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A Study to Assess Knowledge and Practice Regarding the Glasgow Coma Scale Among Second-Year GNM Students in a Selected College in Rajkot

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Abstract

The Glasgow Coma Scale (GCS) is the most widely used scoring system to indicate the level of consciousness in an individual after experiencing a traumatic brain injury. GCS is a neurological scale designed to provide a dependable and objective method for documenting a person's conscious state for both initial and follow-up evaluations. The study was conducted by quantitative research method, and a univariate descriptive design was used. 100 samples studying in 2nd year General Nursing and Midwifery (GNM) were used for the study to collect data for the study. Major studies include students studying in the 2nd year of GNM, 17–19 years of age, male and female, some of them have no previous knowledge of the GCS and had an inadequate level of knowledge on practice. Regarding the level of knowledge, 0% reported adequate knowledge, 56% reported moderate knowledge, and 44% reported inadequate knowledge. Concerning the relationship between the degree of knowledge and their chosen demographic factors, like age, gender, information source, duration of stay, and occupation. A significant relationship was observed with related knowledge, while others were not significant.

Keywords: Glasgow Coma Scale, traumatic brain injury, knowledge assessment, nursing students, quantitative research methodology

INTRODUCTION

The central nervous system regulates most body functions and is composed of two components: the mind and the spinal cord. The brain is the core of human thought. The brain interprets our surroundings and is the source of control over bodily motion [1].

The main role of the central nervous system is to integrate and coordinate body functions. The central nervous system gathers input from various sources and executes appropriate responses to stimuli [1].

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The Glasgow Coma Scale (GCS) is the most widely used scoring system to indicate a person's level of consciousness after experiencing a traumatic brain injury. The GCS provides a dependable objective method for documenting the initial and later levels of consciousness in an individual after experiencing a brain injury [2].

Need for the Study

The GCS was introduced in 1974 by Graham Teasdale and Bryan J. Jennet, a neurosurgeon professor at the University of Glasgow's Institute of Neurological Sciences at the Southern General

Hospital in the city. The GCS is a neurological metric designed to provide a dependable and objective method for documenting a person's level of consciousness for both initial and follow-up evaluations [3].

The GCS can detect alterations in consciousness levels in patients with traumatic brain injury. It is a device that necessitates nurses to completely comprehend its function and how to operate it. Patients requiring GCS evaluation typically experience traumatic brain injury and are usually treated in the emergency room (ER) or intensive care unit (ICU) [4].

A recent assessment of the WHO admission GCS in 275 individuals with acute stroke focused on verbal scoring for intubated or dysphasic patients. The GCS score showed a pattern of circadian rhythms. Midnight hours were independently linked to a decline in the GCS score. A total of 60 patients with traumatic brain injury were admitted to hospitals across India in 2022 [5].

Objectives of the Study

1. To assess the knowledge regarding the GCS among 2nd year GNM (General Nursing and Midwifery) students in selected colleges at Rajkot.
2. To assess the knowledge on practice of the GCS among 2nd year GNM students in selected colleges in Rajkot.
3. To determine the association between the level of knowledge and practice of GCS and selected demographic variables [6].

Hypotheses

The study is based on the hypothesis.

H_1: There will be a significant level of knowledge on the GCS among 2nd-year GNM students.

H2: There will be a significant level of knowledge of GCS among 2nd-year GNM students.

METHODOLOGY

Research approach: Quantitative research design.

Research design: Univariate descriptive survey research design.

Variables

Dependent variable: Level of knowledge and knowledge of practice.

Independent variable: Demographic values such as age, gender, and family size.

Settings: The study will be conducted in a selected college in Rajkot.

Population

Target population: Students studying in GNM at the selected college in Rajkot.

Accessible population: Students studying in the 2nd year of GNM at the selected college in Rajkot.

Sample size: 100 students studying in the 2nd year of GNM.

Criteria for Sampling Technique

Inclusion Criteria for Sampling

1. Students who are studying in the 2nd year of GNM.
2. Students are available at the time of study.
2. Students are able to give answers.
3. Students who know the languages English, Hindi, and Gujarati [7].

Exclusion Criteria for Sampling

1. Students who are absent from the class.
2. Students who are not willing to participate.

Sampling technique: Nonprobability purposive sampling technique.

Description of Tool

Section A: Consists of demographic variables, including age, gender, education, occupation, and previous knowledge of the GCS.

Section B: Consists of structured knowledge questionnaires for assessment of knowledge level and post-assessment of knowledge level. The questionnaire contains a set of 30 multiple-choice questions with a total score of 30 [8].

RESULT AND DISCUSSION

The frequency and percentage of knowledge on practice scores of the respondents regarding level of knowledge, such as 30 and 30% in the area of adequate knowledge, 50 and 50% in the area of moderate knowledge, and 20 and 20% in the area of inadequate knowledge of myths and facts regarding the GCS among 2nd year GNM students (Figure 1).

The frequency and percentage knowledge scores of the respondents regarding level of knowledge, such as 0 and 0% are areas of adequate knowledge, 56 and 56% are areas of moderate knowledge, and 44 and 44% are areas of inadequate knowledge on myths and facts regarding GCS among 2nd year GNM students (Figure 2).

The examination of the relationship between specific demographic factors and knowledge levels regarding practice, utilizing the chi-square test, revealed a notable association between the respondents' knowledge scores and variables like age, gender, information source, residence, and occupation. Since the acquired values exceeded the table values at the 0.05 significance level, hypothesis H1 was accepted [9].

The examination of the relationship between certain demographic variables and knowledge level through the chi-square test revealed a significant association between the respondents' knowledge scores and variables including age, gender, information source, residence, and occupation. Since the values obtained exceeded the table values at the 0.05 significance level, hypothesis H1 was accepted.

FINDING OF THE STUDY

Major Study

Students studying in the 2nd year of GNM, 17–19 years of age, male and female, some of whom had no previous knowledge of the GCS, had an inadequate level of knowledge of practice.

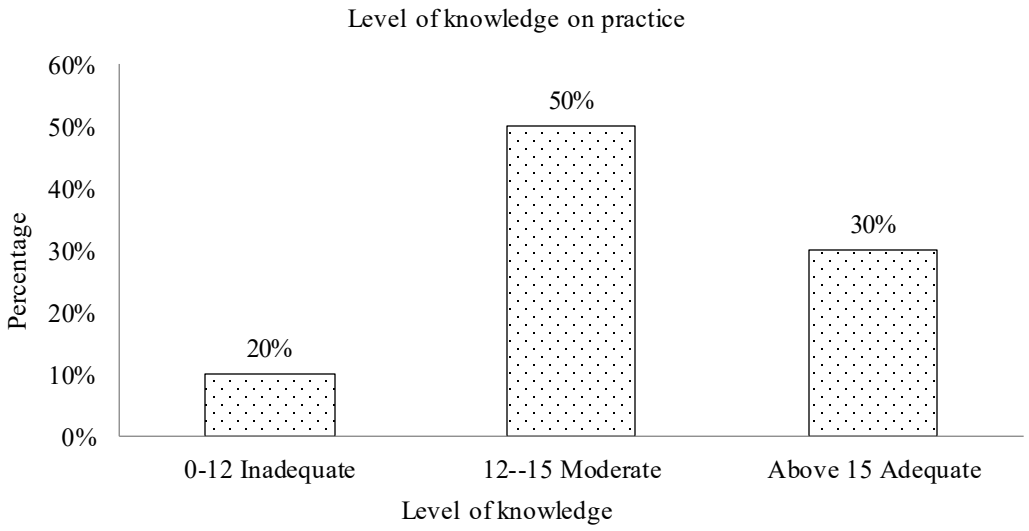

Figure 1. Graph showing frequency and percentage of knowledge on practice score.

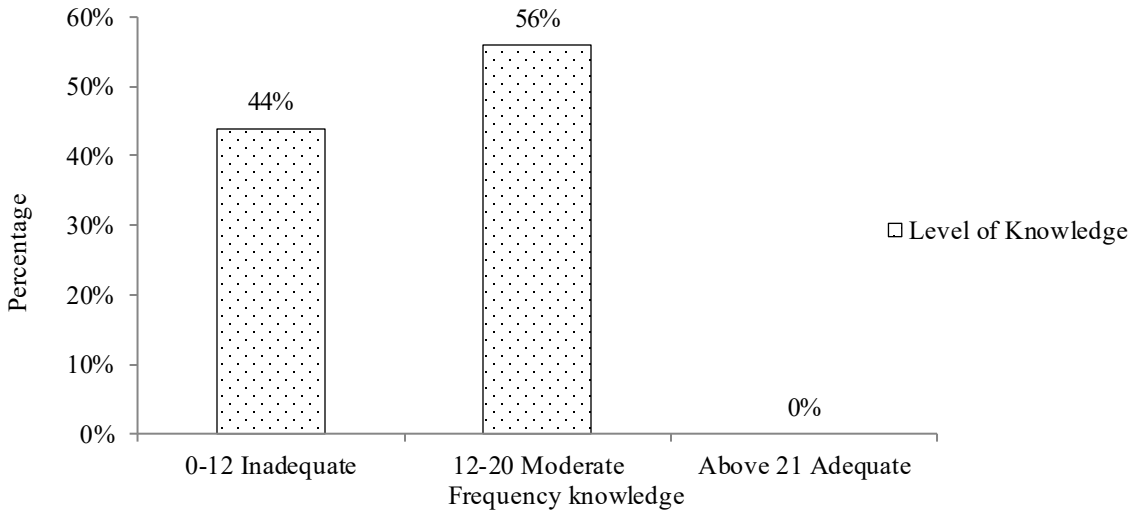

Figure 2. Graph showing the frequency and percentage of knowledge scores of the respondents regarding the level of knowledge.

Regarding the level of knowledge, 0% reported adequate knowledge, 56% reported moderate knowledge, and 44% reported inadequate knowledge [10].

The association between the level of knowledge and selected demographic variables such as age, gender, source of information, stay, and occupation was assessed. There was a significant association with the knowledge of the participants, while the other factors were not significant.

CONCLUSION

The primary finding of this study was that most 2nd-year GNM students possessed insufficient knowledge of the GCS and had a moderate understanding of its practical application.

This highlights the essential need to comprehend the significance of knowledge of the GCS, which will enhance both understanding and application related to the GCS.

Conflict of Interest

The authors have no conflicts of interest regarding these investigations.

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