

## Original Research Article

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# Attitude of health care professional students towards hand hygiene

Rintu Jayan, Riya Paul, Riyamol Abraham, Riyamol Roy, Roniya Dominic,  
Roselin Abraham, Renita Priya D'souza\*, Priya Reshma Aranha

Department of Child Health Nursing, Yenepoya Nursing College, Yenepoya (deemed to be university), Deralakatte, Mangaluru, Karnataka, India

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**\*Correspondence:**

Dr. Renita Priya D'souza,

E-mail: [renipriya@yenepoya.edu.in](mailto:renipriya@yenepoya.edu.in)

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## ABSTRACT

**Background:** Hands are the principal route of nosocomial infections or hospital acquired infections or health associated infections. Hand hygiene is effective in reducing infection rates. Hand hygiene among the health care professionals play a pivotal role in preventing the transmission of hospital acquired infections. The aim of the study was to assess the attitude regarding hand hygiene among students of healthcare professions.

**Methods:** Quantitative research approach and descriptive survey design were used for the study. The purposive sampling technique was adopted to select 100 samples, 25 each from MBBS, BDS, B.Sc. Nursing and BPT. A structured attitude scale was used to collect the data. The collected data was analyzed using descriptive and inferential statistics.

**Results:** The study results showed that majorities (55%) of sample were in the age of 22 years, majorities (90%) were females, and majority (98%) of sample had previous information regarding hand hygiene. The entire study sample had favorable attitudes towards hand hygiene. The study showed a significant association between attitude scores and receiving previous information on hand hygiene.

**Conclusions:** The study concluded that health professional students have favorable attitude towards hand hygiene.

**Keywords:** Attitude, Hand hygiene, Health professional students

## INTRODUCTION

According to World Health Organization (WHO) hand hygiene is defined as any method that removes or destroys microorganisms on hands. It is well documented that the most important measure for preventing the spread of pathogens is effective hand washing. Hand hygiene is the action of cleansing hands, using water and detergent or the use of alcohol-based hand sanitizers for the removal of microorganisms from the hands.<sup>1</sup> The proper hand hygiene is one of the techniques to reduce nosocomial infections in hospitals.<sup>2</sup>

Healthcare associated infection is caused by viral, bacterial and fungal pathogens. The most common types

of nosocomial infections or health associated infections are blood stream infection, pneumonia (ventilator associated pneumonia), urinary tract infections and surgical site infection.<sup>3</sup> Health care professionals and clients in health care setting have increased risk of acquiring infections.<sup>4</sup> Hands are the most common vehicle for the transmission of organisms and hand hygiene is the most powerful weapon against microorganisms.<sup>5</sup> There are guidelines for prevention of hospital acquired infections and the most important guideline is hand hygiene.

In 2005, the WHO introduced the “5 moments for hand hygiene.” The five moments of hand hygiene are before touching a patient, before carrying out clean or aseptic

procedure, after body fluid exposure risk, after touching patient and after touching patient surroundings. This aims to reinforce the importance of hand hygiene among the health care professionals as well as to educate the patients and members of the public. Hand hygiene is necessary not only to prevent infection; the simple action can enhance patient safety.<sup>6</sup>

To practice effective hand hygiene, adequate knowledge and attitude are essential. A study has revealed that among the undergraduate medical students, the knowledge on hand hygiene was moderate among 76% of the study participants. Only 8% of participants had good knowledge and 16% had poor knowledge regarding hand hygiene.<sup>7</sup>

Another study conducted among nursing staffs and students showed that nursing students (52%) had better attitude than nursing staff (12%). The study found that the five moments of hand hygiene practices were better in student nurses than nursing staff.<sup>8</sup>

Investigators in their day to day clinical practice have seen that healthcare professional students are not paying special attention to hand hygiene procedure. Even though the students have adequate knowledge on hygiene their attitude and practices play a major role in prevention of infection. Hence the investigators were interested to conduct a study to assess the attitude of health care profession students towards hand hygiene and to find association between attitude scores and selected demographic variables.

## METHODS

Quantitative research approach with descriptive survey design was used for the study. The study was conducted in Yenepoya University, Karnataka. Purposive sampling technique was used to select the subjects. The sample comprised of 100 health profession students, 25 each from medical (MBBS), dental (BDS), physiotherapy (BPT), and nursing (B.Sc Nursing) courses and data was collected during August to September 2018. The

inclusion criteria for selecting the subjects were, health care professional students studying in 4<sup>th</sup> year of MBBS/BDS/BPT/B.Sc. Nursing courses. Students who were not willing to be study subjects were excluded. Ethical principles were followed during data collection as in the guidelines of institutional ethics committee. The tool used for data collection was structured attitude scale (reliability 0.7). The baseline characteristics of sample were collected. The attitude scale consisted of 20 statements on hand hygiene on a five point rating scale. There were 10 positive and 10 negative statements each which were organized alternatively. Scores were given 5 to 1 for positive statement, and 1 to 5 for negative statements. Score 5 indicates-strongly agree, 4-agree, 3-neutral, 2-disagree and 1-strongly disagree. The maximum possible score was 100. The attitude was graded based on the scores. Score of 50 and below was graded as unfavorable attitude and score above 50 was graded as favorable attitude. The data was analyzed by using descriptive and inferential statistics.

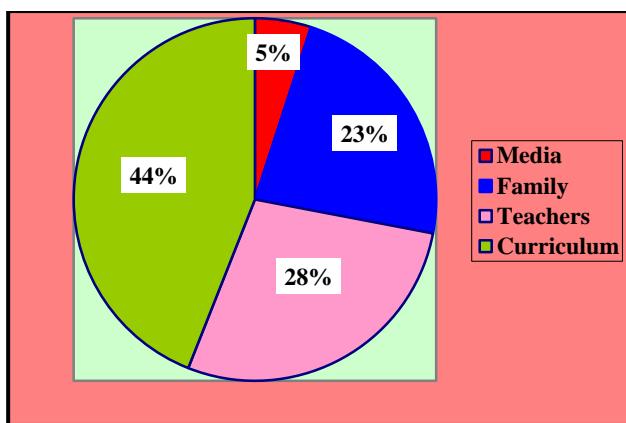
## RESULTS

Table 1 shows demographic characteristics of study subjects where majority (55%) of the subjects were 22 years old, majority (90%) were females, majority (98%) had previous information regarding on hand hygiene. All healthcare professional students had a favorable attitude towards hand hygiene. The mean attitude score was  $79.15 \pm 8.78$ .

The majority agreed that disinfecting hands is not necessary before wearing gloves (37%), sometimes they have more important things to do than hand washing (29%) and they feel frustrated when others omit hand hygiene (43%). Majority (38%) of respondents had neutral attitude for the item such as there is no need to follow hand hygiene in emergency situation, 25% of them had neutral attitude for the statement washing hands can cause skin to become dry, cracked wrinkled and (40%) had a neutral attitude for the statement that hand hygiene products can damage my skin.

**Table 1: Distribution of subjects based on demographic characteristics.**

Sl. no.	Demographic characteristics	Category	Frequency	%
1	Age in years	21	22	22
		22	55	55
		23	22	22
		Above 23	1	1
2	Gender	Male	10	10
		Female	90	90
3	Course/profession	MBBS	25	25
		BDS	25	25
		B.Sc. Nursing	25	25
		BPT	25	25
4	Receiving previously information about hand hygiene?	Yes	98	98
		No	2	2



**Figure 1: Source of receiving previous information on hand hygiene.**

For two items majority students disagreed i.e., comfortable with my own way of hand hygiene (39%) and for the statement-it is not necessary to follow all the steps of hand hygiene at all situations (35%).

It was also seen that there is a significant association between attitude scores and receipt of information regarding hand hygiene by the students ( $\chi^2=65.9$ ,  $p<0.05$ ) and for other demographic variables association was not found.

## DISCUSSION

The present study was conducted in a health care university where the sample is a mixed group of internship students of medical, dental, physiotherapy and nursing students. Majorities (55%) of the sample were 22 years old and majorities (90%) were females. These findings are in line with a study where the sample size of 193 healthcare workers where most of them were nurses (35.2%) and nursing students (31.6%). The study revealed majority (73.6%) of the populations were among 18-25 years age group with a female predominance (70.5% females and 29.5% males).<sup>9</sup> In another similar study majority were females (62.3%).<sup>10</sup>

The present study showed that all the study participants have a favorable attitude towards hand hygiene. This finding is supported by a study which showed that, the attitude regarding correct hand hygiene practices to be followed at all times was found to be better among nurses (62.5%) as compared to residents (21.3%) which was found to be highly significant ( $p<0.001$ ).<sup>11</sup> The present study results are in consistent with another study results showed that the majority of nursing students had significantly ( $p<0.05$ ) better attitudes (52%) compared to nursing staff (12%).<sup>8</sup> Another study reported that majority (90%) of participants had positive attitudes towards hand hygiene.<sup>12</sup>

The present study findings are consistent with similar study where 99% of respondents agreed that hand

hygiene is the single and most effective measure against hospital acquired infections in patient clinical outcome while in another study majority (83%) of the respondents thought that washing hands was important to prevent diseases.<sup>13,14</sup>

## CONCLUSION

The current study revealed that all the study participants had a favorable attitude towards hand hygiene. It is presumed that this may influence their practice of hand hygiene as well. The teaching hospitals where a lot of health care professionals from various streams are involved in providing health care, plays a very important role in increasing hand hygiene compliance among the staff and reducing cross transmission of infections among patients.

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