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Assessment Of Knowledge And Expressed Practices Regarding Spill Management Among Nursing Personnel At Hospitals In Haryana

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Abstract

In a hospital, management of spillage of hazardous substances such as bodily fluids, drugs, cleaning fluids and other chemicals is essential. It is essential, therefore, that the hospital has the right equipment and well-trained staff on hand to deal with any spills immediately when they arise.

Materials and methods: The study employed a quantitative, descriptive survey design. A sample of 200 nursing personnel was selected using convenience sampling from hospitals in Haryana. The tool used for data collection was a structured knowledge questionnaire and attitude scales. Ethical approval was obtained from the institutional ethical committee for conducting the study. The data was analysed and interpreted by using descriptive and inferential statistics.

Result: The mean knowledge score of staff nurses is 21.7+-6.6, and the mean score of expressed practice of staff nurses is 34.2+-3.7 regarding the spill management. There was a positive correlation between knowledge and the expressed practice of nursing personnel regarding spill management. There was a significant association between knowledge and expressed practices of nursing personnel with selected variables regarding spill management.

Conclusion: The study presents the results of knowledge and expressed practice of the nursing personnel regarding spill management in the hospitals of Haryana. There was a positive correlation between the knowledge and expressed practice of nursing personnel regarding spill management. There was a significant association between knowledge and expressed practice of nursing personnel with selected variables regarding spill management. There is a great need for improvement in the knowledge level of the nursing personnel regarding spill management, as the 49% of the nursing personnel have an average knowledge level regarding spill management

Keywords: assessment, knowledge, practices regarding spill management, nursing personnel

Introduction

In hospital, spillage of blood, body fluids or chemicals can occur at any time due to broken or faulty equipment or human error, and it this happens, everyone in the area is at risk, from nursing personnel to visitors to patients.[1] In a hospital, management of spillage of hazardous substances such as bodily fluids, drugs, cleaning fluids and other chemicals is essential. It is essential, therefore, that the hospital has the right equipment and well-trained staff on hand to deal with any spills immediately when they arise.[2] Exposure to blood and body fluids is one of the hazards faced by nursing personnel .[3] Transmission of blood and body

fluid- borne pathogens are likely related to the patient status, type of injury, quantity of blood/body fluid involved in the exposure, the health status of the health care worker as well as the safety precautions employed before, during and after exposure.[4] After blood and body fluid spillage, decontamination of the blood splash is very important to avoid transmission of the blood-borne pathogens. Avoiding occupational blood and body fluid spillage is the primary way to prevent transmission of pathogens in health care settings. It is observed that accidental spillage is more frequent when nursing personnel neglect safety precautions. So, nursing personnel should be knowledgeable about all the potential problems which is caused by occupational blood and body fluid exposure and its preventive measures and management.[5] Nurses are the major health care providers in the hospital and are more potential to get exposed of getting exposed to blood and body fluids. Spillage of blood pathogens plays a significant role in increasing the risk to nursing personnel in the health care settings. Spillage is the exposure of the blood and body fluids, which may contain concentrated virus. In terms of blood and body fluids, semen and vaginal excretions with visible signs should be considered potentially infectious vehicles.[5]

Proper management of spills is necessary for all types of spills, and specialized procedures should be prescribed by each and every laboratory, depending on its activities and the nature of materials handled. Nursing personnel form a major task force of health care providers in hospitals and are, hence at a great risk of such exposure. Occupational exposure in the context of this study is the exposure of skin to blood and body fluids. Transmission of these infections puts health care providers at major risk. Proper decontamination and taking measures to prevent occupational exposure to blood, mercury and body fluids are primary methods of prevention of disease in a health care setup.[6] Proper preparation for spill management and safe remediation requires a multi-faceted approach. Maintaining appropriate spill clean-up supplies and personal protective equipment is vital, as is step-by-step training of nursing personnel on the multiple risks posed by spills in various departments and how to handle each type. Running drills on spill management should be integral to overall safety and risk management preparedness.[7] Fortunately, there are straightforward, checklist-based methods for achieving continued awareness of a sometimes overlooked, but essential area of safety. It is essential that all the nursing personnel should know about spill management to protect themselves from occupational diseases. Spill management in hospitals is vital due to the combination of hazardous substances, busy environment and vulnerable patients, but with the correct training and equipment in place, nursing personnel can minimise the risk to themselves, to visitors and to patients. [7] Exposure to blood and body fluids is the accidental contact with blood and body fluids during a medical intervention by nursing personnel. These unintended exposures to blood and body fluid carry the risk of infection by various blood-borne viruses. Almost 62.3% were exposed to blood and body fluids.[8] It constitutes a major risk for the transmission of infections such as HIV, HBV, and HCV. Nursing personnel are at high risk of contracting various diseases transmitted by blood and body fluids due to frequent exposure to biological materials and patients' body fluids.[8] The most common means of exposure to blood and body fluids is linked to activities like taking blood samples, giving injections, recapping already used needles, surgery, delivery, and emergency care. Nursing personnel are at risk of occupational acquired infections via blood and body exposure.[9] Needle injuries and injuries due to cutting, splashing incidents are some of the ways nursing personnel encounter during their daily activities.[10] Needle stick injuries are hazardous for people working in healthcare settings, and these injuries can occur at any time when people use, disassemble or dispose of needles and can become a potential source of infection.[11] Needle stick injuries and cuts are common occupational accidents. An accidental needle stick injury is defined as a prick with a needle or other sharp objects during the use of the object on a patient.[12]

Objectives Of The Study

1. To assess the knowledge of nursing personnel regarding Spill Management.
2. To assess the expressed practices of nursing personnel regarding Spill Management.
3. To determine the relationship between knowledge and expressed practices of nursing personnel.
4. To find out the association of the level of knowledge and expressed practices score with selected variables.

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Research Methodology

Research approach: A Descriptive survey approach will be used.
Research design: The research design was selected for quasi experimental.
Study variables:
Independent variable: the structured teaching programme on infection control is the independent variable.
Dependent variable: the dependent variable is the knowledge of nursing students on infection control.
Population: In this study, the population consists of nursing students in Haryana.
Study settings: The study was conducted in selected nursing colleges in Haryana.
Sample: Nursing students of nursing colleges, Haryana.
Sample size: The sample consists of 90 nursing students from Haryana.
Sampling technique: Random sampling probability techniques were used for this study.

Results

Table 1 Frequency and percentage distribution of nursing personnel in terms of level of knowledge regarding spill management

Level of knowledge		Frequency	Percentage%
Below Average (<17)		20	10
Average	(18 -23)	98	49
Good	(24 - 28)	82	41

Table 2 Range, mean, median, and standard deviation of the knowledge score of nursing personnel regarding spill management

N=200

	Mean+-Sd	Median	Mode	Range
Knowledge	21.7+-6.6	22	24	5 – 33
Practice	34+-3.7	36	37	20 – 37

Table 3

Frequency and percentage distribution of nursing personnel in terms of the level of expressed practices regarding spill management

N=200

Level of expressed practices		Frequency	Percentage (%)
Good	(>25)	196	98

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Average	(13 – 24)	4	2
Poor	(<12)	0	0

Table 4 Correlation between knowledge scores and expressed practices of nursing personnel regarding spill management

N=200

Test	Mean	R (p value)
Knowledge	21.7	0.50 (0.05*)
Expressed Practices	34.2	

Discussion

The present study aims to assess the knowledge & expressed practices of staff nurses regarding spill management in Haryana. It deals with the findings related to the present study in accordance with the objectives of the study. The findings of the study were discussed with reference to the results obtained in other related research. The purpose of the present study was to assess knowledge & expressed practices regarding spill management. In the present study, the majority of staff nurses were in the age group of 23 - 25 years (59.5%). In the gender category, the majority of staff nurses were female (86.5%). In the category of working wards, the majority of staff nurses were in general wards (62%). In the category of qualification, the majority of staff nurses were GNM (57.5%). In the category of clinical experience, the majority of staff nurses had 1-2 years (43.5%). In the category of frequency of spills per month, the majority of staff nurses had less than 2 months (56.5%). In the category of attended programme on spill management, the majority of staff nurses answered yes (83.5%). In the category of yes, how much time before the majority of staff nurses were <6 months (64%). In the category of done skill management, the majority of staff nurses answered yes (85%). In the category of yes, the majority of staff nurses were 1-3 times (64.5%). In the category of witnessed spill management, the majority of staff nurses were1-3 times (57%). where the majority of the nursing students, second year nursing 40%, 61%, 40% shows knowledge, attitude & practice, respectively. Third year students show better than second year, which was 57%, 71%, 71%, showing knowledge, attitude & practice respectively.

In the present study, the computed chi-square value shows a relationship between the level of expressed practices and selected sample characteristics. The table presents the computed chi-square value of age, gender, working ward, qualification, clinical experience, frequency of spills per month, attended programme, how many times, done spill management & witnessed spill management. Thus, it shows that staff nurses' knowledge of spill management was associated with these selected variables. The qualification value for expressed practices on spill management among staff nurses is 0.00; the frequency of spills per month is 0.017, the p-value is 0.04, and the attending programme timing is 0.04. These findings were consistent with the study conducted by Pramila D'Souza; the p-value was 0.048, which was less than the table value, thus there was a significant association of knowledge score with selected socio-demographic variables.

Recommendation

Nursing practice: Nurses should be encouraged to use proper skills of spill management to prevent infection and injuries.

The awareness can help nurses to use alternative techniques of spill management in their wards.

Nursing administration: Nurse administrators play a vital role in providing facilities to improve standard services based on knowledge, skill, attitude and practice on medical health aspects.

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As ward nursing personnel are the first ones to witness, having proper knowledge and skill, nurses can manage the spill.

Nursing education: While training the nursing personnel, the emphasis should be on current practices and guidelines of spill management.

Conclusion

The study presents the results of knowledge and expressed practices of nursing personnel regarding spill management in Haryana. There was a positive correlation between the knowledge and expressed practice of nursing personnel regarding spill management. There was a significant association between knowledge and expressed practices of nursing personnel with selected variables regarding spill management. There is a great need for improving the knowledge level of nursing personnel regarding spill management, as the 49% of the staff have an average knowledge level regarding spill management.

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