A Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge Regarding Bio Medical Waste Management among Staff Nurses at Integral Hospital Dasauli, Lucknow, U.P

Shahnaj Qumer[1], Achsah Babu[2], Mehnaaz Qumer[3], Shahnoor Khan[4], Saima[5], Shanoor Siddiqui[6], Shalini Mishra[7], Swati[8]

[1]Assistant Professor, Integral University (IINS&R)
[2]Lecturer, Integral University (IINS&R)
[3,4,5,6,7,8]Student's, Integral University (IINS&R)

Abstract:

Biomedical Waste Management (BMW) means that any anatomical waste generated during the diagnosis and treatment of the patient or human being. The medical waste that is generated through the hospital causes harmful or toxic effect to the environment. The burning of solid and regulated medical waste generated by health care recreates many problems. In adequate and improper knowledge of handling waste may be have serious health consequences.

According to WHO (2011) the inappropriate healthcare waste globally caused 21 million of hepatitis B (virus) and 32 % all new infections. Epidemiological studies indicate that through the improper management of waste had a source of 30 % of HBV infection, 18 % HCV infection & 0.3% of HIV infection.

Proper management of biomedical waste is dominant for nurses because nurses spend maximum time with patient and in the ward as compare to any other member in health care team. Nurses have to an aware about the latest guidelines and skills update biomedical waste management to decrease the infection among the patients due to inadequate disposal of biomedical waste management.

BACKGROUND: The amount of biomedical waste being generated in our country is increasing day by day. Biomedical waste if not handled properly can pollute the environment and can spread many harmful diseases. Healthcare workers in our country are still not fully aware about proper biomedical waste management handling and hospital. India as a developing country is facing a lot of health care problem, with the increase in health care facilities; there is a growing concern of hazards of biomedical waste. Since the nursing staff is at the centre of biomedical waste handling, their knowledge of adequate disposal of biomedical waste is important. So, we conducted a study regarding knowledge, attitude and practice of nursing staff working in a premier institute of western Rajasthan with respect to biomedical waste and its management.

Proper management of Biomedical Waste (BMW) generated in a healthcare facility is one of the most

important functions of a healthcare worker (HCW) as its improper management not only poses risk to 5 human being and environment, but may also invite legal action against HCW as well as hospital administration. This study was carried out to assess the knowledge of Bio Medical Waste Management among Staff Nurses at Integral Hospital, Lucknow.

OBJECTIVES: -

Objectives of the study are:

- To assess the knowledge regarding bio-medical waste management among staff nurses.
- To assess the effectiveness of structured teaching program on knowledge regarding biomedical waste management among staff nurses
- To find out the association between pre-test and post-test knowledge on Bio-Medical Waste with selected demographic variables among Staff Nurses at Integral Hospital, Lucknow.

MATERIALS AND METHODS: In this research study, the quantitative research approach adopted was pre-experimental, Pre-test and Post-test design setting of the study was selected in Integral Hospital, Lucknow and the sample was 40 Staff Nurses in Integral Hospital are selected by purposive sampling technique, the self-structured

questionnaire was used.

RESULTS: The result shows that mean pre-test score and post-test score with standard deviation were 12.58 ± 5.679 and 19.23 ± 1.804 respectively. Based on the findings of the researcher calculated 't' value i.e. 6.643. So the researcher accepted the research hypothesis. The result shows that there was significant association between pre-test and demographic variables.

CONCLUSION: The study concluded that the Structured Teaching Programme was effective in improving the level the knowledge regarding Bio Medical Waste Management.

Keywords: Effectiveness, Structured Teaching Program, Knowledge, Bio Medical Waste, Staff Nurses.

CHAPTER-1 INTRODUCTION
"Recycle it all, no matter how small" -

INTRODUCTION

Biomedical waste management (BMW) means that the any anatomical waste generated during the diagnosis and treatment of the patient or human being. The medical waste that is generated through the hospital cause harmful or toxic effect to the environment. The burning of solid and regulated medical waste generated by health care recreates many problems. Inadequate and improper knowledge of handling waste may be having serious health consequences.

Though legal prevision (BMW rules 1998) exits to mitigate the impact of hazardous and infected hospital waste on the community.[1] The improper knowledge about biomedical waste management is the sourceof infection like hepatitis B and C in developing countries. USA has approximately 15% of waste hazardous and 85% non-hazardous, out of 15% of hazardous waste 5 % non-infection and 10% is infection.[2]

According to WHO (2011) the inappropriate healthcare waste globally caused 21 million of hepatitis B (virus) and 32 % all new infections. 2 million hepatitis C virus, 260000 HIV in 2000. Epidemiological studies indicate that through the improper management of waste had a source of 30 % of HBV infection,18 % HCV infection & 0.3% of HIV infection.[3]

Biomedical waste management is a requirement for every health facility for ensuring human safety and

environmental sustainability. As per government guidelines, every health facility, large medical institute, or small clinic must ensure appropriate biomedical waste management. A health care facility (HCF) means a place where diagnosis, treatment, or immunization of human beings is provided irrespective of type and size of the health treatment system and research activity pertaining thereto. Government healthcare facilities include district hospitals, sub-divisional hospitals, community health centers, primary health centers, and sub-centers and private facilities, which include large corporate hospitals to small clinics.[4]

MS. J. Manora" (2014) stated that an ideal hospital requires infection free environmental not to treat the patient but also to keep the visitors safe and surrounding area infection free. hospital generated biomedical waste in both forms solid and liquid.

BACKGROUND OF THE STUDY

Biomedical waste is one of the major causes of a wide range of health hazards which should be seriously taken into concern. A wide range of human activities contributes towards biomedical waste management. To reduce the incidence of such illness, the health team members should h have adequate knowledge regarding these hazards.[5]

India as a developing country is facing a lot of health care problem, with the increase in health care facilities, there is a growing concern of hazards of biomedical waste. Since the nursing staff is at the center of biomedical waste handling, their knowledge of adequate disposal of biomedical waste is important. So, we conducted a study regarding knowledge, attitude and practice of nursing staff working in a premier institute of western Rajasthan with respect to biomedical waste and its management. [6]

Proper management of biomedical waste (BMW) generated in a healthcare facility is one of the most important function of a healthcare worker (HCW) as its improper management not only poses risk to human being and environment, but may also invite legal action against HCW as well as hospital administration. This study was carried out to assess the knowledge of biomedical waste management among staff nurses at integral hospital, Lucknow.[7]

Bio medical waste means is any waste generated during the diagnoses, treatment or immunization of human beings or in research activity. The waste produced in the course of healthcare activities carries a higher potential for infection and injury than any other type of waste. Bio medical waste generated in the hospital falls under two major categories. Non-hazardous and bio hazardous constituents of non-hazardous waste and non-infected plastic card board, packaging material, paper.

a) Infections waste _ sharp, non-sharp, plastic, plastic disposables liquid waste etc.

b) Non infection waste radioactive waste discarded glass, chemical waste, cytotoxic waste incinerated waste etc.

According to WHO (1998) Bio medical waste has been a growing concern because of recent incident of public exposes to discarded blood vials, needles, empty prescription bottles and syringes. Particularly from the municipal garbage bins and disposal site. The waste produced in the course of health care provide carries a higher potential for infection & injury than any other type of waste. Hazardous hospital waste are unique forms of solid and liquid waste generated in the diagnosis treatment and prevention of human diseases each year league amount of hazardous waste is produced by various health care setting.

A major hospital contributes substantially to the quantum of bio medical waste generated them smaller hospitals, nursing home, clinics, pathological laboratories, blood banks etc. also contribute a major chunk.[8]

NEED FOR THE STUDY

Acc. to Bekir onusarl (2003) define that one of India major achievement has been to change the attitude of the operators of health care facilities to staff nurse for practices in their daily operation and to purchase on site waste management services from the hospital.

Risk of air, waste and soil pollution directly due to waste, or due to defective incineration emissions and ash.

As per clinical experience we have observed most of the staff nurse have lack of knowledge regarding bio medical waste management segregation handling and management that can lead to needle stick injury, nosocomial infection as staff nurse is indulge in it. Hence, we want to assess the knowledge regarding bio medical waste management.

According to WHO with regard to life threatening virus infection such as HIV AIDS and Hepatitis B and C health care workers particularly nurse is at greater risk of infection through injuries from contaminated sharp.

Prevention of health servicing infection among patients due to poor management of bio medical waste management and infection manage practices.

Prevention of spreading of risk due to hazardous chemicals, drugs and other infection materials.

RESEARCH QUESTION

Is there is any effect of structured teaching programme on knowledge regarding bio medical waste management among staff nurses?

STATEMENT OF THE PROBLEM

"A study to assess the effectiveness of structured teaching program on knowledge regarding bio medical waste management among staff nurses at Integral hospital, Dasauli, Lucknow, UP."

AIM OF THE STUDY

At the end of the study the staff nurses will able to identify the correct method of handling the hospital waste through structured teaching programme.

OBJECTIVE OF THE STUDY

❖ To Assess the Effectiveness of Structured Teaching Program on Knowledge Regarding BioMedical Waste Management Among Staff Nurses.

❖ To Find Out the Association Between Pre-Test and Post-Test Knowledge on Bio Medical Waste with Selected Demographic Variable Among Staff Nurses at Integral Hospital, Lucknow.

❖ To Assess the Knowledge Regarding Bio Medical Waste Management Among Staff Nurses.

OPERATIONAL DEFINITION

ASSESS: In this study to find the level of knowledge among staff nurses regarding Bio Medical Waste Management.

EFFECTIVENESS: In this study compare the pre-test score and post test score after giving the structured teaching programmed.

STRUCTURED TEACHING PROGRAMME: In this study to give the Structured Teaching instructions in which includes Introduction, Definition, Color coding, new guidelines and how to use Bio Medical Waste Management in hospital.

KNOWLEDGE: In this study, fact information and skill require through experience or education the theoretical and practical understanding of a subject.

BIO MEDICAL WASTE: In this study, Bio medical waste or hospital waste is any kind of waste containing infecting (or potentially infectious) materials.

STAFF NURSES: In this study, the staff nurse is a person who provides routine quality care in a health care setting.

HOSPITAL: In this study, hospital is the health care setting that provides medical care as well as nursing care to the patient.

HYPOTHESIS

H1: There is a significant difference between pre-test and post-test knowledge nurse regarding bio medical waste management among staff nurse.

H2: There is a significant association between post test score and selected demographic variables among the staff nurse regarding bio medical waste management.

H0: There is no significant difference between pre-test and post-test knowledge.

DELIMITATION

This study is delimited to staff nurses at Integral Institute of Medical Sciences & Research, Integral hospital, Lucknow UP.

CONCEPTUAL FRAMEWORK

This study aims to assess the effectiveness of Structured Teaching Programme on knowledge regarding Bio Medical Waste among staff nurses at Integral Hospital. The conceptual framework for this study General System Theory with concept of input, throughput, output and feedback, first introduced by **Von Bertalanffy** in 1968.

INPUT

In this study input refers to the staff nurses and their quality age, gender, education, experience, income, marital status, previous knowledge regarding Bio Medical Waste Management.

THROUGHPUT

According to the Kenny throughput refers to the process by which the system process and give output. It includes the assessment of knowledge by STP to assess the knowledge regarding bio medical waste management. In the present study throughout considering out processing of unit which are pre-test and structured teaching programme and post-test regarding the knowledge of bio medical waste management.

OUTPUT AND FEEDBACK

According to Kenny feedback refers to the output which is returned to the system that allow and monitor itself over time in an attempt to more clearly to study state known as knowledge and effectiveness.

In this study output is the post-test knowledge score among the staff nurses which is divided into 3 groups like inadequate moderate adequate. Feedback is the difference in much percentage of pre and post-test knowledge score of staff nurse regarding Bio Medical Waste Management.
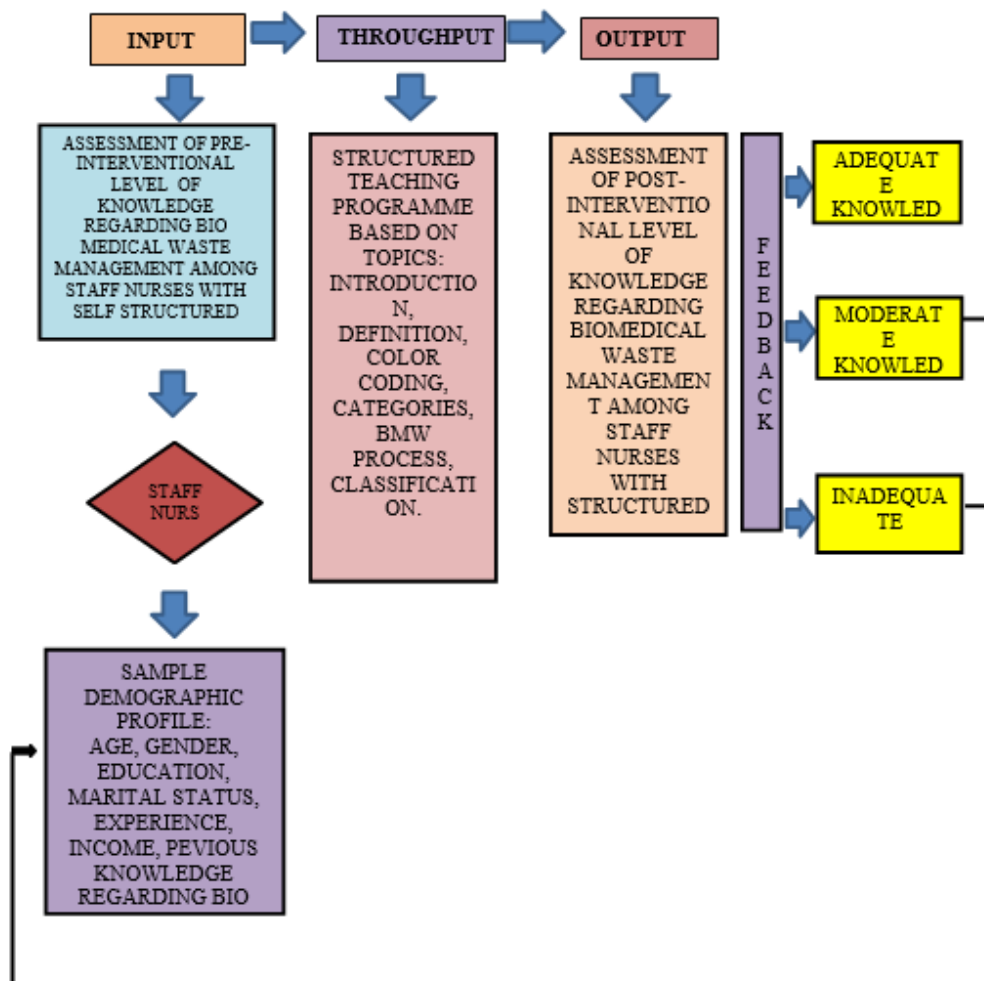
SCHEMATIC REPRESENTATION OF THE CONCEPTUAL FRAMEWORK

CHAPTER-2
REVIEW OF LITERATURE

INTRODUCTION

Review of literature-

Review of Literature is a key step in research process. The typical purpose for analyzing and reviewing existing literature is to generate research question to identify what is known and what is not known about atopic. The major goal of the review of the literature is to develop a strong knowledge base to carry out research and non-research scholarly activities.

A literature review is a compilation of resources that provides the ground work for future study. A review provides a basis for future investigation justifies the need for data collection and relates the findings from one study to another with the hope to establish a comprehensive body of scientific knowledge in a professional discipline from which valid and pertinent theories may be developed.

1. **Masood Ahmad Sheikh1, Swapna Vijay et al (2022)** conducted Pre-experimental Study to Assess the Impact of Awareness Program on Knowledge Regarding Bio-medical Waste Management among Staff Nurses at Selected Hospital of Punjab 5 may 2022. **Aim**: The aim of this study is to provide adequate knowledge and awareness among staff nurses reading bio-medical waste management.

Methods: Pre-experimental design and 50 subjects were selected for this study. Structured knowledge questionnaire was used and analyzed by descriptive and inferential statistics using Chi-square and t-test. **Results**: The findings revealed that in post-test majority of the study subjects 43 (86%) had good knowledge, 7 (14%) had average knowledge and none of them had poor knowledge with post-test mean score (44.04 ± 6.141) is significantly higher than the mean pre-test knowledge scores (24.50 ± 8.428), with a mean difference of (19.540). **Conclusion:** Significant association of pre-test knowledge score with professional qualification (P = 0.000) while as no association was found between gender and years of experience with their pre-test knowledge scores (P > 0.05) at 0.05 level of significance. [14]

2.   **Natasha Mahajan, Mahesh Patidar (2021)**: conducted **A Study to Assess the Effectiveness of Planned Teaching Program on Knowledge Regarding Biomedical Waste Management among Staff Nurses** March 2021. **Aims** the aim of this study was to evaluate the effectiveness of planned teaching program on knowledge regarding bio medical waste management among staff nurse. **Method.** An evaluative research approach with pre- experimental one group pre-test post-test research design was used for the study was conducted at Yerala medical hospital of Mumbai. The sample comprised 60 staff nurses working in the selected hospital. **Result** the result of this study muowed that the level of knowledge has increased in the post test evaluation and the structured teaching program given to the nurse are effective and knowledge is in increased that the result is shown in post test score in which about 40% of nurse attended any program About 91.66% of the sample GNM and 8.33% was PB. BSc. There is a significant association of pre-test score with education qualification of sample += 2.92. **Conclusion** the finding at study concluded that the planned teaching program on BMWM was effective in improving the knowledge of staff nurse. [12]

3.   **Ritarani Nayak, Mamata Swain (2020)**: conducted Effectiveness of Structure Teaching Programme on Biomedical Waste Management among Student Nurses September 2020.
Objective: To assess the level of knowledge and practice on disposal of Biomedical wastes and its related health hazards among student nurses. To find out the effectiveness of structured teaching programme on BMW management.
Method: Evaluative method was implemented and the study was based on the conceptual framework of the General System Model theory. A pre-experimental one group pre-test and post-test design were adopted. The samples of 84 GNM students participated in the study. Data were collected by a convenient sampling method. Self-structure tools were designed and validated for data collection.
Result: Among the total sample maximum of 57.15%
(48) were 18 to 24 years of age. In the case of both knowledge and clinical practice, the pre-test highest scores were (47.62%) and it was the average score and post-test highest (71.43%) which was a very good score. In the pre-test, the knowledge score of GNM 1st year, the maximum was 21 and mean 10.25, SD 2.12, and mean percentages 50%. GNM 2nd year the maximum score was 23 and mean 10.2, SD 0.71, and mean percentages 44.34%. GNM 3rd year the maximum score was 20 and mean 10.03, SD 1.41, and mean percentages 50.15%. In the post-test of the GNM 1styr mean was 14.68, SD 4.95 and mean percentages 69.90%, and the mean difference was 19.9%. In GNM 2nd year post-test score mean was 17.52, SD 1.41, and mean percentages 76.17% and the mean difference was 31.83%. In the post-test score mean was 17.41, SD 2.83, and mean percentages 87.05%, and the mean difference was 36.9%. **Conclusion:** Biomedical waste (BMW) created in our country on an everyday premise is tremendous and

contains irresistible and dangerous materials. Biomedical waste created in our country on an everyday premise is tremendous and contains irresistible and dangerous materials.[11]

4. **Mukesh Sharma, Anita Chakravarti, et al (2020)**: conducted Biomedical Waste Management a study of Knowledge, Attitude, and Practice Among Medical, Dental and Nursing Students in a Teaching College Methods: This cross-sectional study was carried out to access the knowledge and awareness about biomedical waste. The structured self-administered questionnaires were used for data collection.

Results: Out of the total 300 students enrolled in this study (Group I: Medical, Group 2: Dental, Group 3: Nursing students), 20 medical 13 dentals and 23 nursing failed to respond to the questionnaire. MBBS students had more knowledge but better attitude towards BMW management guidelines were seen in nursing students (p<0.001). 86% of the participating candidates had correct knowledge about definition of BMW. Only around 38% of candidates had knowledge of segregation of waste but none had knowledge of correct colour coding. 88% of candidates confirmed that record maintenance was essential but they did lack to answer what kinds of records are important to maintain for biomedical waste management. 94% of the participating candidates said that BMW is teamwork.

Conclusion: There is a need for rigorous training programme and monitoring for medical students.[24]

5. **R Karth, D Kumuthavall, et al (2020)** conducted a study on effectiveness of STP on Knowledge regarding BMW management among GNM students in selected school of Nursing, on December 2020. **AIM:** To assess the effectiveness of STP on knowledge regarding BMW management among GNM, Students**. Objectives:** they conducted pre -test and post-test to assess the knowledge of GNM students. They selected knowledge of GNM students. They socio demographic variables to find out the association between post-test and level among GNM students in nursing school.

Methodology: Sample size is 60 selected by using non probability purposive sampling technique. To assess the knowledge by using STP knowledge questionnaires.

Result: The study shows that after post-test the knowledge of GNM student is highly significant.

Conclusion: Study concluded that the STP highly effective in increase the knowledge of GNM students in a Nursing school.[17]

6. **Haq Inaamul, Samreen Sheema, et al (2019);** Conducted a study on Assessment of Biomedical Waste management and Awareness among Health Care Workers at Lal Ded Hospital, Kashmir.

Aim: To assess awareness among the health care workers and to know about Biomedical Waste management.

Methods: Its was a cross - sectional study. The study design was prepared questionnaire given by WHO.

Result: After the prepared questionnaire the knowledge level increase in workers, they used gloves for the cleaning and other staff also.

Conclusion: The Overall Biomedical Waste management is better as compared with others hospitals; regular training must be done.[21]

7. **Dipti.D. Mulay, Jaishree.M.Petkar et al (2019)** conducted an effect of structured training program on Nursing Staff regarding awareness about Bio-Medical management in a tertiary care hospital

10 July 2019.Aim:This study was undertaken to assess the existing knowledge, attitude and Practice regarding BMW. Method: the study was conducted at a tertiary care hospital in Aurangabad. A total of 181 Nurses participated in the study from various wards and ICUs across the hospital. Result: The study showed a significant increase in the performance of participants in post-test after the training as compared to pre-test. this was found to be statistically highly significant (p.Value 0.00050). There was a significant increase in knowledge regarding bio- medical waste management.27

8.   Patidar Manish, Jain Pawan, et al (2018); conducted a study on Effectiveness of STP on BMW Management, December 2018.

Aim: to enhance the knowledge of nurses in hospital sector.

Methods: it is an experimental research, sample size is 60, one group pre-test and post-test design used, structured demographic and questionnaire tool was used.

Result: the effectiveness of STP is seen in post-test, the adequate knowledge is 70%(high) after the STP is given in post-test and moderate knowledge is 25 % and inadequate knowledge was 5% in the main study**.**

Conclusion: Hence the H0 is accepted.[9]

9.   Tejeshwari B.V. , Simran Kunwar , et al (2018) conducted Effectiveness of Structure Teaching Program on Knowledge Regarding Biomedical Waste Management among House Keeping Staff. **Objective:** To assess the effectiveness of structured teaching programme regarding the knowledge and practice of biomedical waste management among housekeeping staff. to associate the d post-test knowledge and practice score of biomedical waste management among housekeeping staff with selected demographic variables.

Method: Pre- experimental one group pre-test and post-test design was used to study effectiveness of STP. Forty housekeeping staff in RRMCH hospital was recruited by non-probability convenience sampling method**.**

Result: shows that among the 40 respondents; majority of samples 27 (67.5%) had inadequate level of knowledge and only 13 (3.3%) were having moderately level of knowledge regarding biomedical waste management in the pre-test. In post-test among; majority of samples 15(37.5%) had moderate level of knowledge only 25(62.5%) were having adequate level of knowledge regarding BMW in the post-test. Conclusion: the study concluded that the structured teaching program on biomedical waste management carried out was effective in improving the knowledge of housekeeping staff as evidenced by the significant change between pre-test and post-test knowledge score.[13]

10.   Chandana Krishna, Jasra Nisar, et al (2018) conducted Awareness about Biomedical Waste Management among Hospital Staff in a Tertiary Care Hospital in Tumkur December2018.

Objective: To assess the knowledge regarding biomedical waste management. To assess the attitude regarding biomedical waste management. methods A cross sectional study was done between December 2017 to June 2018 among the healthcare staff working at Sri Siddhartha Medical College for a period of six months.

Results: Socio-demographic profile: The median age of study subjects was 34.36 years (IQR: 24.0-41.0). Duration of service of study subjects was 7 years (IQR:2.0-16.0). Majority of study subjects were females i.e., 126 (57.80%) followed by males i.e., 92 (42.20%).

Conclusion: Knowledge & Attitude regarding Bio-Medical waste management among the health care staff was inadequate. Regular training and supervision are necessary for better healthcare waste management and implementation.[18]

11.   Kumar Dhasarathi (2018): conducted A Study to Access the Knowledge Level on Bio-Medical Waste Management among the Nurses in Tamilnadu December 24, 2018.

Objectives: To assess the knowledge on biomedical waste management among the staff nurses. To associate the level of knowledge on waste management among staff nurses with selected demographic variables.

Methodology: The quantitative approach is used to access the biomedical waste management and the sample was taken from the hospital among the nurses of the total no is 100 by the non- probability sampling technique.

Result: The analysis depicted that the p-value corresponding to the demographic variable "Attended in Service Education Program" is significant at 5% level and hence we can say that there is a significant association between "Attended in Service Education Program" and "Level of Knowledge". All other demographic variables do not influence the level of knowledge.

Conclusion: The result of the study concluded that 75% of staff nurses were having inadequate knowledge 25% of the staff nurses having moderate knowledge and none of the staff nurses having adequate knowledge on biomedical waste management.

12.   Deress Teshiwal, Hassen Fatuma, et al 2018; **Aim:** To generate the hazardous Biomedical Waste to a human being or the environment.

Objectives: To assess knowledge, attitude and practice about Biomedical Waste.

Methods: A cross - sectional study was conducted. Data collected were collected through structured self-administered questionnaire.

Result: Among 296 healthcare professionals studied, 168(56.8%),196 (66.2%) and 229 (77.4%) had adequate knowledge.

Conclusion: The level of knowledge and practice score is not satisfactory that means the regular training should be given to healthcare professionals.[25]

13.   Sheikh Javed Ahmad, Dr. M.S. Vinsi (2017) Conducted a study of effectiveness of Structured teaching program (STP) on Knowledge regarding Bio medical waste management among staff nurse - June 2017.

Objective: To assess and evaluate the knowledge of staff Nurse regarding BMW management before and after the administration of STP.

Method: The research approach adopted for this study was evaluative in nature. The target population of the study is made up of staff Nurse who are working in the Hospital of Indore. A pre-experimental single group pre-test design was used the effectiveness of STP the knowledge of Staff Nurse regarding bio medical waste management the sample consist of 30 staff Nurse.

Result: show the comparison of overall knowledge of Staff Nurse before & After STP on an average staff nurse improved they knowledge from 16.26 to 23.03. after STP total questions were 30. The difference between pre and post-test Knowledge score is t=16.26 at P<0.0001 level of significance.

Conclusion: As the part of the study

30 Staff nurse were given the STP. The staff nurse to improve their knowledge on BMWmanagement.[28]

14.   Humayun Mirza1, Muhammad Sami Abbas et al (2016) conducted knowledge about Hospital Waste Management among Final Year Medical Students of a teaching hospital, Lahore September 2016**. Aim**: To determine the following among the final year students of the Lahore Medical & Dental College, Lahore: their knowledge & awareness regarding biomedical (BM) waste management policy and practices, their attitude towards biomedical waste management, and their awareness regarding needle-stick injury and its prevalence among different categories of health careproviders.

Methods: A cross-sectional study was conducted using a questionnaire with closed- ended questions. It was distributed to 100 final year MBBS students at Lahore Medical & Dental College. The questionnaire was used to assess their knowledge of biomedical medical waste disposal. The resulting answers were graded and the percentage of correct and incorrect answers for each question from all the participants was obtained.

Results: Of the 100 questionnaires, all were returned and the answers graded. The results showed that there was a poor level of knowledgeand awareness of biomedical waste generation hazards, legislation and management among the final year MBBS students. It was surprising that only 8(8%) final year MBBS students had excellent knowledge about infectious waste generated from a health care facility, while 92(92%) of studentshad poor knowledge about it.

Conclusions: It can be concluded from the present study that there are poor levels of knowledge and awareness about bio medical waste generation hazards, legislationand management among the students of a private Medical College. Regular monitoring and trainingare required at all levels.[19]

15.   Haider Shamim, Kumari Sneha, et al 2015; Conducted a study on a study of knowledge attitude and practice regarding biomedical waste management among the healthcare workers in a multispecialty teaching hospital at Delhi.

Objectives: To find out the knowledge and attitude and practices regarding healthcare workers. Methods The cross - sectional, descriptive study was conducted in a 998 bedded multispecialty in Delhi. The sample size is 120. A predesigned structuredquestionnaire was conducted**.**

Result: The correct color coding respondents by the student is 84.2%. The response of transmission diseases such as HIV and hepatitis B was known to 66.7%.

Conclusion: The study shows that the knowledge given to the staff and doctors in Biomedical Waste management will lead to an improvement in hospital.[22]

16.   D Imtiaz, SB Gupta, JP Singh, et al 2014 conducted a study on assessment of knowledge of Hospital Staff Regarding Biomedical Waste management in a tertiary Care Hospital in Utter Pradesh. **Objective:** To assess the knowledge regarding hospital waste management among hospitalstaff. A cross - sectional study was done. Pre-test and post-test assessment was carried out among study. Sample size is 336.

Result: The post test score is high that indicate that the knowledge given to the Hospital staff is helpful.

Conclusion: The study indicate that the post test is increase theknowledge of the staff.[26]

17.   Patidar, Pavan Kumar Jain2, et al., (2014) June 2014 conducted Effectiveness of Structured Teaching Programme on Bio-Medical Waste Management.

Aim: the study aimed at assessing the knowledge of Nurses regarding Biomedical Waste Management, evaluate the effectiveness of Structure Teaching Programme on Bio-Medical Waste Management and find out association between pre-test knowledge score and selected demographic variables.

Method: A one group pre-test post-test pre-experimental design and evaluative approach was adopted. The study was conducted among 60 staff nurses conveniently selected from two hospitals of Vadodara. The content validity of the tool and teaching plan was established. The reliability of tool was established by testing the internal consistency by using Test -retest method.

Results: Result of study indicate that p-value = 0.000 < 0.01, the difference between the Pre-test and Post-test scores is highly significant at 1% level of significance this shows that the Structured Teaching Programme on Bio-Medical Waste Management is effective.

Conclusion: this study concluded that structure teaching program is effective tools to improve the knowledge of staff nurses regarding bio-medical management.[16]

18. **Mrs. V. Kirubavathi** (**2012**) conducted Effectiveness of structured teaching programme on disposal of waste among adults in Thanda Lam Village at Kanchipuram district.

Objective: to assess the level of knowledge on disposal of waste among the adults. to evaluate the effectiveness of structured teaching programme on disposal of waste among the adults.

Method: Research methodology is the most important part of any research study, which enables the researcher to form the blue print for the study, the selection of research design is an important and essential step in research as it is concerned with the overall framework of conducting the study by giving the plan, structure and strategy in investigation. Research methodology deals research design, settings of the study, population, sample size, sample technique, criteria for sample.

Result: The analysis showed that in pre-test 86(86%) adults had inadequate knowledge and 14(14%) had moderately inadequate knowledge. The result revealed that there was a lack of knowledge among the adults about disposal of waste. In post-test, 82 (82%) adults had possessed adequate knowledge,16(16%) had moderately adequate knowledge.

Conclusion: The pre-test score shows that 86(86%) adults possessing inadequate knowledge and 14 (14%) had moderately adequate knowledge and the post-test shows that 18(18%) had moderately adequate knowledge and 82(82%) had adequate knowledge.[15]

19. **Vanesh Mathur, S Dwivedi, et al (2011)** conducted Knowledge, Attitude, and Practices about Biomedical Waste Management among Healthcare Personnel: A Cross-sectional Study April 2011.

Objective: The objective was to assess knowledge, attitude, and practices of doctors, nurses, laboratory technicians, and sanitary staff regarding biomedical waste management.

Methods: This was a cross-sectional study. Results: Doctors, nurses, and laboratory technicians have better. knowledge than sanitary staff regarding biomedical waste management. Knowledge regarding the color coding and waste segregation at source was found to be better among nurses and laboratory staff as compared to doctors. Regarding practices related to biomedical waste management, sanitary staff were ignorant on all the counts. However, injury reporting was low across all the groups of health professionals.

Conclusion: The importance of training regarding biomedical waste management needs emphasis; lack of proper and complete knowledge about biomedical waste management impacts practices of appropriate waste disposal.[20]

20. **Mary Anitha (2010)** a study was conducted to "assess the effectiveness of structured teaching programme on knowledge and practice regarding prevention of health hazards related to biomedical wastages among the health team members in the selected primary health centers in Bangalore". 2010 **Objectives:** To assess the knowledge of health team members on biomedical waste management before intervention. To assess the practice of health team members regarding prevention of health hazards in biomedical waste management.

Methods: One group pre-test post-test design was used for the present study. Sample consisted of 60 health team members who met the inclusion criteria. Tools used were structured teaching programme to assess the knowledge andpractice regarding biomedical waste management.

Results The findings of the study showed a significant difference between the pre-test knowledge score and post-test knowledge score, which was significant at 0.05 level. Hence, the research hypothesis H1 was accepted.[21]
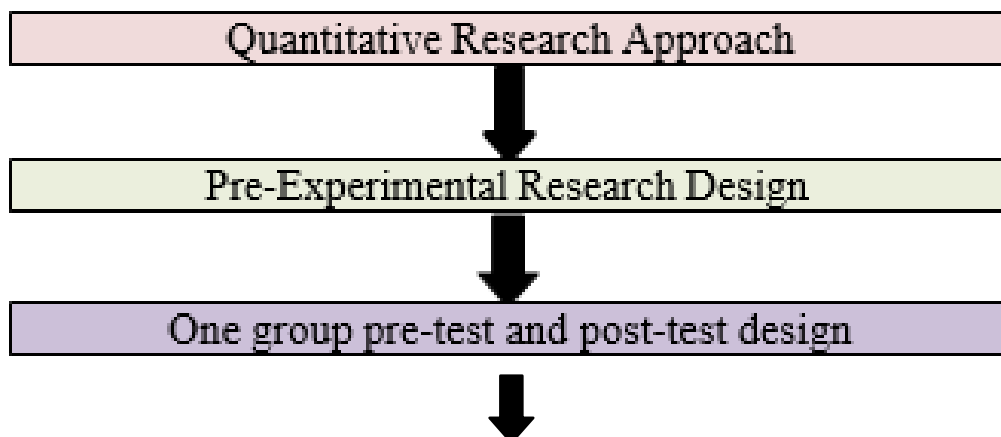
CHAPTER – 3 RESEARCH METHODOLOGY

"Research methodology is called research design, research plan, and research strategy of a research study that gives guideline which directs the research steps, the study process and helps in systematic data collection, logical data organization and accurate data analysis in a research investigation".

This chapter comprises the research methodology for the study. It includes research approach, research design, research setting, and population, sampling technique, sample size, criteria for sample collection, research variables, and description of the tool, testing of the tool, pilot study, data collection procedure and plan for data analysis. This study was done the purpose to assess the knowledge of biomedical waste management among staff nurses.

RESEARCH APPROACH

The researcher adopted quantitative research approach for the study to assess the effectiveness of structured teaching programme on knowledge regarding bio medical waste among staff nurses at Integral Hospital, Dasauli, Lucknow, and Uttar Pradesh.
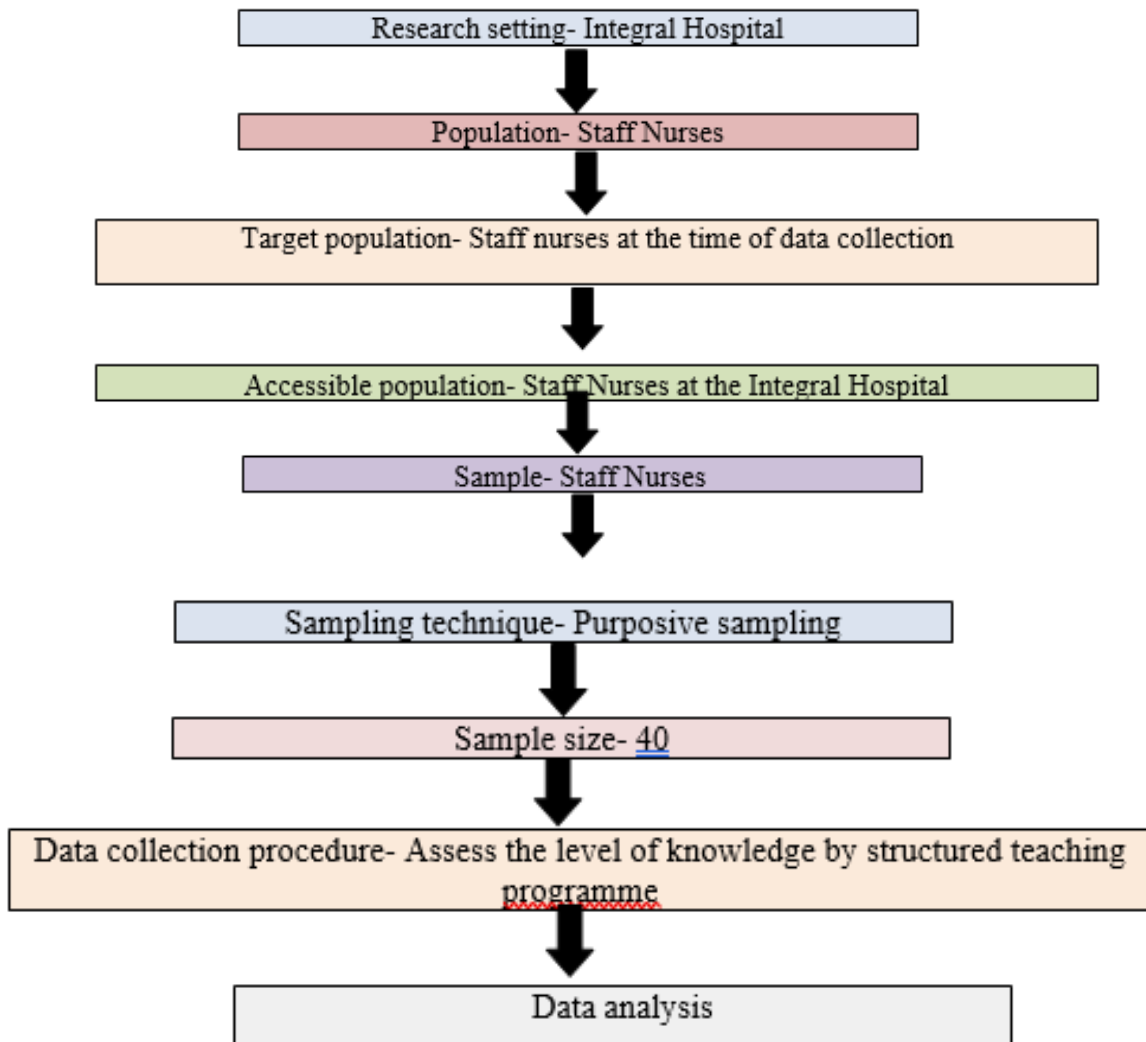
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┌─────────────────────────────────────┐
│    Quantitative Research Approach    │
└─────────────────────────────────────┘
                  ↓
┌─────────────────────────────────────┐
│   Pre-Experimental Research Design   │
└─────────────────────────────────────┘
                  ↓
┌─────────────────────────────────────┐
│ One group pre-test and post-test design │
└─────────────────────────────────────┘
                  ↓
```

Fig.2. SCHEMATIC REPRESENTATION OF RESEARCH DESIGN

RESEARCH DESIGN

The selection of design depends upon the purpose of the study, research approach and variables to be studied.

In this study one group pre-test and post-test design was used.

SETTING OF THE STUDY

The study was conducted in the Integral Hospital.

POPULATION

In this research study, population comprises of staff nurses.

TARGET POPULATION

The target population of the study includes the staff nurses of Integral Hospital during the data collection period.

ACCESSIBLE POPULATION

The accessible population in this study includes of staff nurses who were present during data collection period.

SAMPLE TECHNIQUE

In this research study, the samples were selected through purposive sampling technique.

SAMPLE SIZE

The sample size consists of 40 staff nurses who are working in the hospital who full filled the inclusion criteria of sample selection.

CRITERIA FOR SAMPLE COLLECTIONINCLUSION CRITERIA

- Willingly participate in the study.
- Able to understand English language.EXCLUSION CRITERIA
- Not willing to participate.
- Not able to understand English language.

RESEARCH VARIABLES

Independent variable: structured teaching programme regarding bio medical waste.

Dependent variables: level of knowledge of staff nurses regarding bio medical waste.

Demographic variables: it includes age, gender, qualification, experience, income, marital status, previous knowledge related to bio medical waste.

DESCRIPTION OF THE TOOLSECTION A

It consists of demographic variables such as age, gender, qualification, experience, income, marital status, previous knowledge related to bio medical waste management.

SECTION B

It consists of 29 multiple choice questions to assess the level of knowledge of staff nurses regarding biomedical waste management under the following headings such as introduction, definition, color coding, treatment, management and many more.

SCORING CRITERIA

In assessing knowledge each multiple-choice question consists of 4 alternatives with one correct answer and three are wrong. Each right answer carries the score of one. The scoring was classified as follows: -

S. No	Level of Knowledge	Score
1.	Inadequate knowledge	0-9
2.	Moderate Knowledge	10-19
3.	Adequate Knowledge	20-29

TESTING OF THE TOOLValidity

After the construction of tool which is in questionnaire form were given to five experts for the contentand

tool validation from them the content and questionnaire was corrected and modified by the expert.

Reliability

The pre-test and post-test method was used to check the reliability of questionnaire.

PILOT STUDY

Pilot study was conducted in M.S. HOSPITAL & RESEARCH INSTITUTE. The study was carried out on 4 nursing staffs who fulfill the inclusion criteria of the sample. The pilot study was conducted in the same way as final study was done. In order to check the possibility and feasibility it was done after taking permission from the nursing superintendent and form nursing staff of the hospital who fulfill the inclusion criteria. Pilot study was conducted through the questionnaire to assess the knowledge related to bio medical waste management through pre-test and post- test by maintaining the gap of 5 days between pre- and post- test. And the reliability of the tool is 0.99.

DATA COLLECTION PROCEDURE

Data was collected for a period 23 May 2023 to 28 May 2023 at Integral Hospital, Lucknow. After conducting the pre- test on 23 May 2023 structured teaching programme was given to the staff nurses. On 28 May 2023 the post test was held from the staff nurses. The pre-test and post- test were assessed through structured questionnaire tool regarding bio medical waste management.

DATA ANALYSIS

The data was analyzed on the basis of **Karl Pearson formula 'r'**
Bio medical waste management among the staff nurses.

$$r = \frac{\sum (X-\bar{X})(Y-\bar{Y})}{\sqrt{\sum (X-\bar{X})^2}\sqrt{(Y-\bar{Y})^2}}$$

SUMMARY

This chapter dealt with the research approach, research design, research setting, and population, sampling technique, sample size, criteria for sample collection, research variables, and description of the tool, testing of the tool, pilot study, data collection procedure and plan for data analysis.

ANALYSIS AND INTERPRETATION OF DATA

Analysis and interpretation were done in accordance with the objectives laid down for the study. The purpose of analysis is to reduce the data into an interpretable and meaningful form so that the result can be compared and significance can be identified.

This chapter deals with the analysis and interpretation of data collected. The data was analyzed by calculating the score in terms of frequency, percentage, mean, standard deviation, chi-square, and paired T- test.

Plan of Analysis

Analysis and interpretation of data was done according to the objectives using descriptive and inferential statistics. The level of significance chosen was at $p \le 0.05$.

Organization of Analyzed Data

The analyzed data was organized according to the objectives and presented under the following sections:

Objectives of the study: -

1. To assess the knowledge regarding bio medical waste management among staff nurses.
2. To assess the effectiveness of structured teaching program on knowledge regarding biomedical waste management among staff nurses.
3. To find out the association between pretest and posttest knowledge on bio medical waste with selected demographic variable among staff nurses at Integral Hospital, Lucknow.

Results are presented in following section

Section A; This section describes the demographic characteristics of the sample under the study.

Section B: Analysis and interpretation of data on the level of knowledge.

Section C: Comparison of frequency & percentage distribution of pre-test and post-test level of knowledge.

Hypothesis

H1: There is a significant difference between pre-test and post-test knowledge regarding biomedical waste management among staff nurses.

H2: There is a significant difference between post test score and selected demographic variablesamong staff nurse regarding bio medical waste management.

H0: There is no significant difference between pre-test and post-test knowledge scores of staff **nurses regarding bio medical waste management.**

SECTION-A

Description of demographic profile

This section describes the demographic characteristics of the sample under study. The data obtained describes the characteristics pertaining Age, Gender, Qualification, Experience, Income, Marital status, previous knowledge related to biomedical waste.

TABLE NO: 1 DEMOGRAPHIC PROFILE   OF THESUBJECTS

Variables	Opts	Percentage	Frequency
Age	20 to 23 years	0.0%	0
	24 to 26 years	72.5%	29
	27 to 29 years	22.5%	9
	30 years to above	5.0%	2
Gender	Male	32.5%	13
	Female	67.5%	27
Qualification	ANM	0.0%	0
	GNM	85.0%	34
	B.SC Nursing	12.5%	5
	Other	2.5%	1

Experience	1 to 2 years	12.5%	5
	3 to 4 years	65.0%	26
	5 to 6 years	22.5%	9
	7 year or more	0.0%	0
Income	Rs 5,000 to 10,000	2.5%	1
	Rs 11,000 to 15, 000	67.5%	27
	Rs 16,000 to 20,000	30.0%	12
	Rs 21,000 or More	0.0%	0
Marital status	Married	40.0%	16
	Unmarried	60.0%	24
Previous knowledge related to bio medical waste	Yes	100.0%	40
	No	0.0%	0

Table no 1: The findings were as follows:

- According to age among 40 samples of group, 29 (72.5%) were between 24to 26 years.
- According to gender among 40 samples of group, 27 (67.5%) were female.
- According to the qualification 34 (85.0%) were GNM.
- Among 40 samples of group 26 (65.0%) people having 3-4 years of experience.
- According to income among 40 samples of group 27 (67.5%) having Rs.11,000 to15,000 of income
- According to the marital status among 40 samples of group 24 (60.0%) are unmarried.
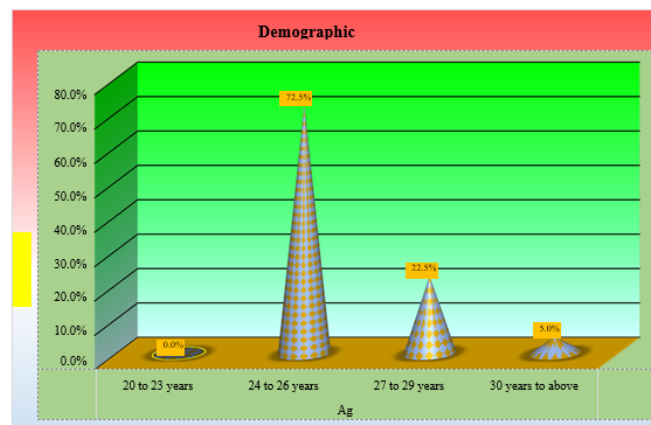- Among 40 samples of group 40(100%) having previous knowledge related to biomedicalwaste.

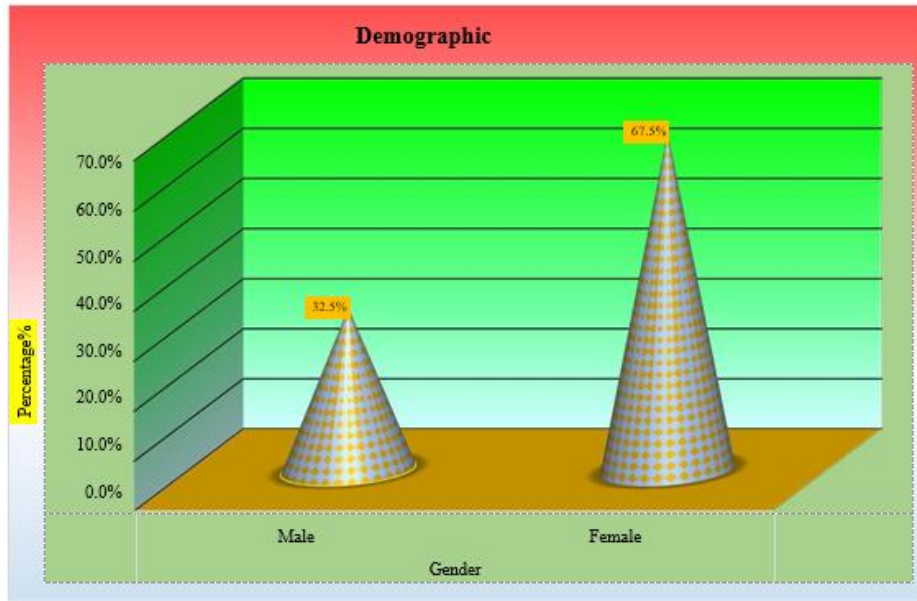**FIGURE NO.3: CONICAL DIAGRAM SHOWING THE PERCENTAGE DISTRIBUTION ACCORDING TOTHEIR AGE.**

FIGURE 4: CONICAL DIAGRAM SHOWING THE PERCENTAGE DISTRIBUTION ACCORDING TOTHEIR GENDER.
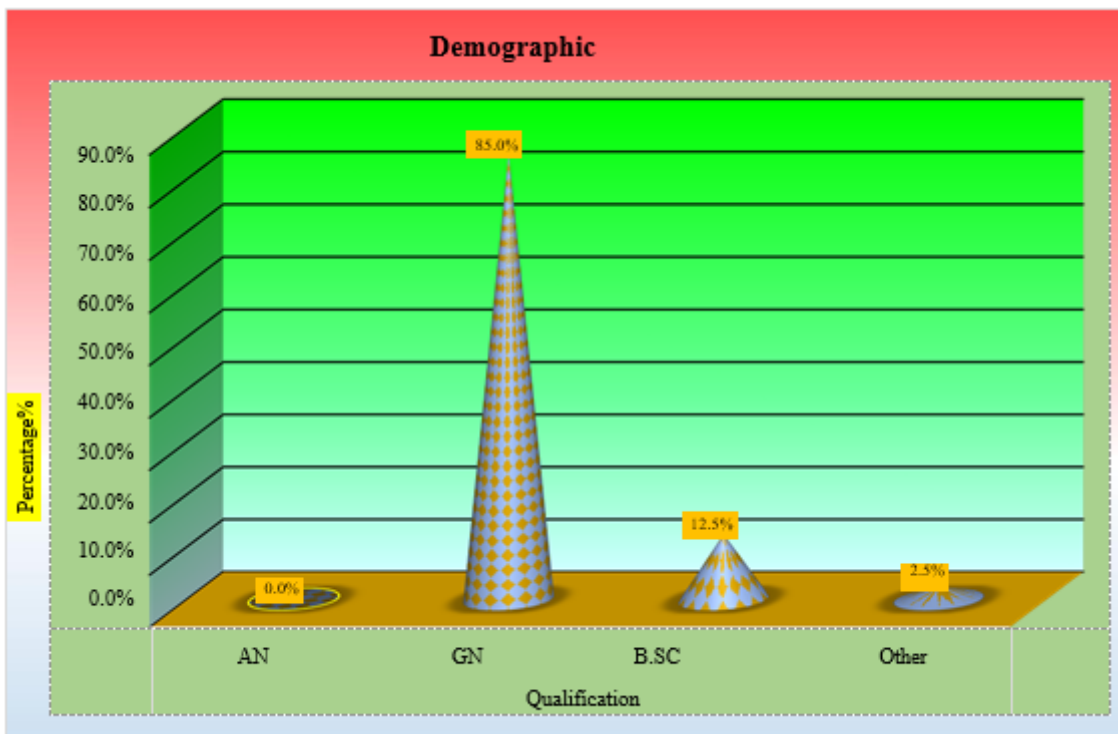

FIGURE 5 : CONICAL DIAGRAM SHOWING THE PERCENTAGE DISTRIBUTION ACCORDING TOTHEIR QUALIFICATION.
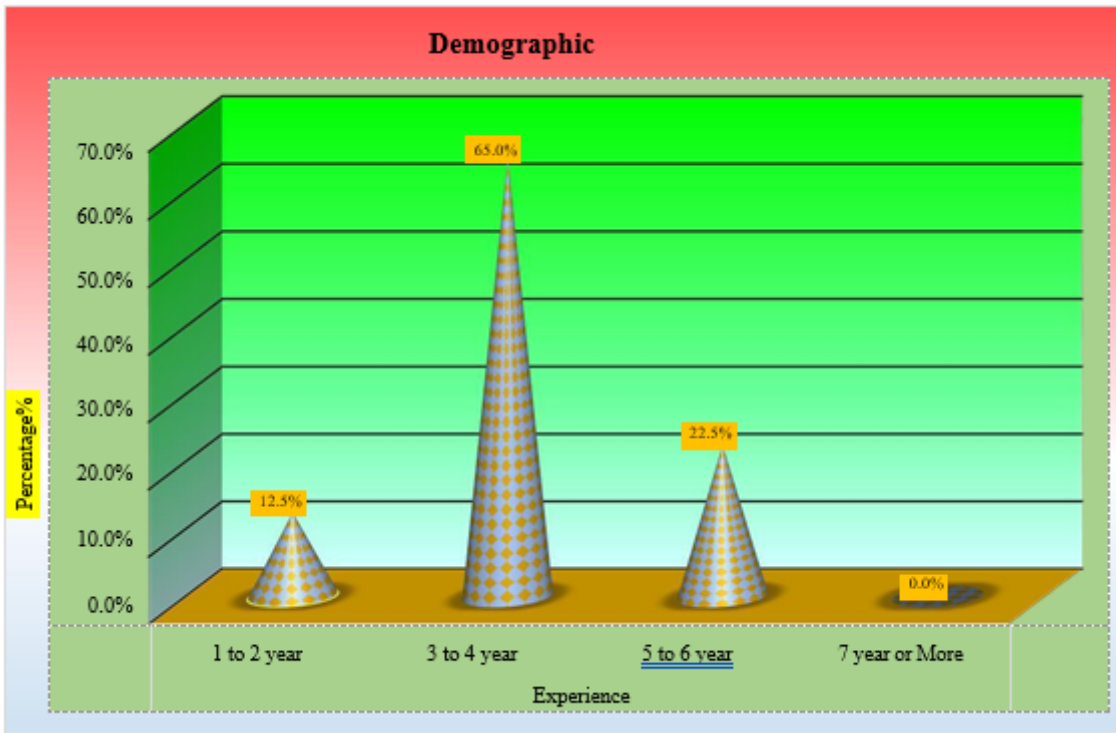
FIGURE 6 CONICAL DIAGRAM SHOWING THE PERCENTAGE DISTRIBUTION ACCORDING TOTHEIR EXPERIENCE
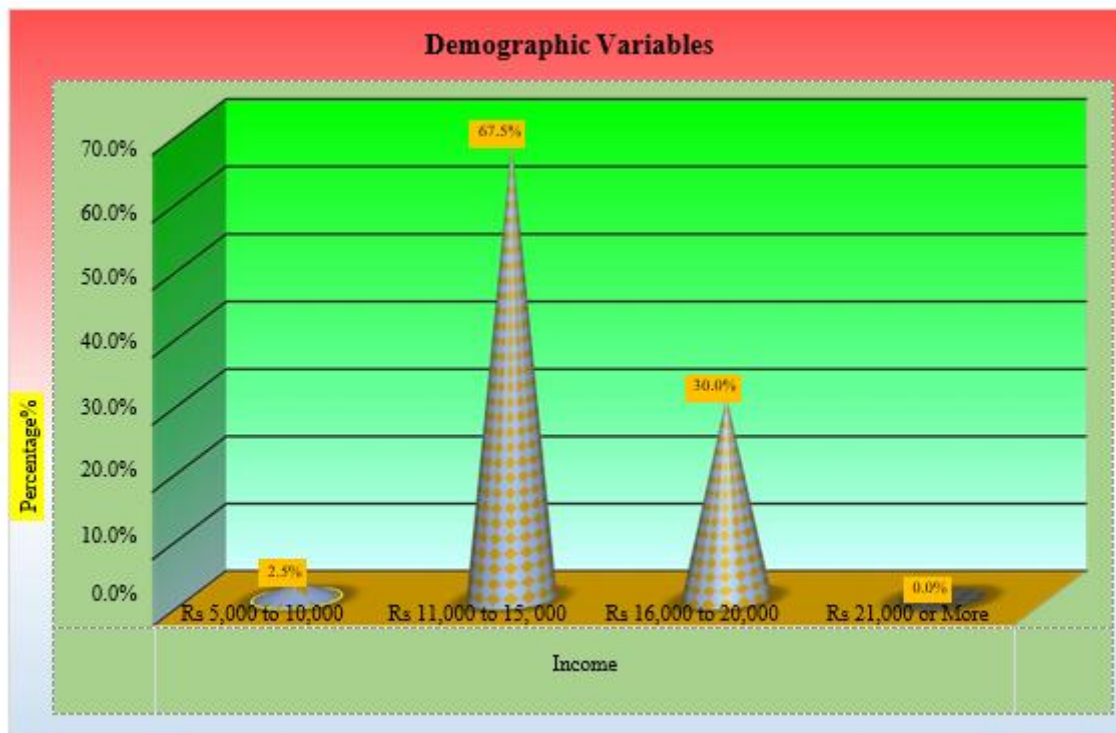

FIGURE 7: NICAL DIAGRAM SHOWING THE PERCENTAGE DISTRIBUTION ACCORDING TOTHEIR INCOME.
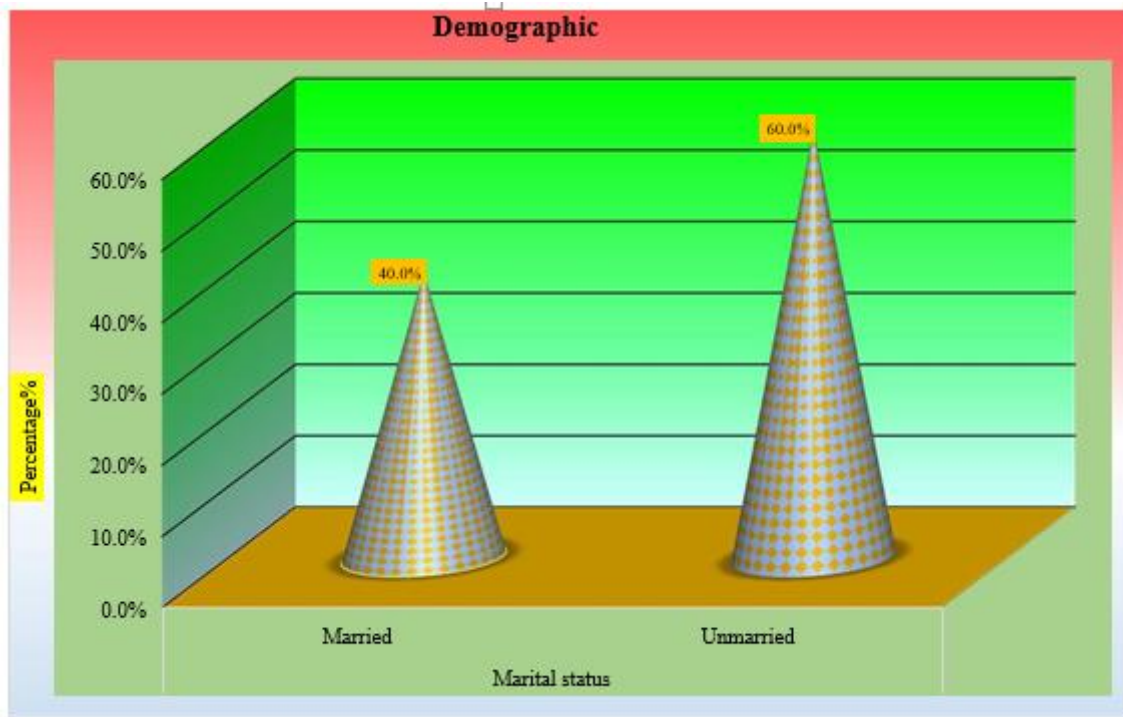
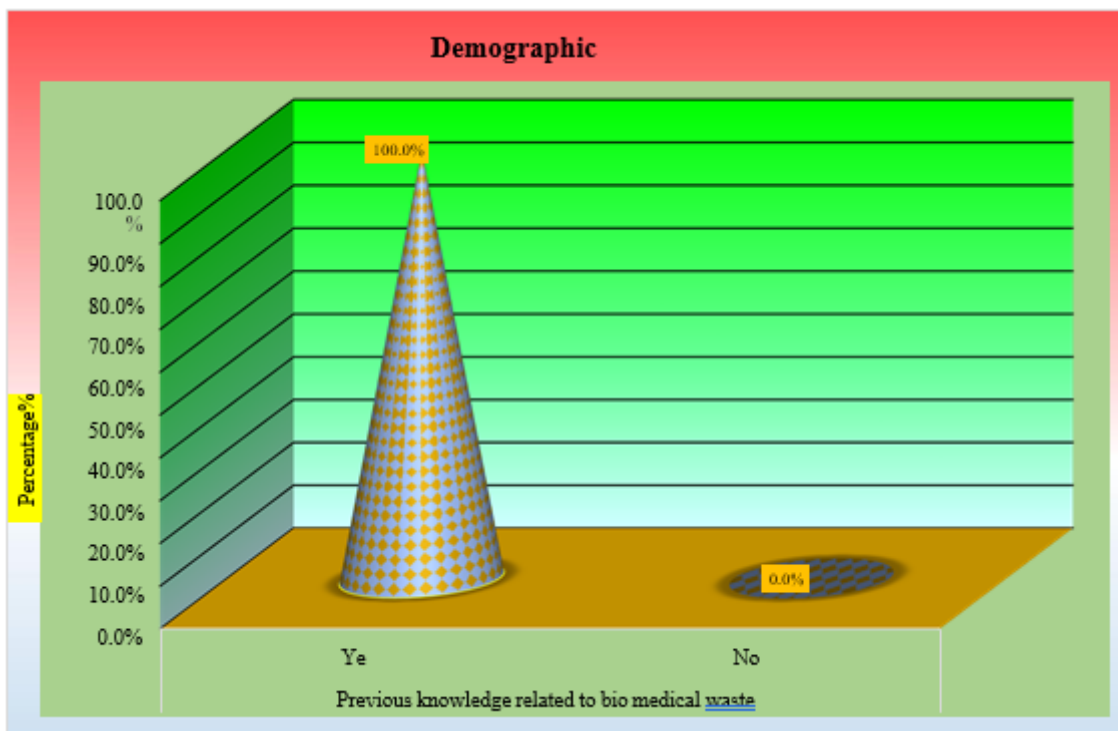**FIGURE 8: CONICAL DIAGRAM SHOWING THE PERCENTAGE DISTRIBUTION ACCORDING TO THEIR MARITAL STATUS.**

FIGURE 9: CONICAL DIAGRAM SHOWING THE PERCENTAGE DISTRIBUTION ACCORDING TO THEIR PREVIOUS KNOWLEDGE RELATED TO BIO MEDICAL WASTE.

SECTION – B

4.1 Main analysis and interpretation of data

Table 2: Frequency & Percentage distribution of pre-test level of knowledgeTable 2: Frequency & Percentage distribution of pre-test level of knowledge

CRITERIA MEASURES OF PRETEST KNOWLEDGE SCORE

SCORE LEVEL (N=40)	FREQUENCY (f)	PERCENTAGE(%)
INADEQUATE KNOWLEDGE (09)	17	42.5%
MODEARATE KNOWLEDGE (10-19)	15	37.5%
TE KNOWLEDGE(20-29)	08	20%

Maximum Score=29   Minimum Score=0

From the above table it is clear that the frequency and percentage distribution of samples accordingto the level of scores is 17(42.5%) are inadequate knowledge, 15(37.5%) are moderate knowledgeand 8(20%) are adequate knowledge.

Table 3: Descriptive statistics of pre-test level of knowledge

Descriptive statistics	Mean	S.D.	Median Score	Maximum	Minimum	Range	Mean %
PRETEST KNOWLEDGE	12.58	5.579	13.5	22	4	18	43.40

Maximum= 29   Minimum= 0

The above table represents the descriptive statistics of pretest level of knowledge. It was found that the mean value was 12.58, median score was 13.5, maximum score was 22, minimum scorewas 4, range of score was 18 and mean percentage was 43.40 %.

Table 4: Frequency & Percentage distribution of post-test level of knowledge

SCORE LEVEL (N=40)	FREQUENCY (f)	PERCENTAGE (%)
INADEQUATE KNOWLEDGE	0	0
MODERATE KNOWLEDGE	25	62.5
ADEQUATE KNOWLEDGE	15	37.5

Maximum Score=29   Minimum score=0

From the above table it is clear that the frequency and percentage distribution of samples according to the level of score is 0 (0%) are inadequate knowledge, 25 (62.5%) are moderateknowledge, 15(37.5%) are inadequate knowledge

Table 5: Descriptive statistics of post-test level of knowledge N=40

Descriptive Statistics	Mean	S.D.	Median Score	Maximum	Minimum	Range	Mean%
Post-test	19.23	1.804	19	23	16	7	66.30

Knowledge							

Hypothesis testing:

The above table represents that the pre-test mean is 43.40% and post-test mean is 66.30%, the standard deviation of pre-test is 5.579 and post-test standard deviation 1.804. The median score of pre-tests is 13.5 and post-test median score is 19. The mean value of post- test (66.30) is higher than pre- test mean value (43.40). So, the H1 hypothesis is accepted, which shows the significant difference between pre-test and post-test knowledge regarding biomedical waste management among staff nurses.

SECTION – C

Table 6: Comparison of frequency & percentage distribution of pre-test and post-test level of knowledge

CRITERIA MEASURE OF KNOWLEDGE SCORE

SCORE LEVEL (N= 40)	-TEST f(%)	T TEST f(%)
INADEQUATE KNOWLEDGE (0-9)	17(42.5%)	0(0%)
MODERATE KNOWLEDGE (10-19)	15(37.5%)	25(62.5%)
ADEQUATE KNOWLEDGE (20-29)	8(20%)	15(37.5%)

Maximum Score=29   Minimum Score=0

The above table represents that among 40 samples where in pre-test, majority of people respondents were having inadequate knowledge i.e.,42.5% whereas in post-test majority of respondents were having moderate knowledge i.e.,62.5% regarding biomedical waste management.

Table 7: Comparison of descriptive statistics of pre-test and post-test Scores of knowledges

N=40

Paired T Test	Mean±S.D.	Mean%	Range	Mean Diff.	aired TTest	P Value	Table alue at0.05
PRETEST KNOWLEDGE	12.58±5.679	43.40	4-22	6.650	6.643*Sig	<0.001	2.20
POSTTEST KNOWLEDGE	19.23±1.804	66.30	66.30				

** Significance Level 0.05 Maximum=29 Minimum=0

Table 8: Table Showing Association of Scores and Demographic variable

VLEDGE SCORES WITH SELECTED SOCIO-DEMOGRAPHICVARIABLES.								
Variables	Opts	ADEQUATE KNOWLEDGE	MODERATE KNOWLEDGE	INADEQUATE KNOWLEDGE	ChiTest	P Value	df	Table Value	Result
	20 to 23 years	0	0	0					

Age	24 to 26 years	4	12	13	7.019	0.135	4	9.488	Not Significant
	27 to 29 years	4	3	2					
	30 years to above	0	0	2					
Gender	Male	2	7	4	2.201	0.333	2	5.991	Not Significant
	Female	6	8	13					
Qualification	ANM	0	0	0	5.165	0.271	4	9.488	Not Significant
	GNM	8	14	12					
	B.SC Nursing	0	1	4					
	Other	0	0	1					
Experience	1 to 2 years	1	3	1	4.469	0.346	4	9.488	Not Significant
	3 to 4 years	5	11	10					
	5 to 6 years	2	1	6					
	7 year or more	0	0	0					
Income	Rs 5,000 to 10,000	0	0	1	10.419	0.034	4	9.488	Significant
	Rs 11,000 to 15, 000	6	14	7					
	Rs 16,000 to 20,000	2	1	9					
	Rs 21,000 or More	0	0	0					
Marital status	Married	3	6	7	0.031	0.985	2	5.991	Not Significant
	Unmarried	5	9	10					
Previous knowledge related to bio medical waste	Yes	8	15	17		N. A		N. A	
	No	0	0	0					

There is a significance association between the pre test scores and selected and demographic (Age, Gender, Qualification, Experience, Marital status) at P= 0.05 hence H2 is accepted

CHAPTER-5
DISCUSSION

The present study was done to assess the knowledge regarding Bio Medical Waste Management among staff nurses in Integral Hospital, Lucknow, where the data was collected from 40 samples.

The data was assessed by using structured teaching questionnaire.

The analysis of data is organized and presented under the following objectives

- To assess the knowledge regarding bio medical waste management among staff nurses.
- To assess the effectiveness of structured teaching program on knowledge regarding biomedical waste management among staff nurses.
- To find out the association between pretest and posttest knowledge on bio medical waste with selected demographic variable among staff nurses at integral hospital, Lucknow.

Objective I: To assess the knowledge regarding bio medical waste management among staff nurses.

Section A: Describes the demographic characteristics of the sample among the staff nurses.

- According to age among 40 samples of group, 29 (72.5%) were between 24 to 26 years.
- According to gender among 40 samples of group, 27 (67.5%) were female.

- According to the qualification 34 (85.0%) were GNM.
- Among 40 samples of group 26 (65.0%) people having 3-4 years of experience.
- According to income among 40 samples of group 27 (67.5%) having Rs. 11,000 to15,000 of income.
- According to the marital status among 40 samples of group 24 (60.0%) are unmarried.
- Among 40 samples of group 40(100%) having previous knowledge related to Bio medicalwaste.

Objective II: To assess the effectiveness of structured teaching program on knowledge regarding biomedical waste management among Staff Nurses.

Section B:Main analysis and interpretation of data

1. Frequency & Percentage distribution of pre-test level of knowledge

In pre-test the frequency and percentage distribution of samples according to the level of scores is 17(42.5%) are inadequate knowledge, 15(37.5%) are moderate knowledge and 8(20%) are adequate knowledge.

2. Descriptive statistics of pre-test level of knowledge

In pretest level of knowledge was found that the mean value was 12.58, median scorewas 13.5, maximum score was 22, minimum score was 4, range of score was 18 and mean percentage was 43.40 %.

3. Frequency & Percentage distribution of post-test level of knowledge

The frequency and percentage distribution of samples according to the level of score is 0 (0%) are inadequate knowledge, 25 (62.5%) are moderate knowledge, 15(37.5%)are inadequate knowledge.

4. Descriptive statistics of pre-test level of knowledge

The descriptive statistics of pretest level of knowledge. It was found that the mean value was 12.58, median score was 13.5, maximum score was 22, minimum score was 4, rangeof score was 18 and mean percentage was 43.40

5. Frequency & Percentage distribution of post-test level of knowledge

The frequency and percentage distribution of samples according to the level of score is 0 (0%) are inadequate knowledge, 25 (62.5%) are moderate knowledge, 15(37.5%)are inadequate knowledge.

6. Descriptive statistics of post-test level of knowledge

The pre-test mean is 43.40% and post-test mean is 66.30%, the standard deviation of pre-test is 5.579 and post-test standard deviation 1.804. The median score of pre-tests is 13.5 and post-test median score is 19.

OBJECTIVE III: To find out the association between pretest and posttest knowledge on bio medical waste with selected demographic variable among Staff Nurses at Integral Hospital, Lucknow.

SECTION C: Comparison of frequency & percentage distribution of pre-test andpost-test level of knowledge.

1. Criteria measure of knowledge score

From the among 40 samples where in pre-test, majority of people respondents were having inadequate knowledge i.e.,42.5% whereas in post-test majority of respondents were having moderate knowledge i.e.,62.5% regarding biomedical waste management.

2. Association of Scores and Demographic variable

There is a significance association between the pre test scores and selected and demographic variables (Age, Gender, Qualification, Experience, Marital status) at P=hence H2 is accepted

CONCLUSION

The data was collected by 40 Staff Nurses at Integral Hospital. Based on the findings of the study, it shows that the level of knowledge regarding Bio Medical Waste management among Staff Nurses are significantly higher after implementation of STP i.e.in pretest, the majority of respondents were having inadequate knowledge i.e., 42.5% whereas in post-test, majority of respondents were having moderate knowledge 62.5% regarding Bio Medical Waste management. The hypothesis 1 is proved. Hence it is proved that the educational intervention given by the researcher was effective to increase the knowledge among Staff Nurses. There was a significant association between pre-test score and selected demographic variables (age, gender, qualification, experience, marital status).

NURSING IMPLICATION

The findings of the study had implication in nursing research, nursing education, nursing service and nursing administration.

NURSING RESEARCH

Use of research findings should become part of the quality assurance evaluation to enhance individual profession as a whole.

NURSING EDUCATION

The teacher can utilize the content to evaluate the students about Bio Medical Waste management.

The student can utilize the content to impact health education to the perspective acceptors.

The findings will help the nursing students to understand the need to be equipped with adequate knowledge.

NURSING SERVICES

Update knowledge of the Staff Nurses regarding Bio Medical Waste management will prevent them from complications.

The findings will help the Staff Nurses to assess and to act accordingly.

It will help the Staff Nurses to understand the necessity of providing in service education program.

NURSING ADMINISTRATION

Nurse's administration can utilize the content for in service education program.

The information can be used for mass media information.

LIMITATIONS

The data was collected by using purposive sampling technique.

The samples drawn in the study were only Staff Nurses at Integral Hospital.

Sample size-40 Staff Nurses.

The study was limited to the Integral Hospital.

RECOMMENDATIONS

Experimental study can be conducted with structured teaching programme.

The study can be conducted on larger scale.

Similar study can be replicated by using quantitative approach.

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