

**Research Article**

## **STUDY OF HAND WASHING PRACTICES AMONG MOTHERS HAVING CHILDREN UNDER 5 YEARS OF AGE**

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### **ABSTRACT**

Hand -washing with soap has been viewed as one of the most cost-effective ways of reducing the global infectious disease burden particularly diarrhoea and acute respiratory infections. To assess the hand washing practices among mothers having children under-5 years of age in urban slums of Dibrugarh district of Assam, this study was conducted. Out of 384 cases, it was observed that 330 women (86%) always washed their hands before cooking food while 16 women (4%) never washed their hands prior to cooking. 93% of these women always washed hands before eating food, of which 31% washed with soap. Before feeding their children, again all women practised some form of hand washing, though not adequate. None of them routinely washed their hands before touching the child and only 36% sometimes did. In the background of such hand washing practices, it was seen that 60% of the children suffered from diarrhoea while acute respiratory infection was seen in 20% of the children. From this study, it was evident that practice of hand washing with 'soap and water' was poor among the mothers. There is an urgent need for promotional programs highlighting the importance of correct method of hand washing with soap and water specially before taking food, after defecation and before feeding babies.

**Keywords:** *Handwashing, Mothers, Under-Five, Urban Slum*

### **INTRODUCTION**

Handwashing with soap has been viewed as one of the most cost-effective ways of reducing the global infectious disease burden (Cairncross *et al.*, 2006). Various studies have highlighted that simple act of hand-washing and basic hygiene behavior could prevent diarrhea, acute respiratory infection and skin infections (Luby *et al.*, 2005; Shahid *et al.*, 1996). Despite the irrefutable evidence in favour of handwashing, it is rarely practiced at times when pathogen transfer could be interrupted, and even more rarely involves the use of soap (Curtis *et al.*, 2009). Interventions that promote handwashing with soap are therefore vitally important to public health, yet changing behaviour is notoriously difficult. It is observed that young children and their mothers in developing countries fail to wash their hand adequately after fecal contact (LiKosek *et al.*, 2003). Magnitude of the problem is more in urban slums with reduced access to safe water and sanitation. Mothers of fewer than five children should maintain a high standard of cleanliness at all times to prevent diarrhoea occurrence. This study was carried out to understand the hand washing practices among mothers of fewer than five children in urban slums of Dibrugarh district in Assam.

### **MATERIALS AND METHODS**

#### ***Aim of the Study***

To assess the hand washing practices among mothers having children under-5 years of age in urban slums of Dibrugarh district of Assam.

#### ***Study Design***

Community based Cross-sectional study.

#### ***Study Area***

Urban slums of Dibrugarh district, Assam.

#### ***Study Population***

Mothers having children below 5 years of age.

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**Method**

Considering prevalence of handwashing to be 50%, the sample size was calculated to be 384. Out of 10 slums, 5 were chosen randomly for the study. Data was collected by house to house visits and 384 mothers residing in the study area, having under- 5 children were interviewed using a pre-designed, pre-tested proforma.

**RESULTS AND DISCUSSION**

Out of 384 cases, it was observed that 330 women (86%) always washed their hands before cooking food while 16 women (4%) never washed their hands prior to cooking. However, out of these all washed their hands with plain water and none used soap (Table 1).

**Table 1: Percentage of mothers who washed their hands before cooking**

	ALWAYS 330 (86%)		SOMETIMES 38 (10%)		NEVER 16 (4%)
	No.	Percentage	No.	Percentage	
WATER	330	100%	38	100%	
SOAP	0	0%	0	0%	
MUD	0	0%	0	0%	
DETERGENT	0	0%	0	0%	

However it was observed that all the women whether frequently or infrequently washed hands before consuming food. Of these 93% of these women always washed hands before eating food, of which 31% washed with soap (Table 2). Again it was observed that all women washed hands after defecation and 93% washed with soap and water while the remainder used mud instead of soap (Table 3).

**Table 2: Percentage of women who washed hands before taking food**

	ALWAYS 357 (93%)		SOMETIMES 25 (7%)		NEVER 0 (0%)
	No.	Percentage	No.	Percentage	
WATER	246	69%	25	100%	
SOAP	111	31%	0	0%	
MUD	0	0%	0	0%	
DETERGENT	0	0%	0	0%	

**Table 3: Hand washing practices in women after defecation**

	ALWAYS 384(100%)		SOMETIMES 0(0%)		NEVER 0 (0%)
	No.	Percentage	No.	Percentage	
WATER	0	0%	0	0%	
SOAP	357	93%	0	0%	
MUD	27	7%	0	0%	
DETERGENT	0	0%	0	0%	

Before feeding their children, again all women practised some form of hand washing. 330 women (86%) used soap and water while the rest washed with plain water (Table 4).

**Table 4: Hand washing practices in mothers before feeding their children**

	ALWAYS 384(100%)		SOMETIMES 0(0%)		NEVER 0 (0%)
	No.	Percentage	No.	Percentage	
WATER	54	48%	0	0%	
SOAP	330	86%	0	0%	
MUD	0	0%	0	0%	
DETERGENT	0	0%	0	0%	

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Surprisingly, none of them routinely washed their hands before touching the child and only 36% sometimes did of these too, only 20% used soap (Table 5).

**Table 5: Hand washing practices prior to handling the child**

	ALWAYS 0 (0%)		SOMETIMES 138(36%)		NEVER 246 (64%)
	No.	Percentage.	No.	Percentage	
WATER	0	0%	110	80%	
SOAP	0	0%	28	20%	
MUD	0	0%	0	0%	
DETERGENT	0	0%	0	0%	

On studying the occurrence of diarrhoea and acute respiratory infections in these mothers and their children, it was observed that 60% of the children and 13% of mothers suffered from diarrhoea while acute respiratory infection was seen in 20% of the children (Table 6).

**Table 6: Prevalence of diarrhoea and acute respiratory infection in these women and their children**

	DIARRHEA	ARI	TOTAL
Children(n=512)	307(60%)	102(20%)	409
Mothers(n=384)	51(13%)	26(7%)	77

**Discussion**

In this study of urban slum mothers we assessed the knowledge attitude and practices of hand hygiene. Of the mother surveyed, ninety three percent were found to practice hand washing by soap after defecation. In a study by Pati *et al.*, (2014) in Odisha only 72% of the women practised handwashing by soap after defecation. This practice needs to be encouraged as it would lead to significant reduction in infectious diseases in these women and their children. While this is encouraging, it was observed that only 80% washed their hands before preparing food and none of them used soap. Pati *et al.*, (2014) noted 85% women practising handwashing before cooking food while the study by Ray *et al.*, (2010) in two communities of eastern India observed that hand washing was not practiced before “preparing food” and after handling “raw vegetables”.

A large proportion of mothers (48%) did not wash their hands with soap before feeding their children. This could have been the cause of diarrhoeal infection in their children. These findings agree with McLennan (2000) whose findings indicate that thirty eight percent (38%) of mothers do not wash their hands prior to feeding their children.

Only 36% of the mothers sometimes washed their hands prior to handling the child. This could be one of the reasons for the occurrence of acute respiratory infections in these children.

Overall, the knowledge and practice of handwashing was found to be poor in the study population. This could be due to lack of proper health education, existing cultural practices, scarcity of soap and even the inability of these women to relate the occurrence of diarrhoea and acute respiratory infections to their poor practice of handwashing.

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**Conclusion**

From this study, it was evident that practice of hand washing with ‘soap and water’ was poor among the mothers. Mothers play an important role in moulding and making a healthy individual and a healthy community. Making hand washing ubiquitous in a community, especially in mothers is a challenging task. There is an urgent need for promotional programs highlighting the importance of correct method of

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hand washing with soap and water specially before taking food, after defecation and before feeding babies.

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