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Original Article

Practice On Hand Washing In Selected Slums Of Dhaka, Bangladesh

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Abstract

Objective: This descriptive cross sectional study was conducted during the period of February 2013 to May 2013 with a sample size of 138 using a pre-tested semi structured questionnaire from selected slums of Dhaka city to assess the practice on hand washing; non randomized purposive sampling technique was applied. 33.6% respondents were belonging to 18-27 years followed by 26.3%. With mean age of 35.8 ± 15.663 . 75% respondents were female. 49.6% of the respondents had primary education and 28.1% illiterate. 44.8% respondents were housewife. Most of the respondents (51.4%) argued that they need more information on steps of hand washing, 22 (19.8%) need time of hand washing and steps in hand washing, 16.2% thought they need information for timing of hand washing 33.9% got hand washing information from mass media, 24.8% from NGO worker or health educator. Sex and type of material used for hand washing is statistically significant where (p-value is 0.001). Gap between knowledge and practice still persist in hand washing practices. Long term and extensive initiatives can aware people about the effectiveness of hand washing.

Key words: Hand washing, communicable disease, hand washing materials, hand washing practice.

Introduction:

Hand washing for hand hygiene is the act of cleaning ones hands with or without the use of water or another liquid, or with the use of soap, for the purpose of removing soil, dirt, and/or microorganisms. The main medical purpose of washing hands is to cleanse the hands of pathogens (including bacteria or viruses) and chemicals which can cause personal harm or disease. This is especially important for people who handle food or work in the medical field, but it is also an important practice for the general public. Prevention (CDC) has stated: "It is well documented that one of the most important measures for preventing the spread of pathogens is effective hand washing."¹

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Antibacterial soaps have been heavily promoted to a health-conscious public. To date, there is no evidence that using recommended antiseptics or disinfectants selects for antibiotic-resistant organisms in nature. However, antibacterial soaps contain common antibacterial agents such as Triclosan, which has an extensive list of resistant strains of organisms. So even if antibiotic resistant strains aren't selected for: by antibacterial soaps, they might not be as effective as they are marketed to be.²

A comprehensive analysis from the University Of Oregon School Of Public Health indicated that plain soaps are as effective as consumer- grade anti-bacterial soaps containing triclosan in preventing illness and removing bacteria from the hands in addition to hand washing with soap and water the use of alcohol gels is another form of killing some kinds of pathogens and

healthful bacteria, but their effectiveness is disputed, and may lead to antibiotic-resistant bacteria strains.³

Despite their effectiveness, non-water agents do not cleanse the hands of organic material, but simply disinfect them. It is for this reason that hand sanitizers are not as effective as soap and water at preventing the spread of many pathogens, since the pathogens still remain on the hands.⁴ should be rubbed together with digits interlocking.⁵

Materials and Methods

This descriptive cross sectional study was conducted during the period of February 2013 to May 2013 with a sample size of 138 using a pre-tested modified semi structured interviewer administered questionnaire by face to face interview from selected slums of Dhaka city to assess the practice hand washing in selected slums of Dhaka city, -Bangladesh. Sample population was Selected from three different slum areas of Dhaka. Non randomized purposive sampling technique was applied for this study; Statistical package for social science (SPSS) version 16.0 a computer programmed was used to analyze the collected data. Proportion was present by frequency and cross tabulation analysis The associate was finding out by using Pearson`s chi-square test.

Results

Among the respondent the study, 33.6% respondents are belongs to 18-27 years followed by 26.3% are in 28-37 years age group and 13.12% who belongs to 38-47 years with mean age $.35.8 \pm 15.663$. 90 (75%) respondents were female and 30 (25%) were male. 49.6% of respondents had primary level of education. 28.1% were illiterate, 15.7% had secondary level of education and 5.8% had more than higher secondary level of education. Most (44.8%) of the respondents were housewife, 24.7% had small business, 16.4% farmers and 12.1% were service holder. 40.8% had monthly family income of 2000- 7000 BDT, 35. 7% 7001-12000 BDT and 18.4% 17001-22000 (BDT per month with mean income of $12419.05+10444.939$. 27.9% family had more than 4 children while 23% having family had more than 6 and 16% family had more than 5 children, 41.5% family had only two children and 29% have more than three children. 94.3% of the respondents had the knowledge that hand washing is important to prevent diseases while other 5.8% thinks that it is not very important. 90.1% had the knowledge that hand aching was important because most of the cdmrnunicable diseases are transmitted by hand. 5.1.% respondents had the knowledge that diseases transmitted through contamination of hand and the diseases transmitted were diarrhea 16.3%, diarrhea and cholera 17.4% and others thought that mostly parasitic infections are transmitted through hand contamination.

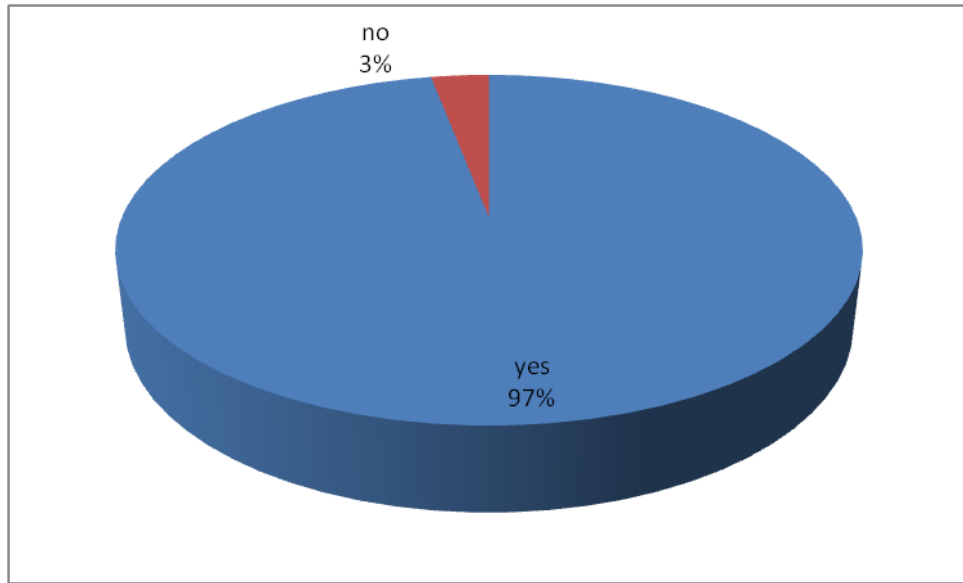


Fig 3: Distribution of respondents by practice of handwashing before eating food

Table No 8: Distribution of respondents by materials used for hand washing (n=122)

Variables	Frequency	Percentage (%)
Running Water	8	6.6
Soap	76	62.8
Soil	4	3.3
Ash	2	1.7
Running Water and Soap	16	13.2
Soap & Ash	5	12.4
Total	22	100

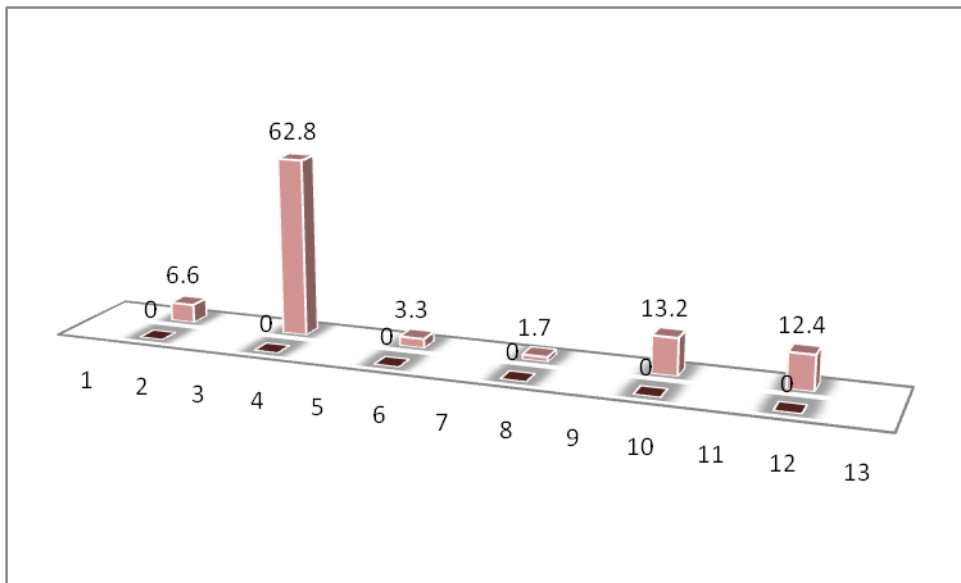


Fig 4: Distribution of respondents by hand washing during cooking and during food handling

Table No 9: Distribution of respondents by type of latrine used (n=119)

Variables	Frequency	Percentage (%)
Kacha/Raw	9	7.6
Sanitary	101	84.9
Modern Commode	1	.8
Others	8	6.7
Total	119	100

Table No 10: Distribution of respondents for budget for purchasing soap and detergents (n=119)

Variables	Frequency	Percentage (%)
Yes	99	81.2
No	23	18.9
Total	122	100

Table No 11: Distribution of respondents for giving hand washing instruction to the family members:n=122)

Variables	Frequency	Percentage (%)
Yes	101	82.8
No	21	17.2
Total	122	100

Table No 12: Distribution of respondents by whether children's are washing hands (n=106)
Variables Frequency Percentage (%)

Variables	Frequency	Percentage (%)
Yes	93	87.7
No	13	12.3
Total	106	100

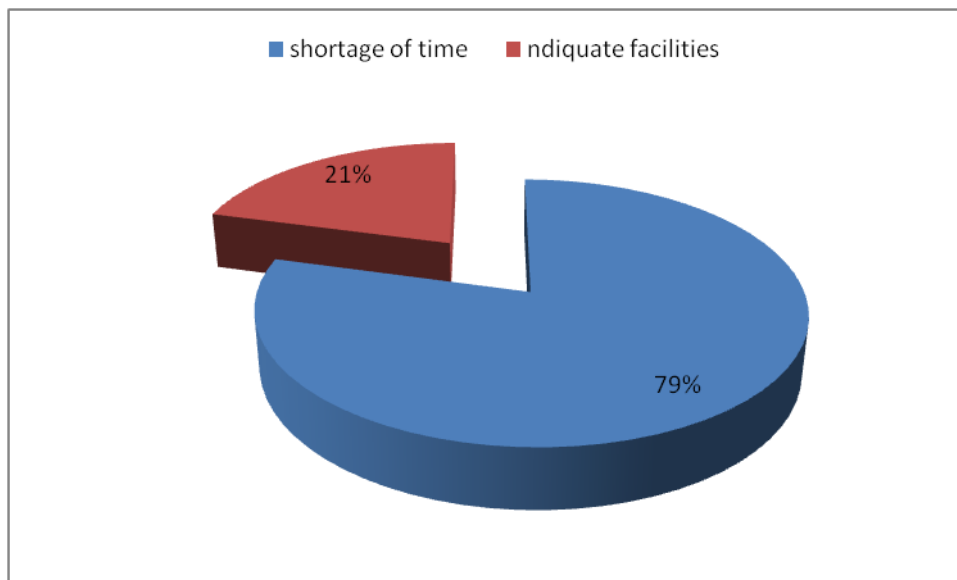


Figure 5: Distribution of respondents by barriers of hand washing

Table No 13: Distribution of respondents by type of information needed on hand washing (n=110)

Variables	Frequency	Percentage (%)
Time of hand washing	18	16.2
Steps of hand washing	57	51.4
Time of hand washing and steps in hand washing	22	19.8
others	14	12.6
Total	110	100

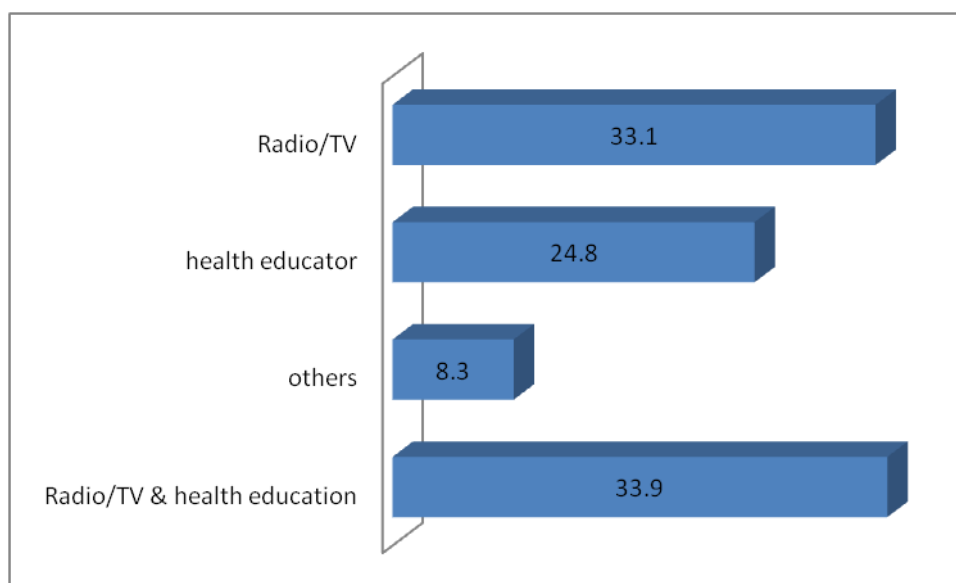


Figure 6: Distribution of respondents by source of information on hand washing

Table 14: Distribution of respondents by association between sex and practice of hand washing (n=122)

Sex	Material user for hand washing						Total	P-value
	Running Water	Soap	Soil	Ash	RunningWith Soap	Soap and Ash		
Male	3	13	1	0	9	4	30	.001
Female	5	63	3	2	7	11	90	
Total	8	76	4	2	16	15	120	

*p-value from Pearson Chi-square (χ^2) test

When statistical analysis was done, it was found that that sex and type of material used for hand washing is statistically significant (p-value <0.001)

Hand washing interrupts the transmission of disease agents and so can significantly reduce diarrhea and respiratory infections, as well as skin infections and trachoma. In Bangladesh most of the people are not used cleaning agent for washing hands especially when they are involved in work place.

This study has identified gap between hands washing knowledge and practice with soap at different critical time i e before eating, after defecation. After cleaning child's stool, before feeding babies and before cooking and serving food. This finding illustrates the knowledge-behavior gap in hand washing with soap.

Present study found that 94.3% thought that hand washing is important to prevent diseases, 90.1% had the knowledge that hand washing is important because. Most of the communicable diseases. Are transmitted by hand, 5 1.1% respondents had knowledge that hand contaminated diseases were diarrhea 16.3%, diarrhea and cholera 17.4%. This study was similar with a study conducted in India. A recent study carried out in Kenya supports our study finding where 71% respondents understood the importance of hand washing after defecation but only 31% did so.⁶

Present study also found that majority (97%) of the respondents. Were washing their hands before eating food: 62.8% are washing their hands with soap, 13.2% with running water and soap, 12.4% with soap and ash and 6.6% are only with running water, 82.3% are washing their hands during cooking but other 17.7% are not washing. Their hands during cooking, on the other hand during food handling 91.2% are washing their hands while remaining 8.8% didn't washed their hands. This study was also found that 84.9% are using sanitary latrine. It was also found that reported hand washing practice with soap before eating is much lower than after defecation. A study conducted by Shabnam (2010) in Jamalpur district in Bangladesh reports similar findings regarding hand washing. Furthermore, results showed that reported hand washing practice with soap after defecation is much higher than actual practice in Bangladesh.^{7,8}

The findings demonstrate that verbal response about hand washing behavior does not provide a real scenario of practices. Hand washing with only water before eating was higher during the physical verification as it seemed sufficient cleanliness for them. Similar finding was found in the study by Holder et al. 2010. Besides, most of the respondents did not mention about hand washing before cooking and before serving food.⁹

Conclusion:

Gap between knowledge and practice still persists in hand washing practices. Long term and extensive initiative can aware people about the effectiveness of hand washing. It is presumed that hand washing is so cheap and simple and can be done by everyone including kids. Evidence has shown that with hand washing, infections and mortality associated with infections will drastically reduce. In Bangladesh hand washing programs are quite successful organizing by different nongovernmental organizations which is reflecting in present study. Hand-washing with soap has been shown to be one of the simplest, cheapest and most effective means of preventing diarrheal disease in young children, resulting in a high chance of risk reduction. Implementation of multifaceted interventional behavioral hand hygiene program is important for improving the compliance to hand iene guidelines.

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