



A STUDY TO ASSESS THE LEVEL OF KNOWLEDGE ON HANDLING, STORAGE, MANAGEMENT, SEGREGATION OF HAZARDOUS CHEMICAL AMONG STAFF NURSES IN SMVMCH AT PUDUCHERRY

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ABSTRACT:

Chemical substances are seen as a significant function in the life on earth because of their beneficial economy. The main objectives of the study is to assess the knowledge of staff nurses regarding hazardous chemicals, To associate the knowledge of staff nurses regarding hazardous chemicals with their selected demographic variables. The research design used in this study was a Quantitative research approach. The design used for the present study was a Descriptive research design. A total sample size of 30 preterm neonates were selected using Convenient sampling technique. The study findings reveal the frequency and percentage-wise distribution of level of the awareness of staff nurses regarding hazardous chemicals. The finding revealed that majority, 22 (73.3%) of the staff nurses had moderate level of awareness and 8 (26.7%) of the staff nurses had adequate level of awareness regarding hazardous chemicals. The data shows that there is significance association between level of awareness of staff nurses regarding hazardous chemicals with the age, education qualification and source of information where 'p' value is < 0.05. There is no significance association between level of perception of patient with religion, income in month and previous information about hazardous chemicals.

Keywords: Knowledge, Management, Hazardous chemical, Staff nurses

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Introduction

Chemical substances are seen as a significant function in the life on earth because of their beneficial economy. In recent decades, chemical substances have emerged as significant substance health care environment. It, without doubt, is applied in pharmaceutical progress, cleaning products, food processing. Because of this convenience, a growing trend of using these substances has received a great deal of public attention. Chemical substances play an important role in nursing job. There are a great number of reasons why chemical substances have capabilities in any industrial field.

Many hazardous chemicals are used in the hospital, cleaning agents, for instance, during the cleaning activities in hospital. These substances do not include sterilize and disinfect surgical and/or medical instruments. The more frequent contact with chemical substances, higher the risk of injuries. Cleaners, staff and especially nurses are the groups which are affected by chemical substances. The health is affected negatively, for example, the eyes.

The management of hazardous chemicals is a critical aspect of ensuring the health and safety of nursing staff in healthcare settings. By fostering awareness, providing comprehensive training, and implementing robust safety measures, healthcare organizations can create an environment that protects the well-being of nursing professionals while maintaining the highest standards of patient care.

Objectives

- To assess the level of knowledge on handling, storage, management, segregation of hazardous chemical among staff nurses.
- To associate the knowledge of staff nurses regarding hazardous chemicals with their selected demographic variables.

Methodology

A research approach is the fundamental element of any research study. The research design used in this study was a Quantitative research approach. The research design is the plan, structure and strategy of investigation of answering the research question. The design used for the present study was a Descriptive research design. In the present study, the target population consists of all staff nurses working at Sri Manakula vinayagar medical College and hospital. The study sample consists of staff nurses in SMVMCH, Puducherry, who meet the inclusion criteria. Convenient sampling technique was used for the present study.

Inclusion criteria

- Staff nurses who are working in SMVMCH, Puducherry.
- Staff nurses who are present during data collection.
- Staff nurses who are willing to participate in the study

- Both male and female Staff nurses

Exclusion criteria

- Staff nurses who are in administrative level.

Tools and instruments

The tool was developed and standardized from extensive literature review, internet research, and expert discussion. The tool consists of the two sections.

Section A: Demographic variables

Section B: Structured questionnaires based on awareness on staff nurses regarding hazardous chemicals in hospitals.

Plan for data analysis

The obtained data were entered in Microsoft Excel (2020) and coded in coding sheet. Analysis was done using SPSS (Statistical Package for Social Sciences) software version 26.0. Demographic variable was expressed in frequency and percentage wise distribution. Pearson Correlation test was used find the correlation. The significance level was analyzed using test of significance (chi – square test). The results were interpreted statistically if the level of significance $p < 0.05$.

Result and Findings:

Regarding the age, the majority 15 (50%) were in the age group of 31-40 years, 8 (26.7%) were in the age group of 41-50 years and 5 (16.7%) were above the age group of 21-30 years. Regarding sex of the patient's, majority 22 (73.3%) were male and 8 (26.7%) were female. In the aspect of religion, the data shows majority 32 (61.5%) were Hindu. Regarding education qualification, majority 16 (53.3%) completed graduation, 10 (33.3%) were completed Higher education and 2 (6.7%) were completed only primary education.

With regarding to residential area, majority 20 (66.7%) were in rural area and 10 (33.3%) were in urban area. In the aspect of occupation status majority, 20 (66.7%) were employed and 2 (6.7%) were unemployed. With regards to family income majority, 16 (53.3%) belong to an income of Rs. 10,001-30,000. With regards to type of family, the data shows that the majority 22 (73.3%) were in nuclear family and 8 (26.7%) were joint family.

Table 1: Distribution of level of knowledge of staff nurses regarding hazardous chemicals

S.NO	LEVEL OF KNOWLEDGE	FREQUENCY (N)	PERCENTAGE %
1.	Adequate	8	26.7%
2.	Moderate	22	73.3%
3.	Inadequate	0	0%

The above table reveals the frequency and percentage-wise distribution of level of awareness of staff nurses regarding hazardous chemicals. The finding revealed that majority, 22 (73.3%) of the staff nurses had moderate level of awareness and 8 (26.7%) of the staff nurses had adequate level of awareness regarding hazardous chemicals.

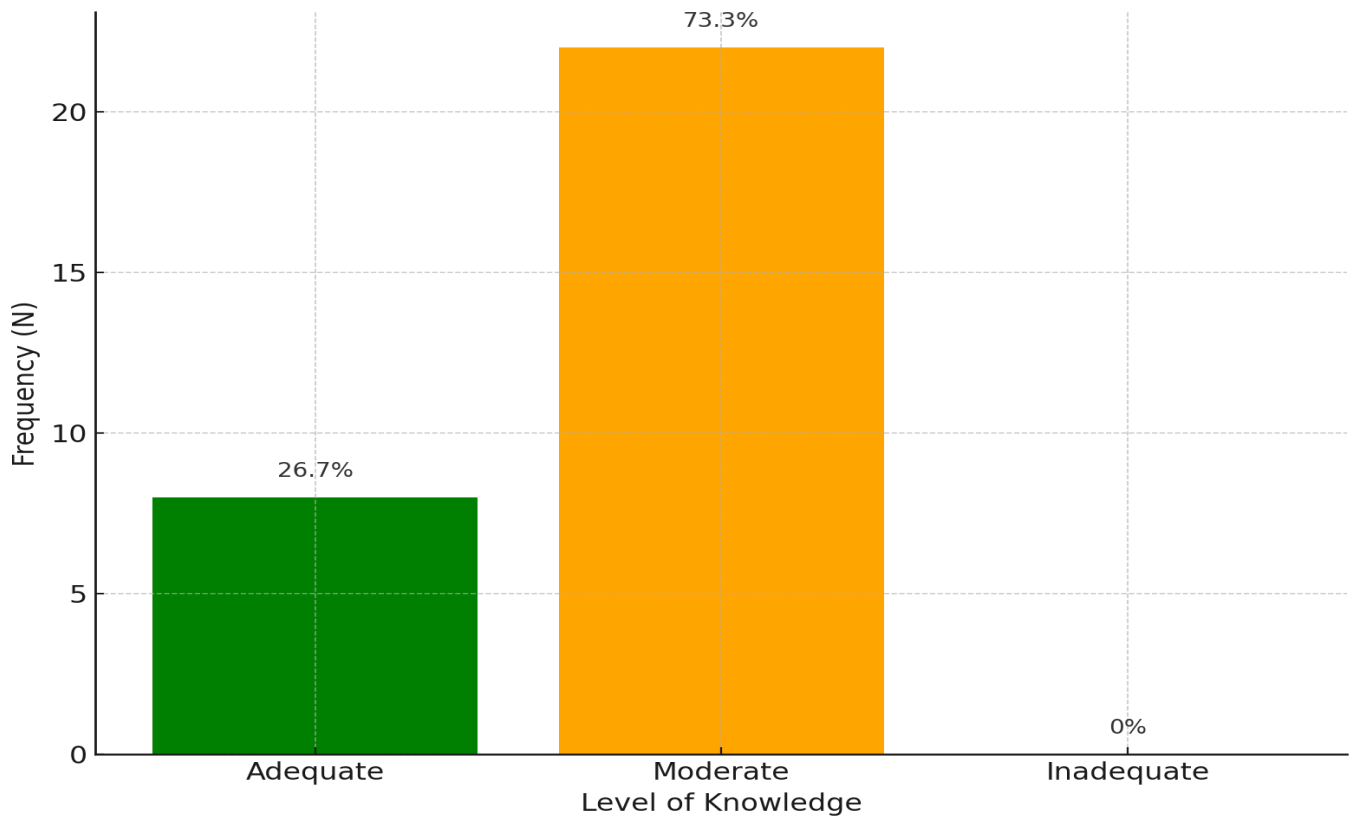


Figure 1: Percentage wise distribution of the level of knowledge of staff nurses regarding hazardous chemicals.

Table 2: Mean, SD and mean% of level of knowledge of staff nurses regarding hazardous chemicals

Overall	Level of awareness Score			
	Max. score	Mean	SD	Mean%
	30	24.86	2.704	82.86

The above table reveals mean, SD and mean% of level of the awareness of staff nurses regarding hazardous chemicals. The finding revealed that mean score of 24.86 with the SD of 2.704. the overall mean percentage is 82.86.

Discussion

The study was conducted to assess the knowledge on handling, storage, management, segregation and awareness of staff nurses about hazardous chemical in SMVMCH at Puducherry. The present study revealed that majority, 22 (73.3%) of the staff nurses had moderate level of awareness and 8 (26.7%) of the staff nurses had adequate level of knowledge regarding hazardous chemicals. The data shows that there is significance association between level of knowledge of staff nurses regarding hazardous chemicals with the age, education qualification and source of information where 'p' value is < 0.05 . There is no significance association between level of perception of patient with religion, income in month and previous information about hazardous chemicals.

This result aligns with the study by **Karemzyjr et al. (2022)** on patients' perceptions and preferences regarding male and female nurses in selected hospitals in Etsako West LGA, Edo State, involving 100 purposively sampled patients. The study found that while respondents acknowledged both genders as competent, they felt neither could provide intimate care effectively. Patients perceived female nurses as more caring but considered male nurses more dedicated to work. Preferences revealed that 51% preferred female nurses, 30% were indifferent, and 19% preferred male nurses. Significant associations were noted between patients' sex, religion, marital status, and their preference for nurse gender.

Conclusion

The present study assessed the handling, storage, management, segregation and awareness of staff nurses about hazardous chemical in SMVMCH at Puducherry. The study findings concluded that there is significance association between level of knowledge of staff nurses regarding hazardous chemicals with the age, education qualification and source of information where 'p' value is < 0.05

RECOMMENDATIONS:

- Same study can be conducted with large samples.
- Same study can be conducted among health care workers regarding hazardous chemicals

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