J Nur Today

RESEARCH ARTICLE

www.jolnt.com

e-ISSN 2456-1630

Descriptive Study to Assess the Knowledge and Practice of Staff Nurses Regarding Hand Hygiene

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Received: 03.08.2017

Edited : 28.08.2017

Accepted: 12.09.2017

Published: 15.09.2017

ABSTRACT

Hand hygiene is now regarded as one of the most important element of the infection control activities. In the wake of the growing burden of health care associated infections the increasing severity of illness and complexity of treatment, superimposed by multi drug resistant pathogen infections, health care practitioners are reversing back the basics of infection preventions by simple measures like hand hygiene. A descriptive study design was used to assess the knowledge and practice regarding hand hygiene among 150 staff nurses at SGRD Hospital, Vallah Amritsar. The sample was selected by using convenient sampling technique. Structured knowledge questionnaire and observational checklist was used to collect the data. The data collected were analyzed using descriptive and inferential statistics. The results of the study reveals that 2 (1.3%) of staff nurses have adequate knowledge, 41 (27.3%) of staff nurses have moderate knowledge and 107 (71.3%) of staff nurses have inadequate knowledge on hand hygiene. Regarding practice of staff nurses on hand hygiene 27 (18%) of staff nurses have adequate practice, 116 (77.3%) of staff nurses have moderate practice and 7 (4.7%) of staff nurses have inadequate practice on hand hygiene. Proper hand hygiene is the single most important, simplest, and least expensive means of reducing the prevalence of HAIs and the spread of antimicrobial resistance. Educational interventions for medical students should provide clear evidence that HCWs hands become grossly contaminated with pathogens upon patient contact and that alcohol hand rubs are the easiest and most effective means of decontaminating hands and thereby reducing the rates of HAIs.

KEYWORDS

Knowledge, Practice, Hand Hygiene

INTRODUCTION

Hand washing should become an educational priority. Educational interventions for medical students should provide clear evidence that HCWs hands become grossly contaminated with pathogens upon patient contact and that alcohol hand rubs are the easiest and most effective means of decontaminating hands and thereby reducing the rates of HAIs. Increasing the emphasis on infection control, giving the charge of infection control to senior organizational members, changing the paradigm of surveillance to continuous monitoring and effective data feedback are some of the important measures which need to be initiated in Indian hospitals[4].

Proper hand hygiene is the single most important, simplest, and least expensive means of reducing the prevalence of HAIs and the spread of antimicrobial resistance. Several studies have demonstrated that hand washing virtually eradicates the carriage of MRSA which invariably occurs on the hands of HCPs working in ICUs. An increase in hand washing compliance has been found to be accompanied by a fall in

MRSA rates. Transmission of Health-care-associated *Klebsiella* sp. has also been documented to reduce with improvement in hand hygiene. The evidence suggests that adherence to hand hygiene practices has significantly reduced the rates of acquisition of pathogens on hands and has ultimately reduced the rates of HAIs in a hospital[7].

Health care associated infections are drawing increasing attention from patients, insurers, governments and regulatory bodies. This is not only because of the magnitude of the problem in terms of the associated morbidity, mortality and cost of treatment, but also due to the growing recognition that most of these are preventable. The medical community is witnessing in tandem unprecedented advancements in the understanding of pathophysiology of infectious diseases and the global spread of multi-drug resistant infections in health care set-ups. These factors, compounded by the paucity of availability of new antimicrobials have necessitated a re-look into the role of basic practices of infection prevention in modern day health care. There is now undisputed evidence that strict adherence to hand hygiene reduces the risk of cross-transmission of infections. With "Clean Care is Safer Care" as a prime agenda of the global initiative of WHO on patient safety programmes, it is time for developing countries to formulate the much-needed policies for implementation of basic infection prevention practices in health care set-ups. This review focuses on one of the simplest, low cost but least accepted from infection prevention: hand hygiene[11].

Nurses constitute the largest percentage of the health care workers (HCW) and they are the "nucleus of the health care system". 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[8].

Hands should be washed properly to ensure microorganisms are removed. Taylor observed that nurses washed their hands for an average time of 20 seconds and that large area of the skin was frequently left unwashed. Microorganisms may remain on parts of hands not exposed to soap and water or alcohol and would still be available for transport to other patients. The greatest concentration of microorganisms is formed beneath finger nails are more likely to become colonized with the gram negative pathogens and transmit infection to vulnerable patients. Long finger nails may also interfere with the hand washing process. Hands should be washed by systematically rubbing all parts

of the hands an wrist with soap and water, being particularly careful to include the areas that are most frequently missed. Similarly, the efficacy of the alcohol hand rub or antiseptic soap solutions depends on the adequacy of the hand wash; microorganisms will be removed by these solutions only if all parts of the hands are reached. Some infection control team recommends a six stage technique for ensuring that all parts of the hands are covered[15].

Hand hygiene is the simplest, most effective measures for preventing nosocomial infections. Average compliance with hand hygiene recommendations varies between hospital wards, among professional categories of heath care workers, according to working conditions as well as according to definitions used in different studies. Promotion of hand hygiene is the major challenge for infection control experts. In Service education, distribution of information leaflets, workshops and lectures[10].

Research problem

A descriptive study to assess the knowledge and practice regarding hand hygiene among staff nurses at S.G.R.D. Hospital, Vallah, Amritsar.

Objectives of the study

1. To assess the knowledge and practice regarding hand hygiene among staff nurses.
2. To associate the findings of knowledge and practice score with selected demographic variables.
3. To correlate the findings of knowledge and practice regarding hand hygiene.

Variables in the study

Research variable: Knowledge and practice regarding hand hygiene

Demographic variable: Age, qualification, area of working, year of experience, Marital status, income, In service education and use of protocol.

Research setting

The study was conducted at SGRD Hospital, Vallah, Amritsar. It is 750 bedded hospital consists of separate medical and surgical department, gynae department, pediatric department and oncology department.

Target population

The study population consists of staff nurses working at medical and surgical wards, ICU, ENT ward, gynae ward and pediatric ward at SGRD Hospital, Vallah, Amritsar.

Sampling technique

Convenient sampling technique is used to select the staff nurses which are easily available and are present during data collection.

Criteria for selection of sample

Inclusive criteria

- Registered Staff Nurses working at SGRD Hospital, Vallah, Amritsar.

Exclusive criteria

- Staff nurses who are not willing to participate in the study.
- Staff nurses who are not present at the time of data collection.

Development and description of tool

The self structured questionnaire was developed from opinion of various experts from nursing department. The tool was prepared after an extensive review of literature.

The tool used for data collection is a structured interview questionnaire to assess the knowledge and practice of staff nurses on hand hygiene.

Section A – Socio-demographic variables such as age, qualification, area of working, experience, income, in-service education and use of protocol.

Section B – Consists of two parts

Part I – structured knowledge questionnaire to assess knowledge of staff nurses on hand hygiene

Part II – Check list to assess practice on staff nurses on hand hygiene

RESULTS AND DISCUSSION

Table.1 Frequency and percentage distribution of demographic variables **N=150**

S. No	Demographic Variable	Frequency (f)	Percentage (%)
1	Age in years		
	a. 21 – 30	130	86.7
	b. 31 – 40	18	12
	c. 41 – 50	2	1.3
2.	Qualification		
	a. B. Sc Nursing	35	23.3
	b. GNM	98	65.3
	c. Post B. Sc Nursing	17	11.3
3	Area of working		
	a. Medicine ward	32	21.3
	b. Surgery ward	50	33.3
	c. Ortho ward	12	8
	d. Pediatric ward	20	13.3
	e. Emergency	6	4
	f. ENT ward	25	16.7
	g. Gynea ward	5	3.3
4	Years of Experience		
	a. 0 - 3 years	95	63.3
	b. 3 - 6 years	39	26
	c. 6 - 9 years	11	7.3
	d. > 7 years	5	3.3
5	Marital status		
	a. Married	58	38.7
	b. single	92	61.3

6	Income		
	a. 5000- 10000	136	90.7
	b. 10000- 20000	12	8
	c. 20000- 30000	2	1.3
7	In-service education		
	a. Yes	137	91.3
	b. No	13	8.7
8	Protocol		
	a. Yes	133	88.7
	b. No	17	11.3

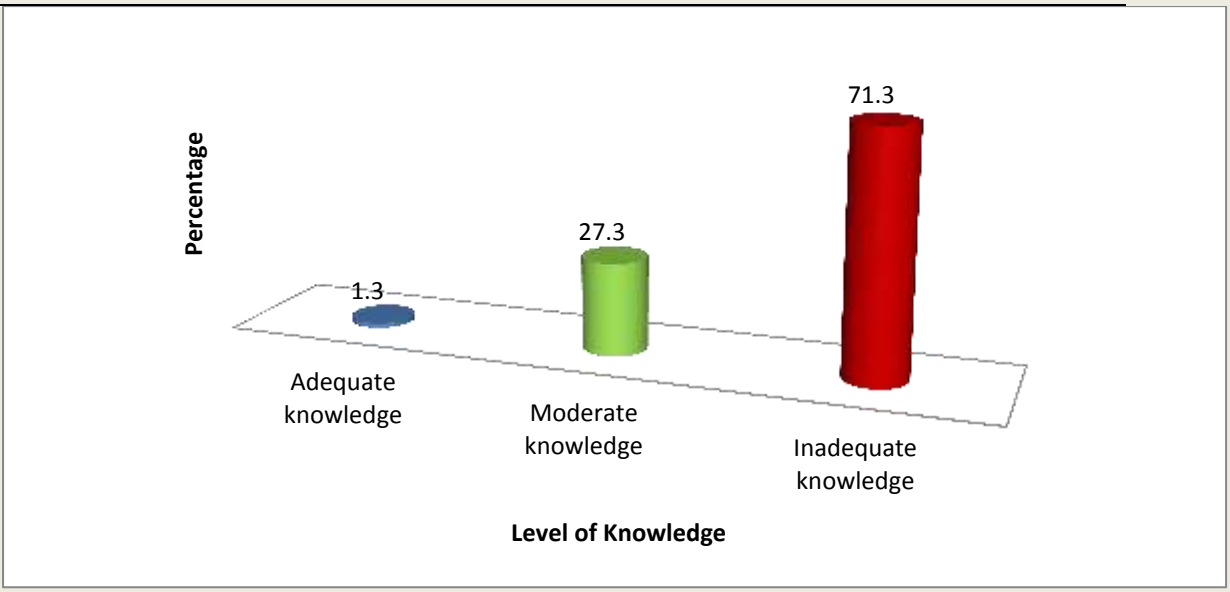

Fig.1 Knowledge level of staff nurses regarding hand hygiene

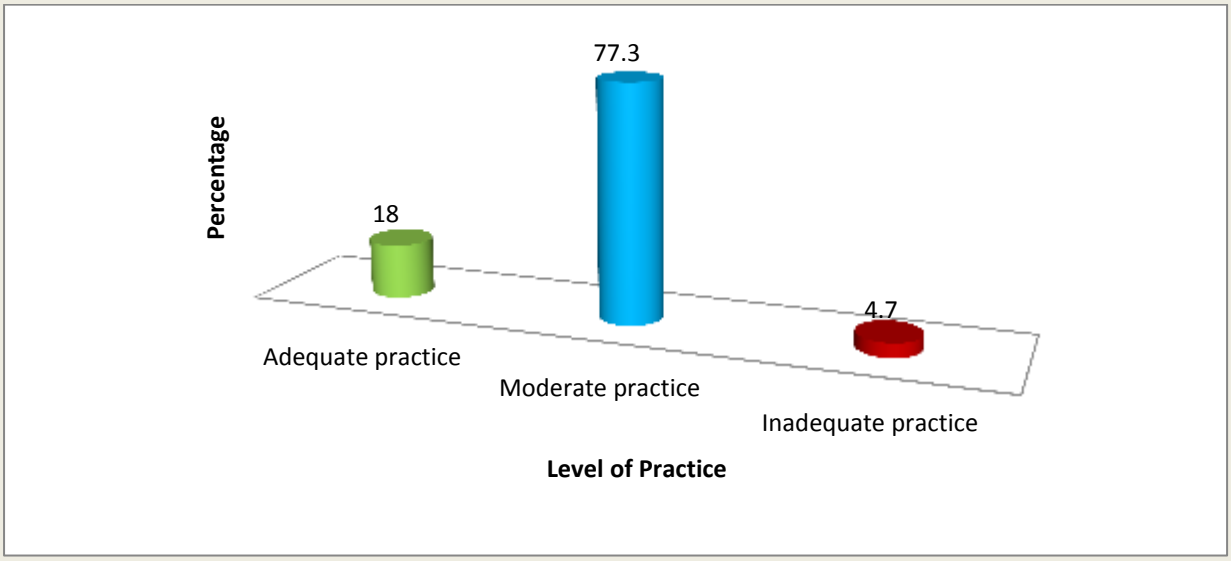

Fig.1 Practice level of staff nurses regarding hand hygiene

The findings of knowledge and practice regarding hand hygiene was correlated which reveals that (r = 0.3) indicated there is poor correlation between knowledge and practice of staff nurses on hand hygiene.

CONCLUSION

Proper hand hygiene is the single most important, simplest, and least expensive means of reducing the prevalence of HAIs and the spread of antimicrobial resistance. Health care associated infections are drawing increasing attention from patients, insurers, governments and regulatory bodies. Hand hygiene is recognized as the leading measure to prevent cross-transmission of microorganisms and to reduce the incidence of health care associated infections. Hand washing should become an educational priority. Educational interventions for medical students should provide clear evidence that HCWs hands become grossly contaminated with pathogens upon patient contact and that alcohol hand rubs are the easiest and most effective means of decontaminating hands and thereby reducing the rates of HAIs.

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