

ORIGINAL PAPER

Knowledge, Attitude and Practices of Staff Nurse on Hand Hygiene in a Tertiary Medical Care

Borah Rashmi Rekaha¹, Das Krishna²

Received on August 5, 2015; accepted (revised) on ..., 2015

ABSTRACT

A cross sectional descriptive study was conducted in Gauhati Medical College and Hospital, Guwahati to assess the knowledge, attitude and practice of nursing staff on hand hygiene. A sample of 100 nursing staff was selected by purposive random sampling technique. The tool used for the study was structured interview schedule consisting of socio demographic characteristics, knowledge questionnaire, attitude measurement using likert scale, practice assessment.

The result revealed that majority of the nursing staff of 42% do not have an adequate knowledge and only 24% have adequate knowledge. With respect to attitude of nursing staff towards hand hygiene it is found that majority (27%) of nursing staff have unfavourable attitude towards hand hygiene and only 19% staff nurse have favourable attitude towards hand hygiene. On basis of practice it is found that majority (33%) do not practice correct hand hygiene techniques/methods and only 7% of nursing staff practice satisfactorily the correct techniques of hand hygiene. The findings of the present study demonstrated that there is a need to increase the awareness among the staff nurses regarding hand hygiene to prevent cross infection and related mortality in the hospital. The findings could be utilized as a basis for conducting training programme targeting hand hygiene practices for the staff nurses with continuous monitoring and performance feedback, so that they develop current knowledge in the area with a behavioural change in attitudes and practices leading to reduction of nosocomial infection.

Keywords: Staff nurse, hand hygiene, knowledge, attitude, practice

INTRODUCTION

Infection caused due to hospital acquired microbes is an evolving problem worldwide, and horizontal transmission of bacterial organisms continues to cause a high nosocomial infection rate in health care settings. Nosocomial infections due to poor hand hygiene are a major cause of increasing morbidity, mortality and health care costs among hospitalized patients worldwide.¹

The high prevalence of these infections, as high as 19%, in developing countries poses a challenge to health care providers.² Hand hygiene is considered as the single most cost-effective public health measure for preventing health care associated infection (HCAI).³

Transmission of healthcare-associated pathogens generally occurs via the contaminated hands of healthcare workers often transmitting virulent and multi-drug resistant strains. Though preventable with a simple hand washing, health care workers are reluctant to adopt recommended practices to curb these infections.⁴

Although the World Health Organisation (WHO) has issued guidelines for procedural hand washing in order to reduce the prevalence of hospital associated infections but lack of knowledge amongst health care workers is associated with poor compliance.⁵

Address for correspondence and reprints:

¹NMT, Jhpiego

Email: rashmirekhaborah6@gmail.com

Mobile: 9085153558

²Professor of paediatric nursing, Regional College of Nursing, Guwahati

Email: mrs.krishnadas@rocketmail.com

Despite evidence and expert opinion that hand hygiene reduces transmission of potential pathogens or antimicrobial-resistant organisms, sustained improvements in adherence to hand hygiene recommendations and proper hand washing technique among health care workers are uncommon⁶, even after educational efforts. At the same time, in some hospitals there is not even proper training the employees regarding hand hygiene practices. This is shown by the lack of even basic awareness about hand washing guidelines among the hospital personnel.

Nurses constitute the largest percentage of the health care workers⁷ and they are the “nucleus of the health care system”,⁸ because they spend more time with patients than any other HCWs, their compliance with hand washing guidelines seems to be more vital in preventing the disease transmission among patients. Many studies have consistently shown that improved hand hygiene has reduced nosocomial infections and cross contamination of multi resistant infection in hospitals.⁹

In Asia there is a paucity of studies¹⁰ exploring this subject, although the prevalence of health care associated infections is high in this region; especially medical and nursing staff’s knowledge of standard precautions is rarely compared.¹¹ The observance of hand hygiene by nursing staff is reported as being weak.^{12, 13} Therefore, it is absolutely essential to investigate and know nurse’s knowledge, attitudes and practices about hand hygiene so that appropriate strategies can be developed to promote hand hygiene compliance in the hospital. With this background, the present study was undertaken by the researcher.

OBJECTIVES

The present study attempted: (i) To assess the level of knowledge of staff nurses on hand hygiene, (ii) To measure the attitude of staff nurses towards hand hygiene and (iii) To identify the practice of staff nurses on hand hygiene.

METHODOLOGY

A cross sectional descriptive survey approach was used for the study. The study was conducted in Gauhati Medical College and Hospital, (GMCH) Guwahati. The population consisted of staff nurses working in GMCH. The sample size was 100 staff nurses who were selected through systematic random sampling technique.

The tool used for data collection consists of the following:

Part 1: Demographic characteristics

A demographic characteristic includes age, religion, marital status, professional qualification and experience in years.

Part 2: Level of knowledge of staff nurses on hand hygiene

This part includes 10 multiple choice questions related to hand hygiene

Part 3: Measurement of attitude

This part includes 3 point likert scale with 10 items which the subject has to respond under agree, neutral, disagree,

Part 4: Level of practices

This part includes 10 items to which the subjects have to response as yes/no.

OBSERVATION AND RESULTS

All the items in the tools were coded and transferred to a master sheet for computer programming. Statistical analysis has been performed by using SPSS software version 20.0 to analyse the data. Frequency and percentage distribution was used to describe the demographic, variables, knowledge; attitude and practice of staff nurses on hand hygiene.

DEMOGRAPHIC CHARACTERISTICS

Analysis of demographic data revealed that majority of staff nurses (55%) were in the age group of 36-45 years followed by 23 % in the age group of 26-35 years, 16% were in the age group of 46 years and above and only 6% were less than 25 years.

In relation to religion of staff nurses majority (61%) were Hindus, 37% were Muslims and only 2% were Christians. Majority of staff nurses (86%) were married and 14% were unmarried. With respect to professional qualifications majority (73%) were GNM, 24% were B.Sc. nurse and only 3% were M.Sc. nurse. In case of working experience majority of (69%) staff nurse were having 6 and above years of working experience, 25% were having 2-5 years of working experience and only 4% staff nurses were having less than 2 years of working experience.

From **Figure 1** it is observed that majority (42%) of staff nurses do not have adequate knowledge on hand hygiene followed by 34% have moderate knowledge on hand

hygiene and only 24% staff nurses have adequate knowledge on hand hygiene.

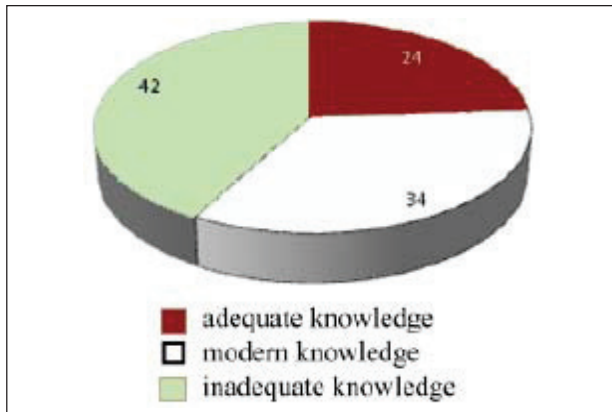


Figure 1 Distribution of knowledge of staff nurse on hand hygiene

The attitude of staff nurse was assessed by 3 point attitude scale consisting of 10 items. The maximum score was 27 and minimum score was 10. According to the total score obtained by each subject the attitude was classified into three categories.

- Unfavourable attitude:** Mean- 1SD (19.48-4.35=15.13)
- Favourable attitude:** Mean – 1SD to Mean +1SD
- Most favourable attitude:** Mean +1SD (19.45+4.35=23.83)
- Unfavourable attitude** = <15 score
- Favourable attitude** = (15-24)
- Most favourable attitude** = >24 score.

Majority (54%) of staff nurses carries moderately favourable attitude towards hand hygiene, 27% carries unfavourable attitude towards hand hygiene and only 19% staff nurse have a positive/favourable attitude towards hand hygiene (**Table 1**).

Table 1 Frequency distribution and percentage of attitude of staff nurse’s towards hand hygiene (N=100)

Attitude Score	Frequency	%
Favourable (>24.)	19	19%
Moderately favourable (15-24)	54	54%
Unfavourable (<15)	27	27%
Total score	100	100%

Figure 2 represents the practice level of staff nurse on hand hygiene which interprets that majority (60%) of staff nurse moderately practice hand hygiene whereas only 7% practice hand hygiene satisfactorily and 33% do not practice hand hygiene satisfactorily.

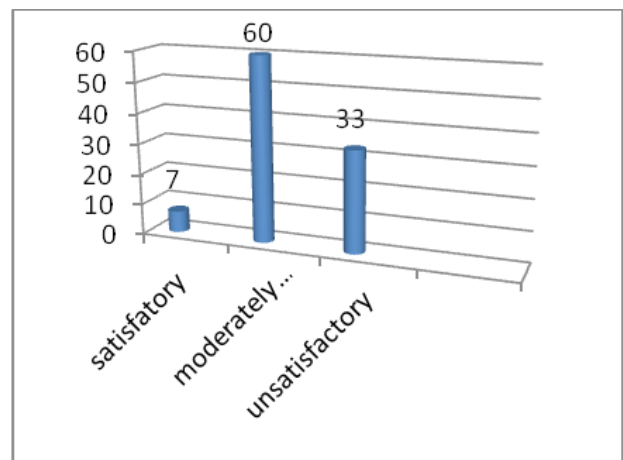


Figure 2 Distribution of practice level of staff nurse on hand hygiene

DISCUSSION

The current study revealed that majority (42%) of staff nurse do not have adequate knowledge on hand hygiene followed by 34% which have moderate knowledge on hand hygiene and only 24% staff nurse have adequate knowledge on hand hygiene. Similar findings were observed by Srujith Sasidharan Nair, Ramesh Hanumant appa, Shashidhan Gurushantswamy Hiremath, et al¹⁴ where only 9% of participants (13 out of 144) had good knowledge regarding hand hygiene.

In the present study it is found that majority (54%) of staff nurse carries moderately favourable attitude towards hand hygiene, 27% carries unfavourable attitude towards hand hygiene and only 19% staff nurse have a positive/favourable attitude towards hand hygiene. Shinde MB, Mohite VR¹⁵ reported similar findings that majority of staff nurses in tertiary care hospital at Karad had poor attitude towards hand hygiene.

The present study is consistent with the study findings of Harris A, Nafziger R, Samore M, DiRosario K, Roghmann M, Carmeli Y¹⁶ which revealed that practice level of staff nurses on hand hygiene is not satisfactory.

CONCLUSION

This study clearly demonstrates that staff nurses are still lagging behind in their knowledge regarding hand hygiene and not aware of the current updates on hand hygiene. They do not have a positive attitude towards hand hygiene and therefore do not practice it, which calls for urgent training or conducting of in-service educational

programme for the staff nurses on hand hygiene. This in turn will reduce the incidence of hospital acquired infection and associated mortality and morbidity in the hospitals.

Ethical Clearance: Done

REFERENCES

1. A Trampuz, AF Widmer. Hand Hygiene: A frequently missed life saving opportunity during patient care. *Mayo Clin Proc* 2004;79:109–16.
2. WHO: The Burden of health care-associated infection worldwide. A Summary [cited 2010 Apr 30]; Available from: URL:http://www.who.int/gpsc/country_work/summary_20100430_en.pdf
3. D Pittet, B Allegranzi, H Sax. Evidence-based model for hand transmission during patient care and the role of improved practices. *Lancet Infect Dis* 2006;6:641–52.
4. MR Meengs, BK Giles, CD Chisholm, WH Cordell, DR Nelson. Handwashing frequency in an emergency department. *J Emerg Nurs* 1994;20:183–88.
5. WHO Guidelines on Hand Hygiene in Health Care First Global Patient Safety Challenge Clean Care is Safer Care. 2009. [cited 2013 Aug 14]; Available from: URL:http://whqlibdoc.who.int/publications/2009/9789241597906_eng.pdf
6. WE Trick, MO Vernon, RO Hayes. Impact of Ring Wearing on Hand Contamination and Comparison of Hand Hygiene Agents in a Hospital. *Clin Infect Dis* 2003;36:1383–90.
7. P. I. Buerhaus, D. I. Auerbach, and D. O. Staiger. Recent trends in the registered nurse labor market in the U.S.: short-run swings on top of long-term trends. *Nursing Economics* 2007;25(2):59–66.
8. R F Abualrub. Nursing shortage in Jordan: what is the solution? *J of Professional Nursing* 2007;23(2):117-20.
9. Mathai E, Allegranzi B, Kilpatrick C, Pittet D. Prevention and control of health care-associated infections through improved hand hygiene. *Indian J Med Microbia* 2010;28(2):100-6.
10. P I Buerhaus, D I Auerbach, and D O Staiger. Recent trends in the registered nurse labor market in the U.S.: short-run swings on top of long-term trends. *Nursing Economics* 2007;25(2):59–66.
11. K Patarakul, A Tan-Khum, S Kanha, D Padungpean, O O Jaichaiyapum. Cross-sectional survey of hand-hygiene compliance and attitudes of health care workers and visitors in the intensive care units at King Chulalongkorn Memorial Hospital. *J of the Med Asso of Thailand* 2005;88(4):S287–S293.
12. KM Kim, MA Kim, YS Chung, NC Kim. Knowledge and performance of the universal precautions by nursing and medical students in Korea. *American J of Infection Control* 2001;29(5):295–300.
13. A Feather, SP Stone, A Wessier, KA Boursicot, C Pratt. Now please wash your hands: the handwashing behaviour of final MBBS candidates. *J of Hospital Infection* 2000;45(1):62–64.
14. Nair, R Hanumantappa, S G Hiremath, Mohammed Asaduddin Siraj, Pooja Raghunath. Knowledge, Attitude, and Practice of Hand Hygiene among Medical and Nursing Students at a Tertiary Health Care Centre in Raichur, India. *ISRN Preventive Med* 2014;608927.
15. Shinde M B, Mohite V R. Knowledge, attitude and practice of five moments of hand hygiene among nursing staff and students at a tertiary care hospital at Kard. *IJSR*. ISSN (online): 2319-7064. Available from: URL: <http://hijsr.net/archieve/V3i2/MDIwMTM5NTc%3dpdf>
16. Harris A, Nafziger R, Samore M, DiRosario K, Roghmann M, Carmeli Y. A survey on hand washing practices and opinions of healthcare workers. *J of Hospital Infection* 2000;45(4):318–321.