aimed to assess nursing students' HE knowledge levels in Alshifa College of Nursing, Perinthalmanna.

METHODS

Study Design

This is a cross-sectional analytical study which was conducted to assess nursing students' knowledge toward HE in Alshifa College of Nursing, Perinthalmanna.

Study Setting

This study was conducted at Alshifa College of Nursing, Perinthalmanna, Malappuram. Nursing students in 4th semester BSc. Nursing were included in the study.

Study Population

This study was conducted among nursing students studying in Alshifa College of Nursing, Perinthalmanna at the period of data collection. 4th semester BSc. Nursing students were included in this study. The other semester students were excluded from the study.

Sampling and Sample Size

A convenience sampling technique was used to include nursing students for the study. The final sample size calculated was 75 nursing students in the institution.

Data Collection

The data was collected using a survey consisting of two parts: part I: demographic characteristics of nursing students (11 questions); part II: knowledge toward HE which consists of causes, signs, medication, complications, and nursing care of HE (24 questions). The levels of knowledge were classified as follows: good level of the nursing students' knowledge who got 76%–100%, moderate knowledge 50–75% and poor knowledge 0%–49%.

The questionnaire was distributed to nursing students at the time of data collection. They were voluntarily responded to the invitation by 100% completion rate.

Data Collection Tool

The knowledge questionnaire was adopted from one previous study conducted by Ramachandran et al, 2020.¹⁴ The questionnaire was reviewed by two faculty members and a statistician to ensure accuracy and measurability. Cronbach's alpha was 0.84 more that the acceptable level.

Data Analysis

Data were analyzed using SPSS version 24. Descriptive analysis was performed for the demographic variables, and characteristics. The inferential test as Chi-square was used to test any association between knowledge levels with demographic characteristics of nursing students.

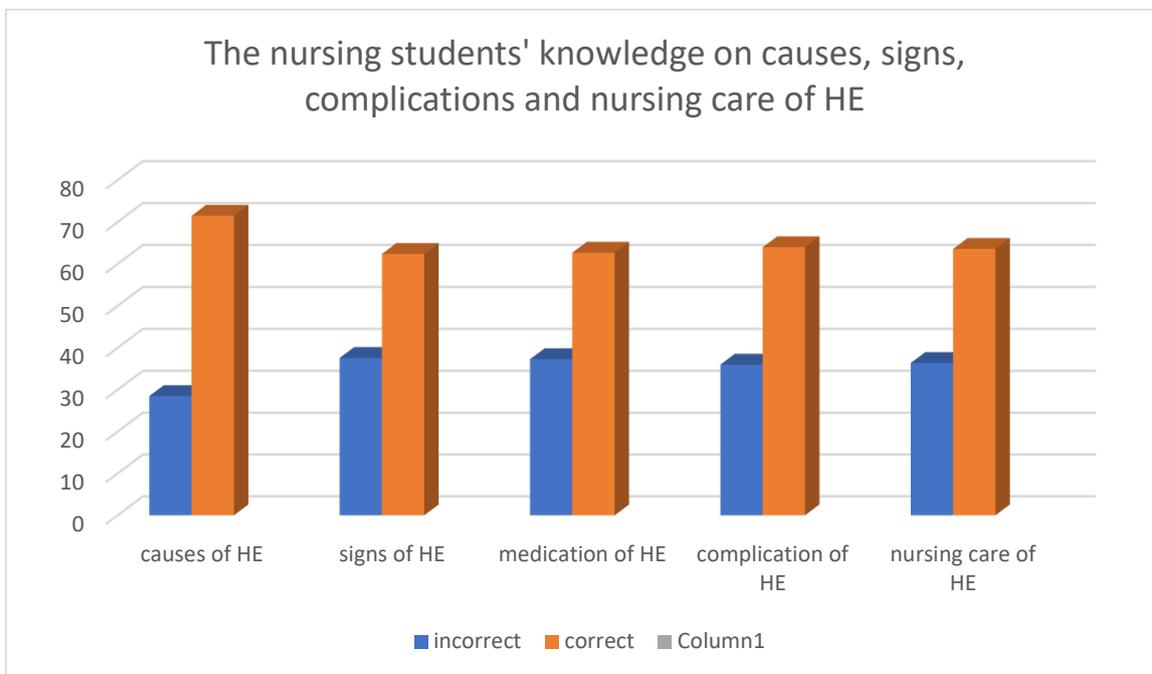
RESULTS

Table 1 provides a comprehensive overview of the demographic attributes of nursing students in Alshifa College of Nursing. The nursing students' age distribution was between 19 and 21 years, and a notable portion (87%) were unmarried, reflecting work-life equilibrium.

Table 1: demographic characteristics of nursing students

Demographic characteristics	Frequency	Percentage
Age		
18 years	18	24
19 years	22	29
20 years	23	30
21 years	12	16
Gender		
Male	8	10
Female	67	90
Marital status		
Single	65	87
Married	10	13

Figure 1 shows that all nurses have knowledge regarding HE disease in all stages from causes (71.5% a correct answer, while 28.5 in correct answers). About 62.4% had correct answers to the signs of disease, but 37.6% have correct answers. The same result about the importance of medications 62.7% has correct answers but 37.3% have incorrect answers. Lastly, nearly two thirds of participants were knowledgeable about HE disease (65%). Figure 2 explores knowledge of nursing students about caring of HE patients from the hospitals (N = 75). Figure 2 shows the overall nurses' knowledge regarding HE. It is shown that most of nursing students are knowledgeable about caring of HE patients.



DISCUSSION

The nursing students in Alshifa college of Nursing participated in study and their age distribution between 19-21 years. Further more notable portion (87%) were unmarried.

This study examined nursing students' knowledge regarding HE. The findings of this study showed that the participants demonstrated a good level of knowledge regarding the HE. These findings are consistent with the findings of other studies conducted on nurses^{17,18} that demonstrated that the majority of nurses had good knowledge about liver and HE.

However, while the study reveals valuable insights, it also bears certain limitations. The cross-sectional design restricts the ability to establish causality. Moreover, relying on self-reported knowledge might introduce response bias, and the inclusion of only Alshifa college of nursing limits the generalizability to other regions. Despite these limitations, the analysis sheds light on the intricate interplay between demographic attributes and HE knowledge among nursing students, offering directions for targeted educational interventions and policy enhancements.

CONCLUSION

In conclusion, this study revealed an adequate knowledge levels among the nursing students ranging from moderate to good. This highlights the importance of tailored educational programs to enhance nurses' understanding of HE symptoms and management. Furthermore, the marital status, education level, and nationality have significant association with nurses' knowledge. These insights emphasize the need for targeted interventions that consider these factors to effectively improve HE-related patient care.

REFERENCES

- Rose CF, Amodio P, Bajaj JS, et al. Hepatic encephalopathy: novel insights into classification, pathophysiology and therapy. *J Hepatol.* 2020;73(6):1526–1547. doi: 10.1016/j.jhep.2020.07.013 [DOI] [PubMed] [Google Scholar]
- Milovanovic T, Pantic I, Velickovic J, et al. Bacteremia in patients with liver cirrhosis in the era of increasing antimicrobial resistance: single-center epidemiology. *J Infect Dev Ctries.* 2021;15(12):1883–1890. doi: 10.3855/jidc.14508 [DOI] [PubMed] [Google Scholar]
- Künzler-Heule P, Beckmann S, Mahrer-Imhof R, Semela D, Händler-Schuster D. Being an informal caregiver for a relative with liver cirrhosis and overt hepatic encephalopathy: a phenomenological study. *J Clin Nurs.* 2016;25(17–18):2559–2568. doi: 10.1111/jocn.13298 [DOI] [PubMed] [Google Scholar]

4. KAftSot L. KASL clinical practice guidelines for liver cirrhosis: varices, hepatic encephalopathy, and related complications. *Clin Mol Hepatol*. 2020;26(2):83. [[DOI](#)] [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
5. Shrestha D, Rathi S, Grover S, et al. Factors affecting psychological burden on the informal caregiver of patients with cirrhosis: looking beyond the patient. *J Clin Exp Hepatol*. 2020;10(1):9–16. doi: 10.1016/j.jceh.2019.06.002 [[DOI](#)] [[PMC free article](#)] [[PubMed](#)] [[Google Scholar](#)]
6. Rice J, Dodge JL, Bambha KM, et al. Neutrophil-to-lymphocyte ratio associates independently with mortality in hospitalized patients with cirrhosis. *Clin Gastroenterol Hepatol*. 2018;16(11):1786–91. e1. doi: 10.1016/j.cgh.2018.04.045 [[DOI](#)] [[PubMed](#)] [[Google Scholar](#)]

