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Original Research Paper

Nursing

ASSESSMENT OF THE KNOWLEDGE REGARDING CPR AND BASIC LIFE SUPPORT (BLS) AMONG THE B.SC. NURSING STUDENTS IN SELECTED NURSING COLLEGE OF WEST TRIPURA

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ABSTRACT

Cardiopulmonary resuscitation (CPR) and Basic Life Support (BLS) are essential skills for healthcare professionals, especially for nurses. These techniques are used in emergency situations to save the lives of patients who have suffered a cardiac arrest or respiratory failure. The prompt and accurate application of CPR and BLS can significantly increase the chances of survival for the patient. Therefore, it is crucial for nursing students to have adequate knowledge and training in these life-saving techniques. This paper aims to assess the knowledge regarding CPR and BLS among B.Sc. nursing students in selected nursing colleges of West Tripura. The researchers conducted a study to assess the knowledge regarding CPR and Basic Life Support (BLS) among the B.Sc. Nursing students in selected nursing college of West Tripura. The purpose of the study is to assess the knowledge regarding CPR and Basic Life Support (BLS) of BSc. Nursing students in selected nursing college of West Tripura. Cross sectional research design was selected for the study with 60 samples of B.Sc. Nursing students in selected nursing college of West Tripura. The present study shows 32 (53.33%) students have satisfactory knowledge about CPR and Basic Life Support (BLS). Their main sources of information about the CPR and Basic Life Support (BLS) were their regular study books and ward duty experience.

KEYWORDS : CPR (Cardiopulmonary Resuscitation), BLS (Basic Life Support), Nursing Education, Knowledge.

INTRODUCTION

According to the American Heart Association (AHA), approximately 350,000 cardiac arrests occur outside of the hospital setting each year in the United States (AHA, 2020). In India, the number is estimated to be much higher due to the lack of timely emergency medical services. In such situations, the immediate application of CPR and BLS by a trained individual can potentially save a life. Nurses, being the frontline healthcare professionals, are often the first responders in emergency situations and are expected to have knowledge and skills in CPR and BLS.

According to a national health report, nearly 350,000 out-of-hospital cardiac arrests occur annually in the country. Immediate and effective CPR, especially by trained healthcare professionals, can significantly increase the survival rates. Given that B.Sc. Nursing students often serve as frontline responders, assessing their knowledge in CPR and BLS becomes paramount to improving the overall survival outcomes in emergency situations."

Despite undergoing Basic Life Support (BLS) training, numerous students struggle to attain the necessary knowledge and psychomotor skills. Noteworthy deficits and skill deterioration have been observed within a few weeks of instruction (Hernández-Padilla et al., 2015) and even in the context of national accreditation and certification (Dick-Smith et al., 2020). The implications of this are evident in the competence of future BLS practices. The inability to effectively transfer learned skills from training environments increases the risk for patients experiencing Cardiac Arrest (CA). Although efforts have been made within pre-registration nursing BLS education to address performance limitations (Finn et al., 2015), the existing evidence base is extensive and varied. Consequently, an integrative review is essential to explore current objective and standardized international BLS training practices.

Basic Life Support (BLS) knowledge equips participants to promptly identify various life-threatening emergencies, administer high-quality chest compressions, provide appropriate ventilations, and employ an automated external defibrillator (AED) early on. Positioned as a life-saving intervention in premedical settings, BLS demands adequate knowledge and awareness, especially for nursing students enrolled in nursing colleges.

Aim Of The Study

The purpose of the study is to assess the knowledge regarding CPR and Basic Life Support (BLS) of B.Sc. Nursing students in selected nursing college of West Tripura.

Objectives Of The Study:

Assess the knowledge regarding CPR and Basic Life Support (BLS) of B.Sc. Nursing students in selected nursing college of West Tripura.

METHODOLOGY

Research Approach:

A non-experimental approach was employed for this study.

Research Design:

A cross-sectional research design was chosen as the most suitable for the study.

Research Variable:

The primary variable under investigation was the knowledge regarding Cardiopulmonary Resuscitation (CPR) and Basic Life Support (BLS).

Research Setting:

The study was conducted at the Institute of Nursing Science, Durjoynagar, West Tripura.

Rationale for Selecting the Setting:

The Institute of Nursing Science, Durjoynagar, West Tripura, served as the setting for the study due to its relevance to the researcher's Masters degree program, and the availability of participants.

Duration of the Study:

The study spanned a period of two weeks.

Population: The target population for this study comprised B.Sc. Nursing students at the Institute of Nursing Science, Durjoynagar, West Tripura.

Sample:

The sample for the study included all B.Sc. Nursing students at the Institute of Nursing Science, Durjoynagar, West Tripura.

Sample Size:

A total of 60 B.Sc. Nursing students were included in the study.

Sample Technique:

Purposive sampling technique was employed for participant selection.

Inclusion Criteria:

1. All B.Sc. Nursing students studying at the Institute of Nursing Science, Durjoynagar, West Tripura, available during the data collection period.
2. Willing participation in the research study from all B.Sc. Nursing students at the Institute of Nursing Science, Durjoynagar, West Tripura.

Data Collection Tool and Technique:

A structured questionnaire on CPR and BLS was developed for this study.

Data Collection Tool, Variables, and Technique:

The tool used for this study is a structured questionnaire designed to assess knowledge related to Cardiopulmonary Resuscitation (CPR) and Basic Life Support (BLS). The questionnaire comprises two parts: Part-A focuses on demographic variables, gathering information about the participants, while Part-B delves into their knowledge regarding CPR and BLS. The administration technique employed for data collection is the traditional paper-pencil method, wherein participants respond to the questionnaire in a written format. This approach allows for systematic gathering of information, providing insights into both demographic characteristics and the level of knowledge regarding CPR and BLS among the study participants.

Development of Data Collection Tools:

- A structured questionnaire was designed to gather background information and assess the knowledge of B.Sc. Nursing students regarding CPR and BLS.
- The structured questionnaire included Part A for demographic data and Part B for assessing knowledge through multiple-choice questions (MCQs).

Ethical Consideration:

- Formal permissions were obtained from the principal of the Institute of Nursing Science.
- Consent was obtained from B.Sc. Nursing students participating in the study.

Plan for Data Analysis:

Following data collection, information was tabulated and analyzed according to the predetermined plan. Descriptive statistics, including frequency, frequency percentage distribution, mean, and standard deviation of knowledge scores, were calculated.

Data Collection Procedure:

- Data collection commenced after obtaining formal permission from the Institute of Nursing Science.
- Consent was obtained from participating B.Sc. Nursing students after explaining the study's purpose.
- Questionnaires were distributed, and after 15 minutes, collected from the participants.

RESULTS:

The demographic characteristics of 60 B.Sc. Nursing students were examined, focusing on age, gender, and educational status. Regarding age distribution, 23.32% of students were below 20 years, 26.66% were between 20-25 years, 33.33% fell within the 26-30 age group, and 16.67% were between 31-35 years.

In terms of gender, 67% of the participants were female, while 33% were male.

The educational status distribution revealed that 33% were in the 1st year, 30% in the 2nd year, 20% in the 3rd year, and 17% in the 4th year of their B.Sc. Nursing program.

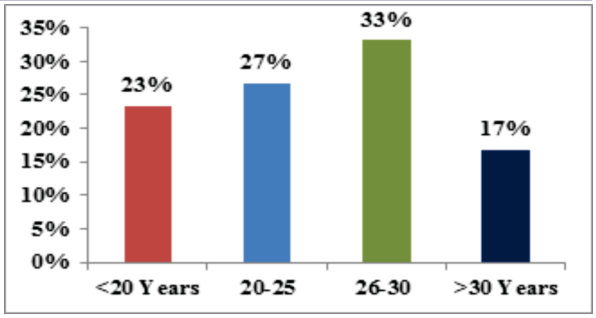

Figure No.1: Distribution of B.Sc. Nursing Student according to Age

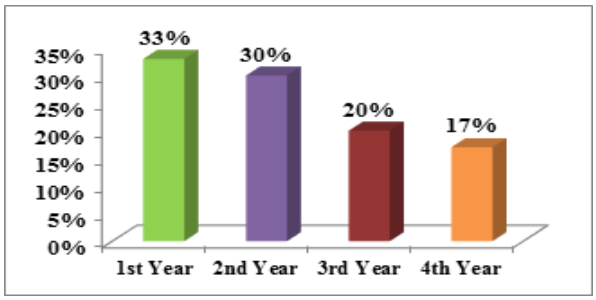

Figure No.2: Distribution of B.Sc. Nursing Student according to Educational Status

Table No.1: Frequency & Percentage distribution of B.Sc. Nursing students according to level of knowledge regarding CPR and BLS. N=60

Knowledge Score	Frequency	%	Range	Mean	SD
4-8	14	23%	15	12.7	14.6
9-11	32	54%			
12-15	8	13%			
16-19	6	10%			
Total	60	100%			

The table summarizes the frequency and percentage distribution of B.Sc. Nursing students based on their knowledge scores concerning Cardiopulmonary Resuscitation (CPR) and Basic Life Support (BLS). The knowledge scores are categorized into four ranges: 4-8, 9-11, 12-15, and 16-19. Among the 60 participants, 23% scored in the range of 4-8, 54% scored in the range of 9-11, 13% scored in the range of 12-15, and 10% scored in the range of 16-19. The mean knowledge score is 12.7 with a standard deviation of 1.6. This distribution provides insights into the varying levels of knowledge among B.Sc. Nursing students regarding CPR and BLS, highlighting the majority falling within the mid-range scores.

1. Poor Knowledge (4-8):

23% of the B.Sc. Nursing students fall within this range, indicating a level of knowledge categorized as poor.

2. Average Knowledge (9-11):

The majority of the students, constituting 54%, have knowledge scores in the range of 9-11, which falls under the category of average knowledge.

3. Good Knowledge (12-15):

Approximately 13% of the students demonstrate a good level of knowledge, as their scores fall within the range of 12-15.

4. Excellent Knowledge (16-19):

The remaining 10% of students exhibit an excellent level of knowledge, with scores ranging from 16-19.

DISCUSSION:

The study aimed to address the problem statement concerning the assessment of knowledge regarding Cardiopulmonary Resuscitation (CPR) and Basic Life Support (BLS) among B.Sc. Nursing students in a selected nursing college in West Tripura. The findings reveal that a significant portion, comprising 53.33% of the participants, demonstrated satisfactory knowledge in CPR and BLS. This suggests a noteworthy level of awareness and understanding of life-saving techniques within the studied cohort. Notably, the primary sources of information for these students were identified as their regular study books and experiences during ward duties. This emphasizes the crucial role of academic curriculum and practical exposure in shaping the knowledge base of nursing students in the context of CPR and BLS. The study's outcomes underscore the importance of integrating practical experiences, such as ward duties, with theoretical knowledge to enhance the overall competency of nursing students in life-saving techniques. Further exploration into the factors influencing knowledge acquisition and potential areas for improvement could contribute to more targeted interventions in nursing education.

CONCLUSION:

The study aimed to assess the knowledge of B.Sc. Nursing students regarding Cardiopulmonary Resuscitation (CPR) and Basic Life Support (BLS) in a selected nursing college of West Tripura. The demographic analysis revealed a diverse participant profile in terms of age, gender, and educational status. The distribution of knowledge scores highlighted that the majority of students (54%) possessed an average level of knowledge, while a significant proportion (23%) demonstrated poor knowledge, and smaller percentages showcased good (13%) and excellent (10%) knowledge. The discussion underscored the significance of practical experiences, such as ward duties, and academic curriculum in shaping the students' understanding of life-saving techniques. Notably, over half of the participants exhibited satisfactory knowledge, emphasizing the positive impact of their educational experiences. The study's findings provide valuable insights for educators and policymakers, suggesting potential areas for improvement in nursing education to enhance CPR and BLS knowledge among students.

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