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RESEARCH ARTICLE

ASSESS THE LEVEL OF KNOWLEDGE ON BIOMEDICAL WASTE MANAGEMENT AMONG STAFF NURSES IN SELECTED TERTIARY HOSPITAL, KANCHIPURAM DISTRICT, TAMILNADU

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ABSTRACT

Aim: To assess the level of knowledge on biomedical waste management among staff nurses in selected tertiary hospital, Kanchipuram district, Tamilnadu.
Methods and Materials: A descriptive approach was used for the present study. The participants were about 60 in number and purposive sampling technique was used. Data was collected by administering a structured questionnaire.
Results: The study result shows that majority (90%) of staffs belongs to 21-30 Age group. A majority (87%) of the staffs were female and 60% of the staffs were belongs B.sc nursing. Majority (60%) of staff were underwent continuous nursing education programme on biomedical waste management. The study result reveals that 60% of staff nurse had moderate knowledge, 33% had adequate knowledge and 7% had inadequate knowledge. The result shows that the age (x^2=6.666) had significant association with the level of knowledge at 0.05 levels and also the CNE programme attended (x^2=13.262) had significant association with the level of knowledge.
Conclusion: This result insists the importance of continuing education through skill based training programme and updating current changes in bio medical waste management for staff nurses.

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INTRODUCTION

"Let the waste of the sick not contaminate the lives of the healthy"

-K.park

Health care personnel including Doctors, Nurses' and paramedical staffs are the guardian of the community. It is the duty of the entire health care establishments to ensure speedy recovery of their patients by maintaining clean and infection free surroundings. Basic sanitation and cleanliness have always been mandatory requirements in the health care establishments; collection and disposal of biomedical waste, often ignored are directly responsible for the spread of diseases in the community specifically among health care personnel. According to WHO, 85 percentage of the hospital waste actually non hazardous, 10 percentage are non infectious and the remaining 5 percentage are non infectious but hazardous consisting of chemical, pharmaceutical, radioactive materials. In India 0.5-2 kg per patient per day waste is generated and the percentage of infectious waste is much higher, that is 30-60 percentages. This is because of improper segregation methods resulting in collections of biomedical waste in a mixed form. Biomedical waste (management and handling) Rules in 1998 insists, all the health care institutions in the country have to make adequate arrangement for handling of such waste. Since nurses form the largest segment of the health care panel, who deal with biomedical waste, it is clear that without their active participation, biomedical waste management would be a dream. So, this study aim to identify level of knowledge on biomedical waste management among staff nurses which forms the base for avoidance of Nosocomial infections.

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MATERIALS AND METHODS

- **Setting:** The study was conducted in medical and surgical ward, Intensive care unit of Chettinad Hospital, Kelambakkam.
- **Research approach**: The approach used for this study was descriptive approach.
- **Research design**: Descriptive design
- **Sample:** 60 staff nurses.
- **Sampling technique**: Purposive sampling method.

Inclusion criteria

1. Only staff nurses working in medical and surgical Ward, MICU and SICU
2. Both male and female staffs included
3. Staff who were willing to participate in the study

- **Exclusion criteria**

Staff nurses who were engaged in administrative work like head nurse.

- **Data collection instruments**

1. **Part 1** –Demographic Data
2. **Part 2** – Knowledge Questionnaire

- **Description of tool**

The questionnaire consists of 2 parts.

1. **Section A**- it has the selected demographic variables like age, gender, educational qualification, whether attended any continuous Nursing education programme (CNE) on Bio medical waste Management.
2. **Section B** - consist of 15 questions which have 3 options out of which one is the correct answer. Score 'one' is given to every correct answer and score 'zero' was given to wrong answer. Maximum score-15 Marks.

about Biomedical waste management. The collected data analyzed by using descriptive and inferential statistics.

RESULTS

A total of 60 staff nurses were included in the study. The study result shows that majority (90%) of staffs belongs to 21-30 Age group. A majority (87%) of the staffs were female and 60% of the staffs were belongs B.sc nursing. Majority (60%) of staff were underwent continuous nursing education programme on biomedical waste management.

The study result reveals that 60% of staff nurse had moderate knowledge, 33% had adequate knowledge and 7% had inadequate knowledge. The result also shows that the age (x^2=6.666) had significant association with the level of knowledge at 0.05 level and also the CNE programme attended (x^2=13.262) had significant association with the level of knowledge. The other variables such as gender, educational status had no significant association with the level of knowledge. Research hypothesis ($H_{1)}$ was accepted.

DISCUSSION

A study was conducted to assess the level of knowledge on biomedical waste management among staff nurses in selected tertiary hospital, Kanchipuram district, Tamilnadu.

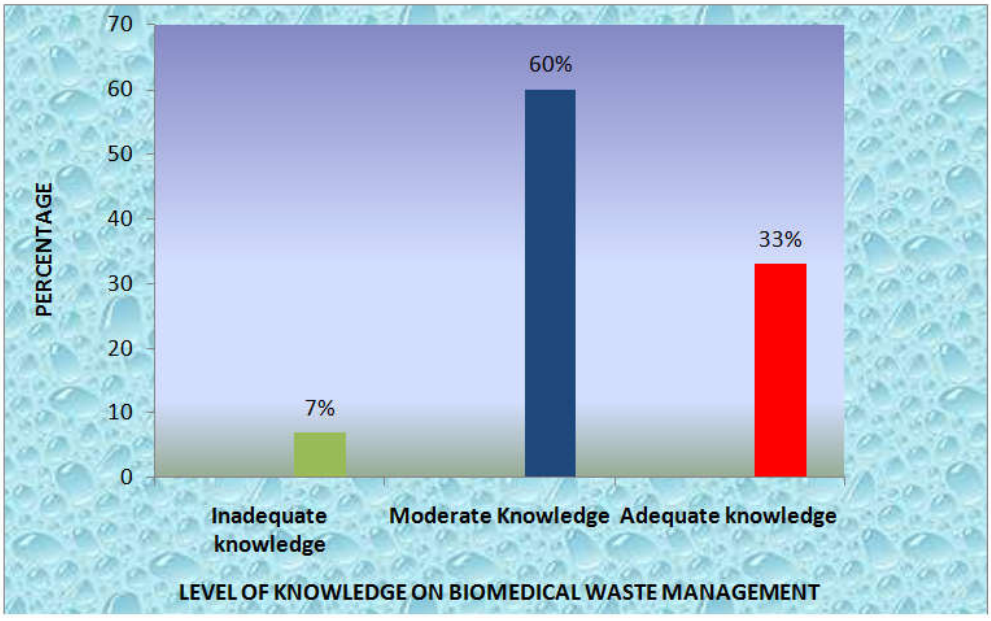

Fig. 1. Percentage distribution of level of knowledge on biomedical waste management among staff nurses

Data Collection Procedure

After obtaining ethical committee clearance and written permission from the Dean and Nursing superintendent, the main study was conducted in wards, ICU at Chettinad hospital, Kanchipuram dist. The investigator obtained informed consent from subjects. Purposive sampling technique was used. Data was collected through structured questionnaire on knowledge

The study result reveals that 60% of staff nurse had moderate knowledge, 33% had adequate knowledge and 7% had inadequate knowledge. A similar study was undertaken to assess the Biomedical waste (BMW) management practices in a tertiary care, teaching hospital of Ludhiana, Punjab. The knowledge of the existence of the biomedical waste management Rules 1998 was better in doctors than in the nurses or the paramedical staff, but knowledge of the

practical aspects of biomedical waste management was better in nurses and paramedical staff. Both the study result reveals that nurses have to improve their knowledge regarding biomedical waste management to control Nosocomial infection

Conclusion

In conclusion, the discussion of the present study findings obtained by the researcher shows that 60% of staff nurse had moderate knowledge, 33% had adequate knowledge and 7% had inadequate knowledge. And also reveals that there was a significant association between level of knowledge with age and CNE programme attended. The other variables such as gender, educational status had no significant association with level of knowledge. This result insists the importance of continuing skill based education progamme on biomedical waste management and through such programmes updating current changes in bio medical waste management for the health personnel will minimise Nosocomial infections. The study results recommends, to avoid Nosocomial infections, nurses at the start of their profession, that is, while they are at the level of students, should be made aware of the health hazards of biomedical waste and the scientific ways of handling it.

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