

Knowledge, Attitude and Practice of Hand Hygiene Among Medical and Nursing Students at a Tertiary Health Care Centre in Southern Rajasthan

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Abstract

Background: Hand hygiene is a very simple yet very effective method of providing infection free environment to patients and healthcare workers. It’s immensely important for all healthcare workers to have knowledge of proper method of hand hygiene and its practice during the work at health care centre. Emergence of COVID 19 has further strengthened the need of proper hand hygiene among the healthcare givers.

Aim: this study was aimed at assessing the knowledge, attitude and practice of proper hand hygiene among healthcare workers at tertiary care centre. Study also compared these hand hygiene parameters between nursing staff and medical students undergoing clinical postings.

Method: The present study was conducted at tertiary care center of south Rajasthan. A 40-question questionnaire was formulated to assess the knowledge of hand hygiene, its application or implementation during

work at health center and health care workers attitude towards the proper practice of hand hygiene.

Result: In our study, knowledge of hand hygiene was found to be moderate to good among both nursing staff and medical students, nursing staff being marginally better.

Attitude towards the proper practices of hand hygiene was overall poor among both nursing staff and medical students, showing their ignorance and lack of awareness.

Conclusion: Wide difference between the theoretical knowledge of hand hygiene and its implementation at working site among target health care workers was found. Lack of awareness and their ignorance towards the hand hygiene is mainly responsible for increase in health care associated infections.

Keywords: Knowledge, Practice, Hand Hygiene, Health-care Associated Infections (HAI's)

Introduction

Health-care Associated Infections (HAI's) are responsible for increased morbidity and mortality at health care centers throughout the world, accounting for 7 to 10 % of total hospital admissions¹⁻³. The health care sector in subcontinent is growing rapidly. Private sector is better equipped with vast infrastructure and standard of services than public sector; therefore, expectation of quality care and infection free environment is largely expected from them⁴. In last few years incidence of Health-care Associated Infections (HAI's) have seen rapid rise in India. The most important reason being lack of awareness and ignorance towards proper compliance of infection control policies⁴. Hand hygiene most important method accepted globally for reducing HAI's⁵. Emergence of COVID 19 lead to increase in importance of hospital infection control and policy making towards its efficient implementation. Hand hygiene is recognized

as simple, cost effective and most efficient method to interrupt spread of infection in health care settings⁶. Hand hygiene though relatively simple method its compliance rate is variable and poor among health care givers⁷. There are many reasons responsible for poor compliance of infection control policies at centers, most important being lack of appropriate facilities, insufficient knowledge and negative attitude of healthcare workers towards its implementation⁸. Nursing staff and medical students are pillars of healthcare system and spend maximum time with patients, therefore their knowledge and attitude towards implementation of infection control policies is very important.

This study was conducted to assess the level of Knowledge, Attitude and Practices of hand hygiene among nursing staff and medical students (Interns) working at tertiary health care center in south Rajasthan.

Material and Methods

This observational cross section study was undertaken at tertiary health care center in south Rajasthan. The questionnaire used was tailor made to assess the practical knowledge of hand hygiene, its application in routine working and attitude of health care workers towards the proper practice of hand hygiene.

Ethical clearance was taken from the ethical committee of the institute. Total of 200 participants, including 100 nursing staff and 100 medical students (interns) were enrolled for the study. Participant selection was purely voluntary and confidentiality was ensured by avoiding use of names of participants.

The usual protocol of verbal consent and briefing of study was made to the participants.

Questionnaire of 40 questions based on knowledge, attitude and practices was presented to the participants

and their responses were analyzed as poor, moderate and good depending on correct answers.

Category	Number of correct answers
Poor	Up to 20 (50%)
Moderate	21-30 (up to 75%)
Good	>30 (>75%)

Results

A total of 200 (100 nursing staff and 100 medical students) were enrolled in the study. Nursing group included both trainees and trained nurses posted in ICU’s and wards and medical students mainly comprised of final year students and interns undergoing clinical postings.

Overall response

Category	Number of total correct response (out of 40)	Percentage
Medical students	23	57.5
Nursing staff	27	67.5

Category	Knowledge based questions (out of 15)	Percentage
Medical students	10	66.6
Nursing staff	12	80

In our study analysis of the responses showed that health care workers had moderate to good knowledge on hand hygiene, similar to other studies, where nursing staff were better versed (80% correct response) than medical students (66.6% correct response).

Knowing the gaps in their knowledge made it easier to formulate the teaching modules on hand hygiene.

Category	Attitude based questions (out of 15)	Percentage
Medical students	7	46.6
Nursing staff	8	53.3

The attitude of the participants towards hand hygiene was overall poor in medical students and nursing staff, nursing staff being marginally better. This showed that in spite of God knowledge about hand hygiene their attitude towards its practice is poor due to ignorance and lack of awareness.

Category	Practice based questions (out of 10)	Percentage
Medical students	6	60
Nursing staff	7	70

Discussion

In our study, both the group’s i.e., nursing staff and medical interns had relatively good knowledge but poor and inadequate attitude towards hand hygiene practice. The knowledge and attitude were found to be better in nursing staff than medical interns who shows their commitment towards patient care. Similar study was conducted by Kingston et al. in 2018, which observed attitude towards hand hygiene between nursing students and medical students, which showed a general positive knowledge and attitude towards hand hygiene. In accordance to our study the nursing staff had better hand hygiene compliance than medical students.⁹ A similar study was done in Saudi Arabia among medical interns showed poor knowledge and practice of hand hygiene, which was in accordance with our present study.¹⁰ Our study was also in accordance with the similar study done at tertiary care hospital in Raichur, India which showed poor knowledge and attitude towards hand hygiene

among both nursing staff and medical students. Nursing staff out performed medical students in both knowledge and attitude.¹¹ COVID 19 also had a very interesting impact on hand hygiene practices, where both general public and healthcare workers admitted to have engaged in active and regular hand hygiene practices after the pandemic.¹²

Many other studies done worldwide on similar subject showed that knowledge and attitude of various healthcare workers towards hand hygiene varied from fair to good but practice was poor among all groups.^{13,14} Another study done to compare hand hygiene practices between public and private healthcare centers revealed that private setup are significantly more compliant and aware than public setups. It was also found that tertiary health center was better compliant than primary and secondary centres¹⁵.

Fear of contracting infection was most important motivational factor for practicing proper hand hygiene, which was consistent with few other studies as well^{16,17,18}.

Conclusion

The most important inference which can be drawn by this study is that there is wide difference between the theoretical knowledge about the concept of hand hygiene and its efficient implementation at working site.

There is obvious lack of awareness among healthcare workers regarding importance of hand hygiene in control of hospital acquired infections

Nursing staff is more informed and have positive attitude towards importance of hand hygiene than medical students who are little ignorant regarding this practice.

Continuous sensitization and training is required for all healthcare workers towards importance of proper hand hygiene practice at work place and more practical

training modules are to be structured for nursing staff and medical students.

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