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# A Study to Assess the Knowledge on Biomedical Waste Management Among GNM Students at Selected School of Nursing, Vrindavan, Mathura, U.P.

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**Abstract:** In pursuing the aim of abating health problems and enhancing the quality of care, healthcare facilities inevitably create waste that may itself be hazardous to health. Proper management of such waste is not only a legal, but also a social responsibility of the hospitals. Segregation at the site of waste generation is the first and foremost important step in healthcare waste management. It is emphasized as a means of ensuring that hazardous healthcare risk waste and healthcare general waste are separated and stored in appropriate containers. The importance of segregation is highlighted by the mere fact that only 10% to 25% of waste generated in health facilities is hazardous. Failure of this vital step turns non-hazardous waste into hazardous. Segregation also enables those who handle the containers outside the hospital wards to identify and treat them appropriately. There has been a sharp increase in the amount of waste generated from both health facilities and households. It is estimated that 0.5 to 2.0 kg per bed per day hospital waste is generated in India. Therefore, Biomedical waste must be properly managed and disposed of to protect the environment, general public and workers, especially healthcare and sanitation workers who are at risk of exposure to biomedical waste as an occupational hazard.

## Objectives

1-To assess the level of knowledge among the GNM students regarding Biomedical waste in selected hospital of Vrindavan.

2- To correlate the knowledge of GNM students regarding Biomedical waste with selected demographic variables

**Methodology:** This study was conducted to assess knowledge among the GNM students regarding Biomedical waste in selected Hospital in Vrindavan, Mathura and the descriptive study design was selected. Population selected was GNM students and sample size were 70. The consent was taken from samples. The subjects were selected by convenient sampling technique. The structured questionnaires were distributed to the students to assess their level of knowledge regarding Biomedical waste management after obtaining an informed consent. Data was collected by using Structured Knowledge Questionnaire.

**Results:** The study revealed that the level of knowledge among the students who has inadequate knowledge was 12.85% those who have moderate knowledge is 67.15% and adequate 20%. The chi-square test revealed that there was significant association with age, and training attended by students on Biomedical waste management and there is no significant association with year, source of information, area of working.

**Keywords:** Biomedical waste, Management, knowledge

## I. INTRODUCTION

Nursing personnel play a critical role in healthcare waste segregation in the hospitals. Their knowledge, attitudes, and practices regarding healthcare waste management are vital for the prevention of healthcare waste related hazards. Although there is an increased global awareness among health professionals about the hazards and also appropriate management techniques, the level of awareness in India is found to be below par. Adequate knowledge about the health hazard of hospital waste, proper technique, and methods of handling the waste could go a long way toward the safe disposal of hazardous hospital waste and protect the community.

### A. Statement of Problem

A Study to Assess the Knowledge on Biomedical Waste Management Among GNM Students at Selected School of Nursing Vrindavan, Mathura, U.P.

### B. Objectives

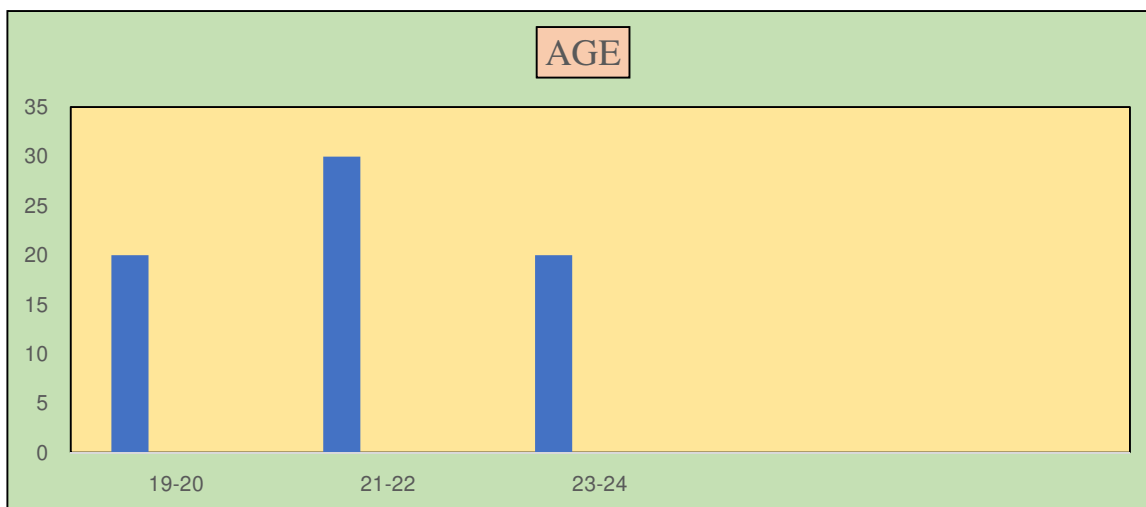
- 1) To assess the level of knowledge among the GNM students regarding Biomedical waste in selected hospital of Vrindavan.
- 2) To correlate the knowledge of GNM students regarding Biomedical waste with selected demographic variables

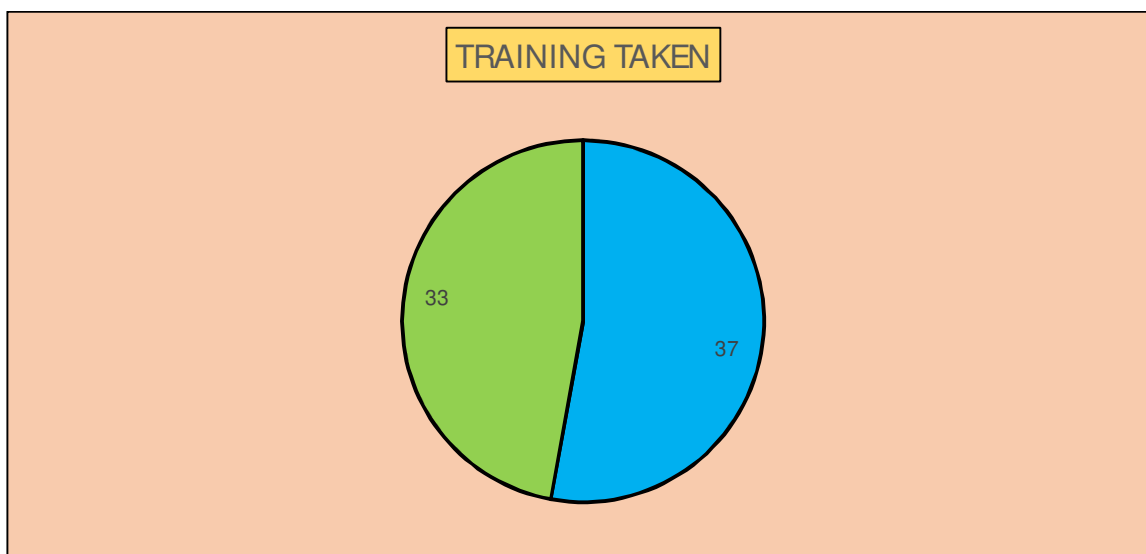
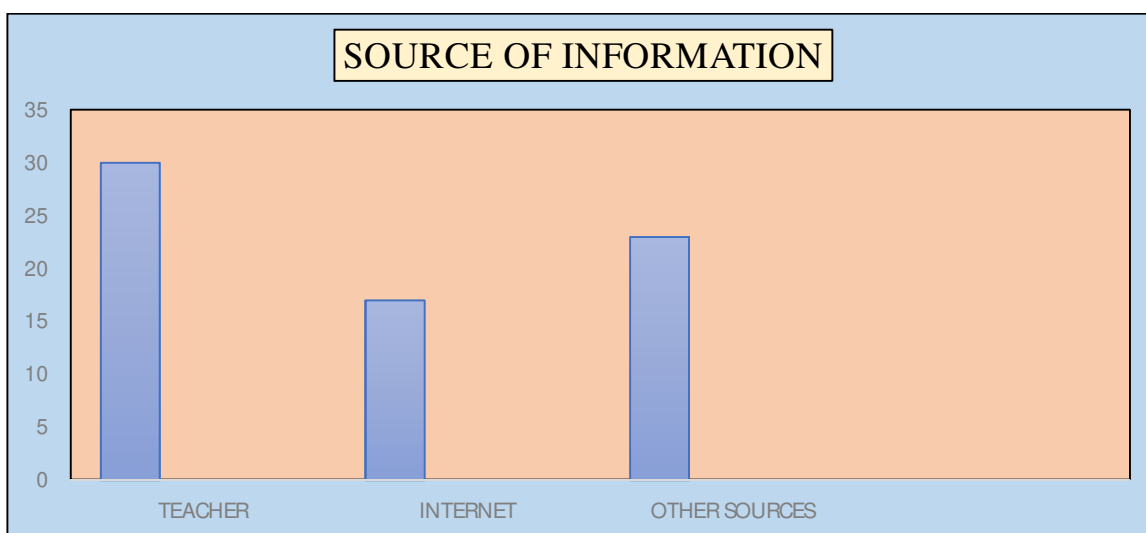
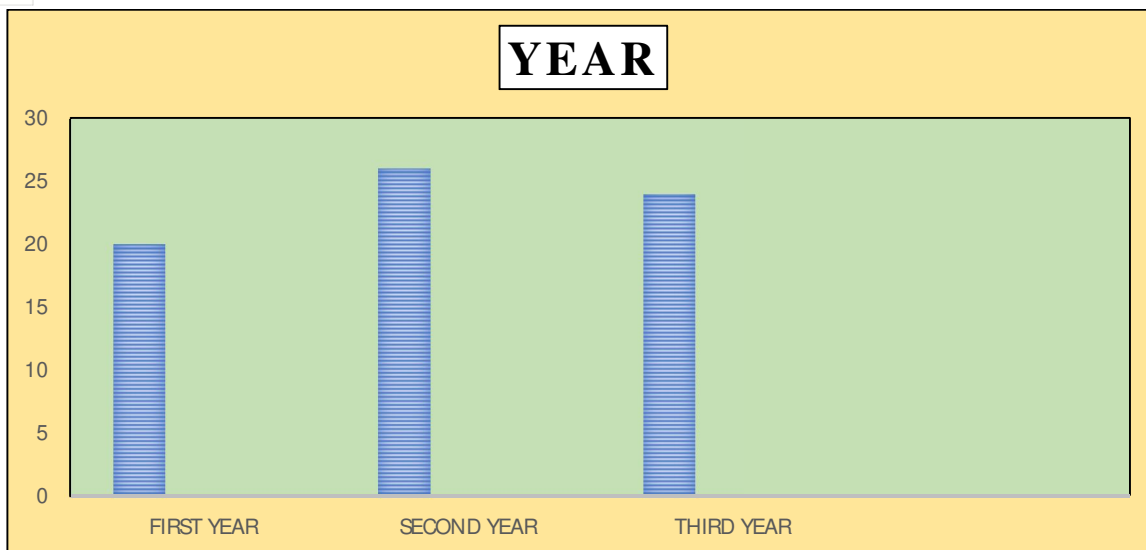
## II. MATERIAL AND METHODS

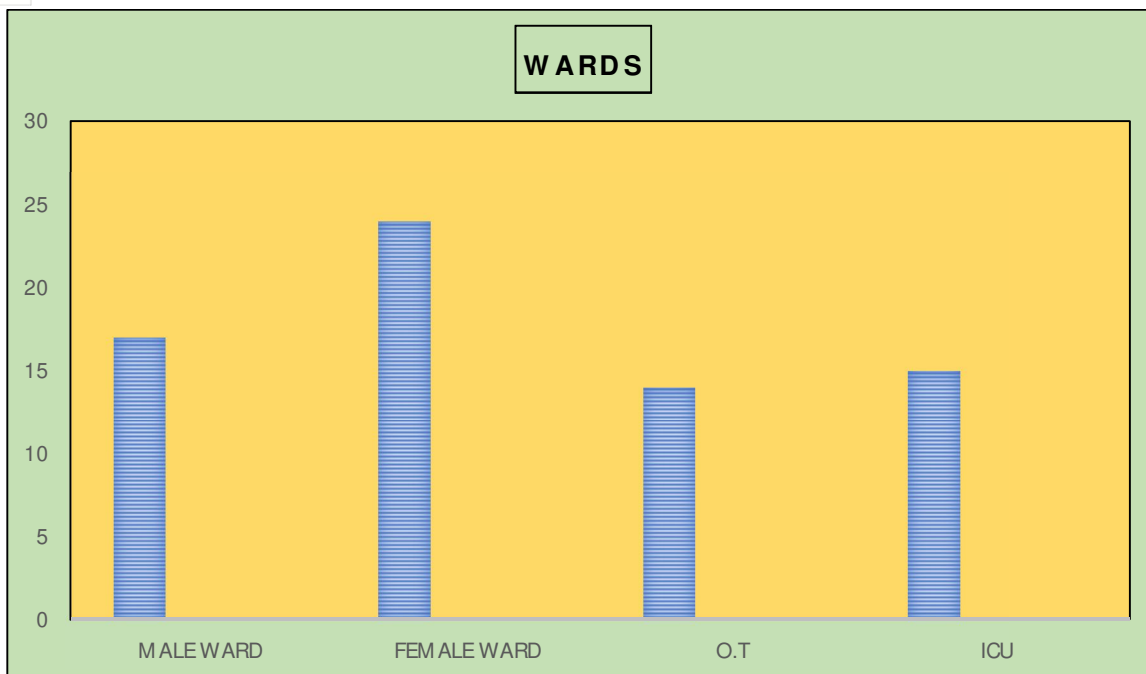
Descriptive research design was adopted for the study. The study conducted at Ramakrishna

Mission Sevashrama, School of Nursing first year GNM students were selected for the study by using convenient sampling technique. The formal permission obtained and written consent approval collected from sample with their willingness. The period of data collection was one week and data was collected from 70 GNM Students by using self-structured questionnaire.

Demographic Variable	Percentage Of Obtained Knowledge Scores			Chi Square	D.F	Inference	Frequency	Percentage
AGE	Inadequate	Moderate	Adequate	9.85	4	S	20 30 20	28.5% 43% 28.5%
19-20								
21-22	4	10	6					
23-24	2	26	2					
	3	11	6					
YEAR				5.64	4	NS	20 26 24	28.5% 37.2 34.3
FIRST YEAR	5	13	2					
SECOND YEAR	2	19	5					
THIRD YEAR	2	15	7					
SOURCE OF INFORMATION				2.693	4	NS	30 17 23	43 24.2 32.8
TEACHER	2	22	6					
INTERNET	2	12	3					
OTHER SOURCES	5	13	5					
TRAINING TAKEN				13.75	2	S	37 33	53 47
YES	3	28	6					
NO	5	19	8					
AREA OF WORKING				4.75	6	NS	17 24 14 15	24.2 34.3 20 21.5
MALE WARD	4	10	3					
FEMALE WARD	2	18	4					
O.T	2	09	3					
ICU	1	10	4					







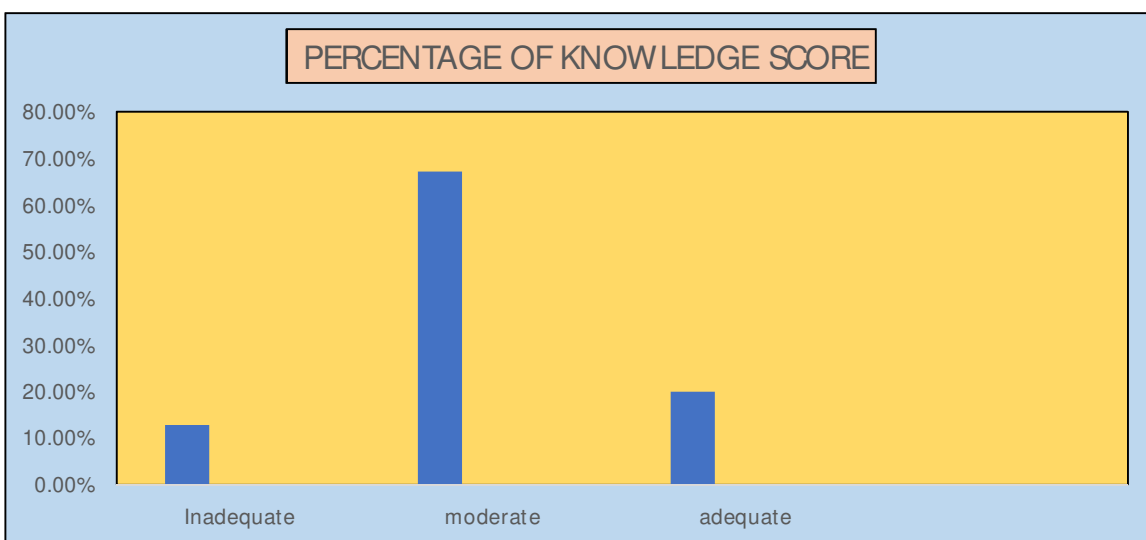
### III. RESULT AND DISCUSSION

The study revealed that the level of knowledge among the students who has inadequate knowledge was 12.85% those who have moderate knowledge is 67.15% and adequate was 20%. The chi-square test revealed that there was significant association with age, and training attended by students on Biomedical waste management and there is no significant association with year, source of information, area of working.

#### A. Assessment of Level of Knowledge on Biomedical Waste Management

KNOWLEDGE SCORE	PERCENTAGE
INADEQUATE	12.85%
MODERATE	67.15%
ADEQUATE	20%

Table 1-percentage of knowledge score



#### IV. DISCUSSION

*A. The First Objective Study was to assess the Knowledge of first year GNM Nursing Students*

The study revealed that the level of knowledge among the students who has inadequate knowledge was 12.85% those who have moderate knowledge is 67.15% and adequate 20%.

*B. The Second Objectives of this Study were to Associate the selected Demographical variables with Knowledge on Biomedical waste among GNM Nursing first year students.*

The chi-square test revealed that there was significant association with age, and training attended by students on Biomedical waste management and there is no significant association with year, source of information, area of working.at the  $p < 0.05$  level.

#### V. CONCLUSION

The study concluded that the most of the students are not having adequate knowledge regarding the Biomedical waste management and there was significant association with age, and training attended by students on Biomedical waste management and there is no significant association with year, source of information, area of working.

Conflict of interest: none

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