

# “A Study to assess the knowledge regarding Bio-Medical Waste Management among Staff Nurses at S.V.R.R.G Hospital, Tirupati, Chittoor (Dt) A.P ”.

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## ABSTRACT

All human activities produce waste. Such waste may be dangerous and needs safe disposal. Industrial waste, sewage and agricultural waste pollute water, soil and air; it can also be dangerous to human beings and environment. Similarly, hospitals and other health care facilities generate lots of waste which can transmit infections, particularly HIV, Hepatitis B & C and Tetanus, to the people who handle it or come in contact with it. “A study to assess the knowledge regarding bio-medical waste management among staff nurses at S.V.R.R.G Hospital, Tirupati, Chittoor (dt) A.P. The main objectives of study were

- 1) to assess the knowledge of staff nurses regarding biomedical waste management.
- 2) To find out the association between the levels of knowledge of staff nurses regarding biomedical waste management with their selected socio demographic variables.

A descriptive research design and non probability convenience sampling technique was adopted among 50 samples of Staff Nurses at S.V.R.R.G Hospital Tirupati based on the inclusion & exclusion criteria. Data was collected by using tool which consists of socio demographic variables and questionnaire related to Bio-medical waste management. A total 50 samples were included for the study and informed consent was obtained. Confidentiality of shared information was assured. Data was analyzed and interpreted by using descriptive and inferential statistical method (i.e. frequency and percentage mean, standard deviation, chi – square). Result showed that mean and standard deviation of knowledge regarding Bio-medical waste management it includes mean 18 with 2.24 SD.

Result showed that significant association between the level of knowledge regarding Bio-medical waste management with their selected socio demographic variables such as age and level of knowledge.

**Keywords:** Knowledge, Bio-medical waste, Staff Nurses

## 1 Introduction

Hospital waste refers to all waste, biologic or non biologic that is discarded and not intended for further use. Medical waste is a subset of hospital waste; it refers to the material generated as a result of diagnosis, treatment or immunization of patients and associated biomedical research. Biomedical waste (BMW) is generated in hospitals, research institutions, health care teaching institutes, clinics, laboratories, blood banks, animal houses and veterinary institutes.

Biomedical waste is the infectious waste generated from hospitals. Improper management of waste generated in health care facilities causes a direct health impact on the community, the health care workers and on the environment. The waste generated in these institutions essentially consists of solids and liquid, which may be hazardous, infectious and non-infectious. It has been estimated that up to 85% to 90% of the waste generated in hospitals is non-infectious (free with any body fluids, which is similar to domestic waste).

It is the remaining 10% to 20% of waste that is of concern because it is hazardous and infectious. . In addition, waste that is un-segregated and not treated in the right manner would cause environmental pollution affecting the health of the community. From waste audits done at several hospitals by a few NGOs, arrived at some figures, which can now be used and extrapolated for the whole country. These audits must be conducted only after adequate training on waste segregation is given to health care institutions.

## 2 Statement of the problem

“A Study to assess the Knowledge Regarding Biomedical Waste Management among Staff Nurses at S.V.R.R.G Hospital Tirupathi, Chittoor (Dt), AP”

## 3 Objectives

- To assess the knowledge of staff nurses regarding biomedical waste management.
- To find out the association between the levels of knowledge of staff nurses regarding

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biomedical waste management with their selected socio demographic variables.

#### 4 Assumptions

- The staff Nurses who are working in the hospital may have some knowledge

#### 5 Methods and Materials

Quantitative research approach was utilized to assess the knowledge regarding Bio-Medical Waste Management; Descriptive survey design was adopted for the study. The study was conducted in S.V.R.R.G Hospital at Tirupati among staff Nurses by using Non probability convenience sampling technique. The sample size of study was 50 staff nurses working in S.V.R.R.G Hospital at Tirupati

#### 6 Description of the Tool

The tool was developed with the help of related literature from the various text books, journals, websites, discussion and guidance from the experts Two consist of two parts

**Part-I:** Consist of questions to collect the demo data like age, religion, educational status, area of working, years of experience.

**Part-II:** Consist of structured questionnaire to assess the level of knowledge regarding Bio-medical waste management.

#### 7 Scoring and Interpretation:

**Part-I:** Scoring system was developed by 1 mark to correct response.

##### Score Interpretation

Grading System	Percentage
Below Average	Less Than 50%
Average	50 To 75 %
Above Average	More Than 75%

#### 8 Data Collection Procedure

Data was collected by using structured questionnaire. To assess the knowledge regarding Bio-medical waste management among staff nurses working in S.V.R.R.G Hospital at Tirupati. It may take 20 minutes for each study to complete questionnaire. The data was analysed according to the objectives.

#### 9 Data Analysis and Interpretation

The data was analyzed under following section

**Section-I** Frequency and percentage distribution of socio demographic variables among staff nurses

**Section-II** The level of knowledge regarding Bio-medical waste management among staff nurses.

Frequency and percentage distribution of level of knowledge regarding Bio-medical waste management among staff nurses.

Level of knowledge	frequency	Percentage
Below average	13	26%
average	37	74%
Above average	0	0%

**Section-III** Mean and standard deviation of level of knowledge regarding Bio-medical waste management among staff nurses.

Group	Mean	Standard deviation
Staff Nurses	16	2.14

Shows that mean and standard deviation of level of knowledge regarding Bio-medical waste management mean is 16 and standard deviation is 2.14 .

#### Section-IV Association between the levels of knowledge regarding Bio-medical waste management with their selected socio demographic variables (n=50)

In association with age in staff nurses the calculated value is 11.6 and the table value is 11.07, at p=0.05 level. The calculated value is higher than the table value; hence there is significant association between age and level of knowledge.

There is no significant association with religion, Residence.

#### 10 Major Findings

- With regards to age 30(60%) of staff nurses are between 21-22 years.
- With regards to religion 22 (44%) of staff nurses are Hindus.
- With regards to educational status 24(48%) of staff nurses studied B.Sc nursing.
- With regard to area of working 16(32%) of staff nurses are working in special wards.
- With regards to years of experience 26(52%) of staff nurses have 1-2 years of experience.

#### 11 Conclusion

The study was new beginning for record the knowledge of nurses regarding Bio-medical waste management. This gives a new learning experience for the investigator. The overall experience of conducting the study was satisfied. The result of present study shows there was a great response from Staff nurses in knowledge regarding Bio-medical waste management.

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