



A STUDY ON PRACTICE OF HAND WASHING AMONG THE NURSING STAFF IN A TERTIARY CARE TEACHING HOSPITAL.

Community Medicine

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ABSTRACT

Background: The current majority of modern medicine is to prevent infections due to hospital acquired microbes and evolving bacterial organisms which can affect the nursing staff due to improper hygiene. In this study we sought to study the practice of hand washing among nursing staff in a tertiary care teaching hospital.

Material & Methods: A cross-sectional study was conducted to assess hand washing practice among the nursing staff in a tertiary care teaching hospital.

Results: A total of 150 nursing staff were studied for their practice of hand washing. It was found that a total of 77% staff practiced hand washing before examining patient and a total of 90% staff practiced handwashing after examining the patients. Compliance with hand washing practice was observed more in B.Sc and M.Sc qualified nurses than in ANM and GNM qualified nurses.

Conclusions: The majority of nursing staff wash their hands after the patient care. Educational qualification and Service experience of healthcare professionals are showing impact on the hand hygiene practice. The current study emphasizes the need of counselling on hand hygiene to the healthcare professionals. Hence it is important to conduct regular training programs on hand hygiene for nurses with continuous monitoring.

KEYWORDS

Hand hygiene; Nursing staff; hospital acquired infections.

INTRODUCTION:

Health care associated infections (HAI) are the major cause of mortality and morbidity among the hospitalized patients contributing 7-10% of the hospital admissions.¹ In developed countries, HAI affects about 5-15% of hospitalized patients and the rate is higher among those in intensive care units (ICUs), between 9-37%.^{2,3} The incriminating organisms are often microbial isolates of resistant organisms.⁴ The practice of hand hygiene by health care professionals, through the use of either soap and water or an alcohol-based hand sanitizer, is widely considered to be the most important and effective means of preventing health-care associated infections.⁵

The concept of hand hygiene and antisepsis was introduced by Ignel Semmelweis who demonstrated that cleansing hands with an antiseptic agent between patient contacts may reduce health-care associated transmission of contagious diseases.⁶ The reasons for low levels of practice of hand hygiene have not been defined in developing countries probably due to limited observation and studies on hand hygiene.

In this study, we sought to study the practice of hand washing among Nursing staff in a tertiary care teaching hospital and the relationship between Educational qualification and their hand washing practice.

MATERIAL & METHODS:

This descriptive, cross-sectional survey was conducted at Santhiram General Hospital from August to October 2018. This study was approved by the Institutional Ethics Committee of our institute. A total of 150 nursing staff were surveyed with a standard questionnaire to assess their hand washing practice during their services in the hospital wards.

Data collection included age, gender, educational qualification, length of service, habit of hand washing before and after patient examination and type of hand washing agent.

Statistical analysis: Data was collected on Microsoft Excel worksheets. Results are represented as counts with percentages. Statistical Package for Social Sciences (SPSS) version 20.0 (IBM Corp, Chicago, IL, USA) was used to analyze the data.

RESULTS:

A total of 150 nursing staff were included in the study and were studied

for their practice of hand washing. Majority of the Nursing staff are in 29-35 years age group (33.3%) followed by 22-28 years of age group (30%). Table-1 shows the age wise distribution of the nursing staff. Majority of them are female (n=105). (figure-1)

Educational Status of Nursing staff: Majority of the Nursing staff are GNM qualified (n=90; 60%) followed by ANM (n= 40; 26.7%). B.Sc and M.Sc qualified are less in number with 10% (n=15) and 3.3% (n=5) respectively. (figure-2)

Service Experience: 53.3% of the staff are having service experience of 6-10 years followed by staff having experience of 1-5 years (30%). (table-2)

Habit of Hand washing: It was found that a total of 77% (n=115) staff practiced hand washing before examining the patient and a total of 90% (n=135) staff practiced handwashing after examining the patients. (table-3)

Pattern of Use of Soap/Sanitizer: Majority of the staff are using Soap for hand washing. Table-4 shows the pattern of agent used for hand washing.

Educational Qualification vs Hand washing practice: Compliance with hand washing practice was observed more in B.Sc and M.Sc qualified nurses than in ANM and GNM qualified nurses. (table-5)

Length of Experience vs Hand washing practice: Hand washing practice was observed more in nurses having experience between 11-15 years followed by 1-5 years of experienced. (table-6)

DISCUSSION:

In the current study, we observed that 77% of the nurses are handwashing before patient examination and 90% are handwashing after patient examination. While 71.3% of nurses are handwashing both the times. The compliance rate of handwashing among nursing staff of our hospital is quite better than previous reports. Many studies on hand washing practice by health care professionals (HCPs) have reported low compliance rate.⁷⁻⁹

In an observational study conducted among HCPs in a tertiary care hospital in Ghana, hand washing compliance rate was reported ranging from 9.2% to 57% and 9.6% to 54% among doctors and nurses

respectively.¹⁰ In an Egyptian study, only 34% had a good practice of hand washing.⁸ In a similar study among HCPs of ICU in a tertiary care hospital in Nigeria, hand washing compliance rate of 53% was reported. In our study, hand washing practice was observed more in B.Sc and M.Sc qualified nurses than in ANMs and GNM. We have also observed that nurses with service experience of 11-15 years are compliant to the hand wash. Though the hand washing practice is more in well qualified and experienced staff, we could not find a significant difference between handwashing practice and educational qualification of the staff as well as their length of service.

The current study findings have also shown that nursing staff tend to wash their hands more often after contact with patients than before patient examination (77% vs 90%; p0.05). This finding is similar to that of other studies reported earlier.^{11,12} In one of such studies, hand washing rate of zero percent was reported before the patient examination, and this was increased to 63% hand washing rate after patient examination.¹² Hand hygiene also is an efficient and cost-effective way to reduce the rate of transfer of microorganisms to hospitalized patients and this will further reduce the number of infections. Any healthcare worker, who is involved in patient care directly or indirectly, should be aware of hand hygiene importance and also be able to carry out hand hygiene properly.¹¹

The main factors that contribute to non-compliance to handwashing among health care workers include lack of awareness and knowledge among health care workers. The patients are equally protected from infectious agents if all HCPs practice good hand hygiene. Hence, hand hygiene training sessions should be conducted more frequently for health care professionals to encourage them to observe and practice the methods & techniques on quality of hand hygiene practices.

CONCLUSIONS:

The majority of nursing staff wash their hands after the patient care. Educational qualification and Service experience of healthcare professionals are showing impact on the hand hygiene practice. The current study emphasizes the need of counselling on hand hygiene to the healthcare professionals. Hence it is important to conduct regular training programs on hand hygiene for nurses with continuous monitoring.

TABLES:

Table-1: Age distribution of the Nursing staff:

Age Group (in years)	Frequency (n=150)	%
22-28 years	45	30%
29-35 years	50	33.3%
36-42 years	35	23.4%
43-50 years	20	13.3%

Table-2: Service experience of Nursing staff:

Service Experience	n (%)
1-5 years	45 (30%)
6-10 years	80 (53.3%)
11 – 15 years	15 (10%)
16-20 years	10 (6.7%)

Table-3: Hand washing practice among nursing staff:

	Before Patient Examination	After Patient Examination
Handwashing	115 (76.7%)	135 (90%)
Not Handwashing	35 (23.3%)	15 (10%)

Table-4: Pattern of use of Soap/Sanitizer:

	Before Patient Examination	After Patient Examination
No Hand wash	35 (23.3%)	15 (10%)
Soap	60 (40%)	70 (46.7%)
Sanitizer	38 (25.3%)	45 (30%)
Both Soap & Sanitizer	17 (11.3%)	20 (13.3%)

Table-5: Educational Qualification vs Hand washing practice:

Educational Qualification	Hand washing Before examination	Hand washing After examination	Hand washing Both the Times	p- val
ANM (n=40)	30 (75%)	36 (90%)	28 (70%)	0.99
GNM (n=90)	69 (76.7%)	79 (87.8%)	63 (70%)	

B.Sc. Nursing (n=15)	12 (80%)	15 (100%)	12 (80%)	
M.Sc. Nursing (n=05)	04 (80%)	05 (100%)	04 (80%)	

Chi-square test showed that there is no significant difference in hand washing practice among the staff based on their Educational qualification. [p-val = not significant].

Table-6: Length of Experience vs Hand washing practice:

Length of Service (in years)	Hand washing Before examination	Hand washing After examination	Hand washing Both the Times	p-val
1-5 yrs (n=45)	38 (84.4%)	41 (91.1%)	35 (77.8%)	0.99
6-10 yrs (n=80)	58 (72.5%)	72 (90%)	54 (67.5%)	
11-15 yrs (n=15)	13 (86.7%)	14 (93.3%)	12 (80%)	
16-20 yrs (n=10)	06 (60%)	08 (80%)	06 (60%)	

Chi-square test showed that there is no significant difference in hand washing practice among the staff based on their length of service. [p-val = not significant].

FIGURES:

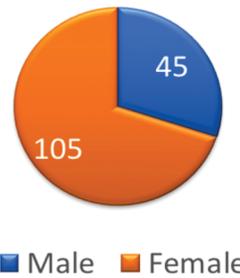
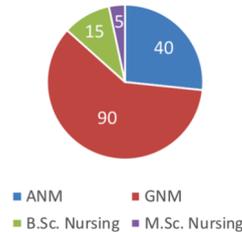


Figure-2: Distribution of Nursing staff based on their educational levels:



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