

A Knowledge, Attitude and Practice Based Study on Lesser Known Social Hand Hygiene Moments in a University Setting in India

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Abstract—Objective: This study aims to evaluate the knowledge, attitude and practice on lesser known social hand hygiene moments in a University setting in India.

Materials and methods: A cross sectional study was conducted among 200 students at bachelors and masters level at Amity University, Noida, UP, India. A pre formed, pre-tested questionnaire was used. Data was analyzed statistically by using Microsoft Excel.

Results: The mean age (\pm SD) was 19.83 \pm 1.6. 61.5% (n=123) disagree that they should wash their hands before using the washroom. 44% (n=88) agree that they should wash their hands after handshaking. 13.5% (n=27) say they always wash their hands after money exchange.

Conclusions: Our study showed that the knowledge, attitude and practice on lesser known hand hygiene moments are fairly good among university students in India. However, hand hygiene needs to be promoted with regards to moments like after exchange of money and before using the washroom.

1. INTRODUCTION

Approximately 1.1 million children under five die each year - or about 3000 a day - as a result of diarrhoea¹. It is the second most common cause of child deaths worldwide². There is consistent evidence that hand washing with soap at critical times - including before eating or preparing food and after using the toilet - can reduce diarrheal risk by about 45%³. Hand washing with soap can reduce the incidence of acute respiratory infections (ARI's) by around 23 percent⁴ including Pneumonia, the number one cause of mortality among children under five years old, taking the lives of an estimated 1 million children per year⁵. Hand washing by mothers and birth attendants was associated with a 40-44% reduction in neonatal mortality in a recent study in Nepal⁶. Hand washing with soap prevents trachoma and ascaris infections⁷. Hand washing with soap is an effective control measure in pandemics such as SARS⁸ and Pandemic Flu⁹. Hand washing can be a critical

measure in controlling pandemic outbreaks of respiratory infections.

Several studies carried out during the 2006 outbreak of severe acute respiratory syndrome (SARS) suggest that washing hands more than 10 times a day can cut the spread of the respiratory virus by 55 percent¹⁰. Hand washing with soap has been cited as one of the most cost-effective interventions to prevent diarrhoeal related deaths and diseases¹¹. A review of several studies shows that hand washing in institutions such as primary schools and daycare centers reduce the incidence of diarrhoea by an average of 30 percent¹². A 11 country review of (observed) hand washing behavior shows that on average only 17% of the mothers wash their hands with soap after having used the toilet, and 45% washes their hands without soap (water only). Other hand washing rates for different occasions are: After cleaning child stools (19%), before handling food are very low too (13%)¹³.

There are many studies conducted on hand hygiene practices during critical times including before eating food, after using the toilet, before preparing food and after washing child's bottom. However, there are few studies on lesser known hand hygiene moments including before using the washroom, after a handshake, after exchanging money, before having lunch, snacks and fruits. We, therefore, conducted a knowledge, attitude and practice based study on lesser known social hand hygiene moments in a University setting in India.

2. MATERIAL AND METHODS

The sampling frame consisted of all students of Amity University, Noida, India. Sample selection procedure was based on convenience; those students who were present and willing to participate in the study during the study period. The study was conducted from December 2016 to January, 2017. All necessary permissions from the University management and verbal consents from all participants were obtained.

'Social hand washing' in this study was defined as a mechanical cleaning process, specifically removing dirt and pathogenic bacteria by using water and solid or liquid soap with no antiseptic properties. Participants were asked to fill in a questionnaire. The questionnaire was prepared by using previously published study. The questionnaire included questions on student's socio-demographic characteristics and information on students' social hand washing knowledge, attitude and practices. There were 4 questions to evaluate hand washing knowledge, 4 questions to assess hand washing attitude, and 4 questions to assess hand washing practices. Percentages and means were calculated as usual.

3. RESULTS

The mean age (\pm SD) was 19.83 ± 1.6 . The age range was between 17 and 31. Fifty point five (50.5) percent of the participants were women. Forty nine point five (49.5) percent of the participants were men. Thirty three point five (33.5) percent of the participants were arts students. Sixty six point five (66.5) percent of the participants were science students. Ninety two (92) percent of the participants were day scholars and the remaining eight (8) percent were hostellers.

Seventy two (72) percent ($n=144$) agree that hands should be washed for at least 15 seconds while twenty (20) percent ($n=39$) do not agree that hands should be washed for at least 15 seconds and the rest nine (9) percent ($n=17$) say they do not know about how long should one wash hands. Sixty nine (69) percent ($n=137$) say that they would wash their hands more often if soap or liquid handwash were available. Sixty two (62) percent ($n=123$) disagree that they should wash their hands before using the washroom. Twenty five (25) percent ($n=49$) agrees that they should wash their hands before using the washroom while the rest fourteen (14) percent ($n=28$) response, "can't say". Forty four (44) percent ($n=88$) agree that they should wash their hands after handshaking while thirty five (35) percent ($n=70$) disagree and twenty one (21) percent ($n=42$) can't say. Ninety five (95) percent ($n=189$) agree that they should wash their hands after blowing nose. Seventy nine (79) percent ($n=158$) say they 'always' wash their hands before having lunch in places like classroom, office, common room, and staircase while twenty point five (20.5) percent ($n=41$) responded "sometimes" and only one participant responded to have 'never' wash his/her hands before having lunch in places like classroom, office, common room, and staircase. Sixty three point five (63.5) percent ($n=127$) say they 'always' wash their hands before having fruits and snacks while thirty four (34) percent ($n=68$) responded "sometimes" and two point five (2.5) percent ($n=5$) responded "never". Thirteen point five (13.5) percent ($n=27$) say they always wash their hands after money exchange while thirty four (34) percent ($n=68$) responded "sometimes" and fifty two point five (52.5) percent ($n=105$) responded "never". Eighty one point five (81.5) percent ($n=163$) say they always wash their hands when they come home while Fifteen (15)

percent ($n=30$) responded "sometimes" and Three point five (3.5) percent ($n=7$) responded "never".

4. DISCUSSION

This study examined university students' lesser known social hand hygiene knowledge, attitude and practices. From the study we can say that the knowledge component of social hand hygiene is fairly good and most of the respondents also say that they would wash their hands more often if soap or liquid hand wash were available. More than half of the respondents disagree that they should wash their hands before using the washroom. Provision of basic hand washing infrastructures like basins, solid or liquid soap uninterrupted in strategic places like toilet, common rooms, cafeterias, library where students are most likely to have lunch, snacks and fruits and also awareness campaigns for university students about the importance of hand washing before using washroom as it is a potential source of infection are desirable. Further studies including observational studies on lesser known hand hygiene practices in a university setting is highly recommended.

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