

Knowledge & Practice Study among Staff Nurses about Surgical Site Infections in a Tertiary Care Hospital in Northern India

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Abstract: ***Objectives:** To assess the knowledge and practice among Nurses regarding prevention of Surgical site infections. **Materials and methods:** A descriptive cross sectional study was undertaken to assess the knowledge and practice among Nurses regarding prevention of Surgical site infections. Total 70 samples aged between 21 to 60 years were selected by non probability convenient sampling from all wards where postoperative patients were being monitored. A structured questionnaire was used to assess existing level of knowledge and practice was assessed by an observational checklist. Descriptive and inferential statistics was used for the analysis of the tabulated data. **Results:** Out of 70 respondents maximum respondents 41 (58.6%) were from age group of 21 - 30 years. Majority of the respondents 35 (50%) were Graduate nurses, 33 (47.1%) had clinical experience of 5 to 10 years and 38 (54.3%) underwent speciality courses. Majority of the respondents i. e. 44 (62.9%) had poor knowledge whereas 23 (32.9%) had fair knowledge regarding prevention of SSI. Only 3 (4.3%) had good knowledge. 68 (97.1%) of the respondents exhibited high level of practice in response to prevention of SSI whereas 2 (2.9%) demonstrated moderate level of practice There was a weak positive correlation between mean knowledge and mean practice regarding prevention of surgical site infections which is was statistically insignificant. **Conclusion:** The study concluded that though the nurses lack knowledge they practiced prevention of SSI appropriately. Therefore, efforts have to be made to update the knowledge of nurses regarding surgical site infection prevention activities.*

Keywords: Knowledge, prevention, surgical site infection

1. Introduction

Surgical site infections (SSI) are the third most commonly reported nosocomial infection and they account for approximately a quarter of all nosocomial infections¹. It has an adverse impact on the hospital as well as on the patient. Surgical site infections are responsible for increasing length of stay of patient which results in social and economic loss to the patients and family

Accordingly, the first step in the treatment of Surgical site infections (SSI) is in their prevention. This encompasses meticulous operative technique, timely administration of appropriate preoperative antibiotics, and a variety of preventive measures aimed at neutralizing the threat of bacterial, viral, and fungal contamination posed by operative staff, the operating room environment, and the patient's endogenous skin flora.

It is estimated that 25% of infections can be prevented by nurses through implementing standard precautions during care of the surgical patients. So, nurses can help to prevent surgical site infection, decreases patients economic burden as well as hospital expenses and enhance quality of life of the patients by the application of knowledge and recommended practices.

2. Review of Literature:

a) Sadia H et al conducted a descriptive study to assess knowledge and practice regarding prevention of Surgical Site Infection among staff nurses. The results of the study reveals that the overall knowledge of staff nurses for surgical site infection prevention was poor whereas the overall practice of staff nurses regarding preventing and managing of surgical site infection was at good level.

b) Results of a descriptive study conducted by Nawab Shah in 2010 in a tertiary care hospital of Uttar Pradesh revealed that in which the rate of surgical site infection was as 9.3%. Malik et al. explored the incidence rate of surgical site infection at a district hospital in Islamabad in 2011 revealed that the rate was 8.6%.

3. Materials & Methods

A cross sectional descriptive study was conducted among 70 staff nurses working in a tertiary care hospital OPD of a tertiary care hospital. Samples were recruited by convenient sampling technique. A self administered questionnaire was prepared which consists of two sections to assess demographic profile & knowledge regarding prevention of Surgical Site infections among staff nurses. Reported practices were assessed using an Observation checklist. Data analysis was done by descriptive & inferential statistics.

4. Results

- All of the respondents were female
- Mean age was 31 years.
- 35 (50%) of the participants were BSc, 32 (45.7%) were GNM and 2 (4.3%) were PBBSc
- Mean of 8 years as clinical - based practice experience.
- Knowledge score ranged from 1 - 10, the mean of knowledge score was 6.5. Only 3 out of 70 (4.3%) had good knowledge, 23 (32.9%) had fair knowledge, and 44 (62.9%) had poor knowledge
- 97.1% of the staff nurses demonstrated high level of practice regarding prevention of Surgical Site Infections.

Table 1: Distribution of samples as per their Knowledge level regarding prevention of SSI, n=70

Knowledge	Frequency (f)	Percentage (%)
Poor	44	62.9
Fair	23	32.9
Good	3	4.30

Table 1 depicts that the knowledge score of staff nurses ranged from 1 - 10, and the mean of knowledge score was 6.5.3 i. e. (4.3%) of the respondents possessed good knowledge whereas 23 (32.9%) depicted fair knowledge, and 44 (62.9%) had poor knowledge

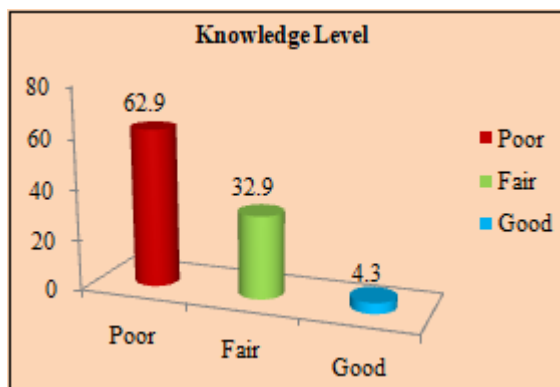


Figure 1: Distribution of samples as per their Knowledge level regarding prevention of SSI, n=70

Table 2: Distribution of samples as per their practice level regarding prevention of SSI, n=70

Practice	Frequency (f)	Percentage (%)
Moderate	2	2.90
Higher	68	97.1

Table 2 depicts the practice level of samples regarding prevention of Surgical Site infection. It is observed that 68 i.e. (97.1%) of staff nurses demonstrated high practice level whereas only 2 i.e. (2.9%) revealed moderate practice level

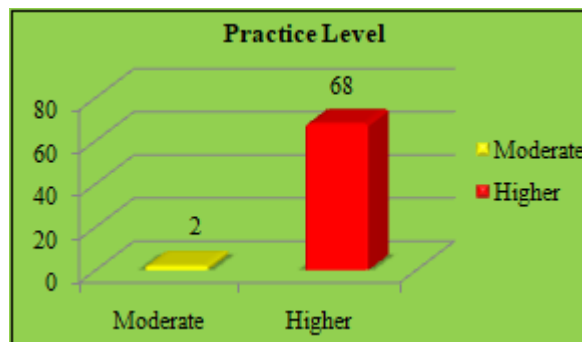


Figure 2: Distribution of samples as per their practice level regarding prevention of SSI, n= 70

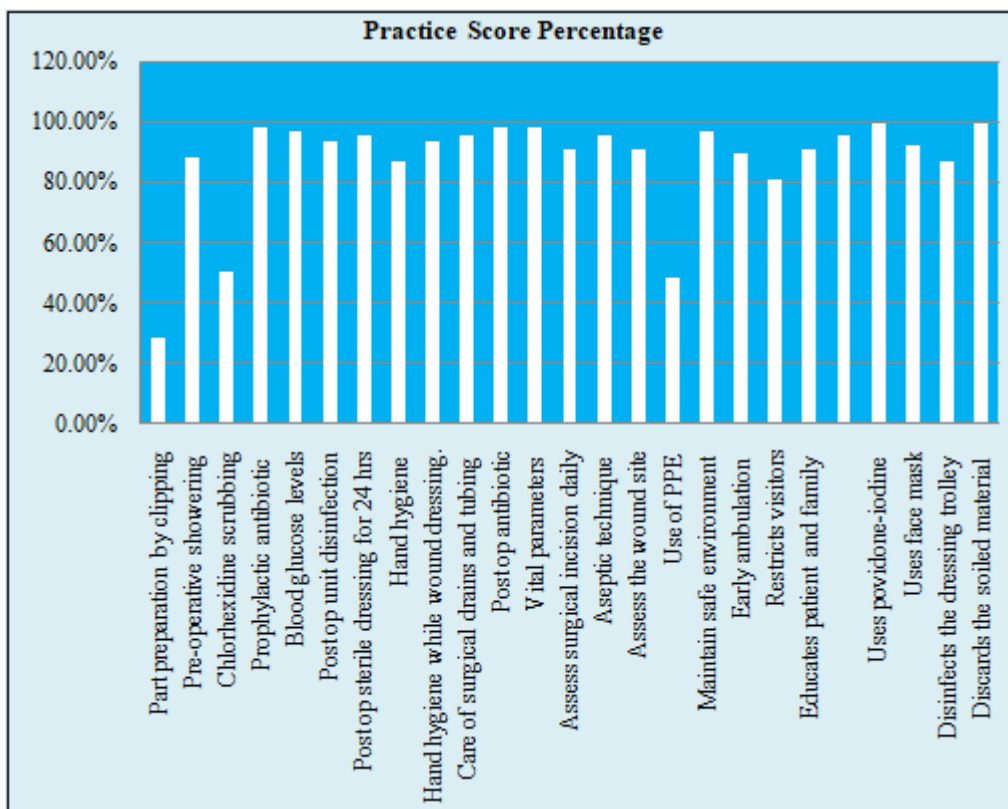


Figure 3: Distribution of practice according to questionnaire

Fig 3 shows about the practices by nurses, investigators observed the practices of nurses regarding prevention of SSI. In reference to the figure, major areas of concern where practice is lacking were part preparation by clipping (29%) and use of Personal protective equipment (48.6%).

References

[1] World Health Organization. (November 2016). Clean care is safer care - Global guidelines on the prevention of surgical site infection (pp.1–184).

- [2] Sickder, H. K., Sae - Sia, W & Petpichetchian, W. (2014). Nurses' Knowledge and Practice Regarding Prevention of Surgical Site Infection in Bangladesh.
- [3] Wong, E. S. (1996). Surgical site infections. In C. G. Mayhall (Ed.), Hospital epidemiology and infection control (1st ed). Williams & Wilkins.
- [4] Joshi, R. (2014). A Study to assess the Knowledge and Practice of Staff Nurses Regarding Prevention of Surgical Site Infection among Selected Hospital
- [5] Najeeb N & Taneepanichsakul S (2008). Knowledge, attitude, and practice of standard and transmission - based precautions of doctors and nurses in tertiary and secondary health care settings of Maldives. Journal of Health Research, 22, 45–48.