

“A Descriptive Study to Assess the Knowledge Regarding Procedure of Sterilization in Operation Theatre Among Students in Selected Nursing Institution of Pune City.”

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Abstract

Title: “A descriptive study to assess the knowledge regarding procedure of sterilization in operation theatre among students in selected nursing institution of Pune city”.

Objectives: 1. To assess knowledge regarding procedures of sterilization in operation theatre among nursing students. 2. To find association of the study between the knowledge with selected demographic variables.

Materials and Methodology: Non experimental descriptive research design was adopted. The approach of this research is quantitative. The sample size was 200. The sampling technique was non-probability purposive sampling technique. The inclusion criteria for the research include students whose age is between 17-25yrs, students of 2nd year GNM, 2nd year BSC and 3rd year BSC nursing students and exclusion criteria include students who were truant during the time of data collection. Samples were compiled from selected nursing schools of Pune city. A self-constructed questionnaire involving demographic variables and a set of 30 questions were provided to each sample.

Result: Majority of sample 69.5 % had average knowledge, 28.5% samples had poor knowledge and only 2% sample had good knowledge regarding procedures of sterilization in O.T. Mean value computed as 12.89 and S.D as 3.98. Chi-square test was used to find out the significance with demographic variables. There is no significance was found with the selected demographic variables as the obtained p values were greater than 0.05.

Conclusion: Analysis revealed that the nursing students of the selected nursing institutions of Pune city had average knowledge regarding procedure of sterilization in O.T.

Keywords: Assess, knowledge, procedures of sterilization in O.T, nursing students.

Introduction

"Reserving the operating theatre aseptic is infrequently a custom, it's really a devotion to clients' safety." Sterilization is the basic procedure handled in operating room where microbes get disinfected in terms of physical and chemical means to stop the rate of infection in hospital setting. It is dominant to assure patients protection, to decrease septicemia and to maintain aseptic surrounding to get effective result. In medical practice, sterilization place a pivotal role in detaching all the unwanted microorganisms presented in explicit instruments. Therefore acknowledging the concept, their methods and significance by healthcare practitioners are very necessary in medical practices.

Operation theatre (O.T) is an environment where complicated surgery are presented in safe and comfortable habitat. In operation theatre, a sterilizer room should be situated near to the theatre complex. A steriliser room is an aseptic habitat featured with a hand sink to decontaminate the used gadget and autoclave. The materials utilized should be examined, recognised and packaged antecedent to autoclaving. If the surroundings are not germfree

then it can lead into septicemia as there are many high risk surgeries presented in operating room for example heart surgery. There is high probability of microorganisms entering into patient's body part where the surgery goes and can result in infections. Transmission arise from diverse forms like bacteria, fungi, viruses or prions.

Broadly around 310 million surgeries are handled per year in distinct health centres along with 4 to 40% infection within the resection site. Meanwhile in every procedures the mucous membrane or inner tissue of a person who had undergone surgeries comes in touch with the surgical tool. There might be chance of proliferation of germs which extend the infection rate, therefore it is beneficial to keep every single surgical device sterilized and it should probably be carried out by a trained staff.

Need of the Study

Disinfection and sterilization are the elements that prone to control infection throughout hospital setting. Sterilization is the principle procedure practiced in operation theatre to drop down the spread of all kind of parasites. The primary intension of generating sterile atmosphere is to evacuate the existence of microorganisms within interior and exterior surface of operation theatre.

When O.T staff fails in practicing all the steps, it will be an open door for infectants to reach in the body of patient. Upgraded technology in addition to trained staff incorporates the progression of asepsis leading to positive approach in client's physical health. According to the study, conducted by National Institute of Health ,14% - 17% of hospital acquired infections and 38% of nosocomial infections are witnessed as surgical site infection, the operated patient is exposed to extra 7 to 10 days of hospitalization and there is 2 to 11 times greater risk of patient appearing death.

Sterilization is a technique executed in operation theatre to eliminate the curse of infection among patients. During academic journey, student's acknowledgment in sterilization procedure is minimal even if they have theoretical knowledge. This study is giving significance to raise the insight of performing and cultivating aseptic environment.

Scholar view: It's predominantly an essential factor that a nursing student must have thorough knowledge in sterilization practice which must be provided from their respective institution along with clinical exposure. In many cases it was evidenced that more than half of the nurse's population have practically average knowledge regrading this. Ensuring clients' safety is the soul of this divine profession.

A research study addressed to assess awareness regarding sterilization practices upon medical students and healthcare workers. Mixed-method approach including interviews and surveys was distributed to 500 participants. Results signified comprehensive lack of understanding among 2 groups, with 60% of medical students along with 45% of healthcare workers demonstrate insufficient knowledge. Interviews disclosed a key factor about incompetent training and insufficient practices.

Aim of Study

The aim of this study is to assess the knowledge regarding procedure of sterilization in operation theatre among students in selected nursing institution of Pune city.

Research Methodology

The objectives of current study is to assess the knowledge regarding procedures of sterilization in operation theatre among nursing students and to find association between knowledge and selected demographic variables. Non-experimental descriptive research design was implemented. A total of 200 nursing students belonging to 2nd year B.sc, 3rd year B.sc and 2nd year GNM from 17-25 years were selected using non-probability purposive sampling technique. Reliability of this study was done using test-retest method and 'r' value interpreted as 0.79. Later on, pilot study was conducted with 20 samples which revealed that the study was feasible.

Result

Section -1:- Demographic Data

Findings: - Section no.1 points that **11 (5.5%)** comes under **17-19 years**, **163 (81.5%)** comes under **20-22 years**, **26 (13%)** comes under **23-25 years**. Distribution of gender like **80 (40%)** comes under **Male** category and **120 (60%)** comes under **Female** category. **56 (28%)** comes under **Diploma** and **144 (72%)** comes under **Nursing Degree**. **147(73.5%)** students had previous knowledge about sterilization procedures in O.T and **53(26.5%)** had no knowledge.

Section-2: Knowledge Score

Table.2: Distribution of frequency and percentage with respect to knowledge score. (n=200)

KNOWLEDGE SCORE			MEAN	S.D
CATEGORY	FREQUENCY	PERCENTAGE		
POOR	57	28.5%	12.89	3.98
AVERAGE	139	69.5%		
GOOD	4	2%		

Findings:-Table shows that

- Majority **139 (69.5%)** of Nursing students have **Average knowledge** about procedures of sterilization in Operation theatre.
- **57(28.5%)** have **Poor knowledge** about procedures of sterilization in Operation theatre.
- **4(2%)** only have **Good knowledge** about procedures of sterilization about procedures of sterilization in Operation theatre.
- Mean was calculated as 12.89 and Standard Deviation (S.D) as 3.98.

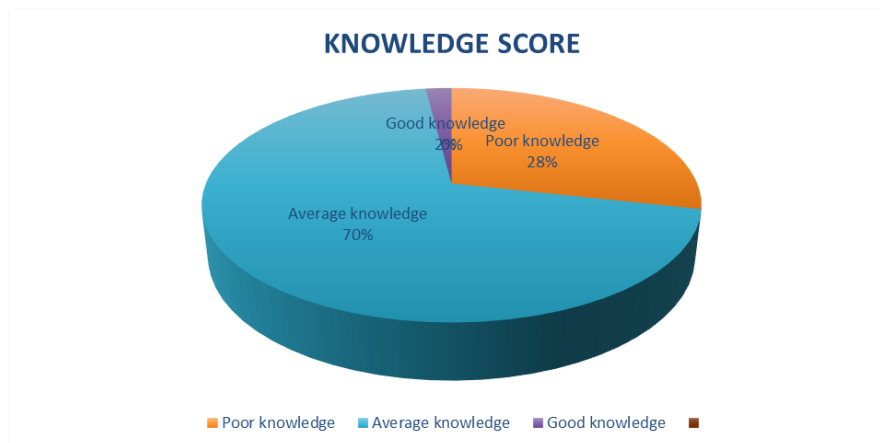


Fig.no.1:- Distribution of frequency and percentage in knowledge.

Section-3:- Analysis related to association of demographic variables with knowledge score.

Table.3:- Chi-Square test for the association of knowledge with demographic variables of nursing students regarding procedures of sterilization in O.T.

Findings: - Data exhibited in Table.no.3 calculates the association between selected demographic variables.

As the p-values interpreted using Chi-square test are greater than 0.05, there is no significant association between students Age, Gender, Diploma and Previous knowledge about sterilization procedures in O.T.

Discussion

The results investigated were purely explained degree of knowledge in nursing students regarding sterilization procedures by interpreting the counts of poor, average and good knowledge. It specifies that majority 139(69.5%) had average knowledge. This study signifies the need of applying specific interventions in their education to improve their comprehension skill that endeavor positive impact in their clinical experience. The data collected for this research had kept highly confidential and analyzed depending on several factors.

A study focused on assessment on team members of surgery towards knowledge and distinct practices followed in O.T based on sterilization process. A Cross sectional approach utilized among 200 technologists in surgical field squad. This research study was directed in distinct health center's where surgeries were handled by technologists using various equipment's. A survey based questionnaire was employed using random sampling technique to assess the basic facts related to sterilization in O.T. Results suggested that technologists had 80% knowledge in this sector and also proves a better level understanding among them of selected center's hence the defined variable was satisfied. This study emphasizes significance of assessing their actual knowledge with required equipment's using certain protocols. This study points a high need of educating and practicing sterility techniques in recommended field to enhance client security.

Another study addressed on the assessment of sterilization procedures followed in O.T. An observational approach was implemented in 20 different operating rooms using cluster technique. The researchers closely observed the process like pre and post-surgical measures individually. The results suggested that score given for compliance was only 65% pointing the need for complete compliance with the protocols. Finally it was proved that surgical team members had 85% knowledge than nursing graduates, as they had 70% knowledge related to sterilization practice in O.T. Researchers of various researches used different approaches and sampling methods.

Recommendation:

The recommendations for upcoming research are given below:-

- Along with knowledge, attitude of students regarding sterilization in O.T can be evaluated.
- An identical study can probably conduct on large number of samples.
- This same study can perform on multiple hospitals urban and suburban areas.
- A study can identically conduct among O.T staffs.

Conclusion

The current study was focused on knowledge level of nursing students (GNM & B.sc) related to sterilization procedures carried out in O.T. All the process of research had covered gradually and eventually got the results. The calculated values were analyzed using Karl-Pearson's formula of correlation coefficient for reliability and Chi-square test for association. Among 200 samples, 139(69.5%) students had average knowledge, 57(28.5%) had poor knowledge and 4(2%) had good knowledge.

It is beneficial to boost the education and practice of students in hospitals by administering certain interventions thereby they can ensure the patient security in O.T. This study can bring good knowledge and development among educating nurse both in O.T procedures of hospital and in nursing field by conducting and demonstrating thorough procedures thereby provoking the graduating students to cooperate and team-up with other health care personnel skillfully for risk free environment.

This study promotes interdisciplinary opportunities in nursing students thereby facilitating enhanced learning in students to work in O.T, hence providing a panoramic outlook to patient supervision. It can resolve staffing requirements and capabilities imperative to comfort nursing staffs in the synthesis of complete procedures fulfilled in O.T, thereby guarding specific requisites in staffing aspects and blending several competences.

Conflict of interest: The authors certify that they have no involvement in any organization or entity with any financial or non-financial interest in the subject matter or materials discussed in this paper.

Funding: This project was not funded by any of agency.

Ethical Approval: Ethical approval is given by Institutional research & recommendation committee, Bharati Vidyapeeth (Deemed to be University), College of Nursing, Pune.

Acknowledgement:

Most sincerely we convey our deep sense of gratitude to our participants, organizations & Bharati Vidyapeeth College of Nursing, Pune for remarkable guidance and academic support during this study. At last we are grateful about the support and help we got throughout the research study from our authority, faculty teams and our group members who contributed to accomplish the research study successfully.

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