A STUDY ON THE AWARENESS AND PRACTICES OF HAND WASHING AMONGST MOTHERS OF UNDER-FIVE CHILDREN IN THE SLUMS OF GUWAHATI CITY

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ABSTRACT

INTRODUCTION

Hand washing with soap at critical events reduces the incidence of diarrhoeal diseases by about 42% to 47% and respiratory infections by 30% which are important contributors of under-five child morbidity and mortality in India. The awareness and hand washing practices amongst mothers residing in poor environmental settings of slums are important as they are the primary caregivers and have a determining role in the health of their children.

OBJECTIVES

To assess the awareness, practices and factors associated with hand washing amongst mothers of under-five children in slums of Guwahati City, Assam.

MATERIALS AND METHODS

The study was a community based cross-sectional study carried out for a period of three months from August 2015 to October 2015 in two slums under the urban field practice area of the Department of Community Medicine, Guwahati. 150 mothers having under-five children were included in the study.

RESULTS

100.00% of the mothers were aware about the role of hand washing in prevention of diseases. 100% mothers practised hand washing with soap after defaecation. 84.30% and 85.71% washed their hands with water alone before feeding a child and cooking respectively. None of the mothers were aware and practised the recommended steps and time for hand washing.

CONCLUSION

The factors identified as barriers to hand washing practices in the study can be overcome by health education with involvement of the community.

KEYWORDS

Awareness, Practices, Hand washing, Mothers, Slums.

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INTRODUCTION: Hand washing as a part of hygiene has been practised since early times. It is the act of cleaning hands with water, with or without the use of soap or other detergents for the purpose of removing soil and/or microorganisms.[1]

Hands carry a variety of microorganisms and pathogens and spread diseases via direct or indirect contact to susceptible hosts. Hand washing with soap interrupts the transmission of diseases by acting as primary barriers and breaking down grease and dirt that carry germs through rubbing and friction which dislodges the pathogens.[2] According to CDC 2009,[3,4] some of the important events where hand washing with soap must be practised are after using the toilet or cleaning a child's bottom and before handling food and feeding a child.

Washing of hands with soap at these critical events have reduced infections like diarrhoea, ARI, as well as skin, eyes and helminth infestations in children. According to WHO (2001),[2] diarrhoea and respiratory infections are responsible for about two thirds of a child's death in children less than five years of age in poor, developing countries like India.

Various studies[5,6,] have shown a reduction in the incidence of diarrhoea and acute respiratory infections by almost half as a result of hand washing, and also in infections relating to skin, eye and helminth infestations.

In India, a study finding[7] reported 25% fewer diarrheal episodes, 15% fewer ARI episodes and 27% fewer school absences due to illness, and 46% fewer eye infections due to hand washing.

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Hence, it is one of the most important cost-effective measures from the public health point of view in terms per DALY. But despite its enormous benefits, practice of hand washing is relatively low ranging from 16% to 34% among mothers in India.[8,9] This is observed more so in poor environmental settings of slums where there is lack of adequate water supply and sanitation.

For the promotion and improvement of hand washing practices, the Global Public-Private Partnership for Hand Washing with Soap (PPPHW) have targeted mothers and caregivers with specific behavioural interventions[3]. The Global Hand Washing Day in India since 2008 is one such intervention for the promotion and adoption of hand washing with soap at critical times.

The Wash Program in India[10] with initiation of the Total Sanitation campaigns have focused on the hand washing practices among school going children and mothers in the community for promotion of hand washing.

Role of mothers are important as being the primary caregivers of under-five children in our society, improved hand washing practices in them can go a long way in prevention of childhood morbidity and mortality and help in the overall development of a child.

Therefore, the present study was undertaken amongst mothers of under-five children residing in slums of Guwahati City with the following objectives.

OBJECTIVES OF THE STUDY:

1. To assess the awareness of hand washing practices amongst the mothers of under-five children.
2. To assess the practices and the factors influencing hand washing amongst the mothers of under-five children in the slums of Guwahati City.

MATERIALS AND METHODS: The community based cross-sectional study was carried out in two selected slums of Guwahati City under the field practice area of the Department of Community Medicine, Gauhati Medical College. The study was carried out for a period of three months from August 2015 to October 2015.

These two slums were selected for operational feasibility. The sample size for the study was based on purposive sampling. From each of the slums, 75 mothers participated in the study. If a mother with more than two under-five children were found in the same house, they were considered as a single unit. The inclusion criteria were those willing to participate and have been residing in the slums for a minimum period of three months. The first house from each slum was selected by simple random sampling and thereafter purposively till the desired number of respondents. The study was conducted by interview method and observational methods.

Observational method was used for assessing the environmental sanitation and storage of water in the study area. A verbal informed consent was obtained prior to the collection of data explaining in detail the nature and purpose of study. Information regarding the socio-demographic characteristics, factors affecting hand washing like availability and source of water supply, availability of soap in the homes of the respondents, the practice of hand washing at various events among the respondents were collected in a predesigned and pretested structured schedule containing both open and close ended questions. In the present study, hand washing has been defined as washing of hands with plain soap (non-antimicrobial) and water.[11] An antimicrobial soap is defined as a soap containing an antiseptic agent.

The critical events adopted in this study to assess the practices of hand washing among the mothers are before cooking, before feeding a child, after cleaning a child and after defaecation (WHO).[2,3]

The data collected were entered into Microsoft Excel and analysed accordingly in percentages and are presented in the form of tables.

RESULTS: A total of 150 mothers having under-five children participated in the present study. 46.00% were Hindus followed by 42.00% of Islam religion. 58.00% resided in a nuclear family. Majority 30.00% of the mothers were in the age category of 25 to 28 years. 58.00% of the mothers had attended middle and high level school and only 15.33% of the mothers were illiterate. Majority 52.00% of mothers were from families whose monthly income in rupees from all sources were in the range of Rs.2000 - Rs.4000. 79.33% of the mothers were housewives and 20.67% were working as part-time domestic workers.

Socio-demographic profile	No. of respondents (n=150)		
	No.		%
Religion	Hindus	69	46.00
	Islam	63	42.00
	Sikhs	18	12.00
Type of family	Nuclear	87	58.00
	Joint	63	42.00
Age (in years)	17-<20	25	16.67
	20-<24	42	28.00
	24-<28	45	30.00
	28-<32	30	20.00
	>32	8	5.33
Educational status	Illiterate	23	15.33
	Primary school	87	58.00
	Mid & High school	34	22.67
	>High school	6	4.00
Monthly Income (in rupees. from all sources)	Rs. 650-1000	3	2.00
	Rs. 1000-2000	39	26.00
	Rs 2000-4000	78	52.00
	Rs. 4000-<6000	21	14.00
	>Rs 6000	9	6.00
Water supply	Tap water supply	137	91.33
	Well	13	8.67
Type of latrine	Sanitary	119	79.33
	Insanitary	31	20.67

Table 1: Distribution of socio-demographic profile of Mothers

Awareness	Yes		No		Don't know		Total
	No.	%	No.	%	No.	%	
Important for prevention of diseases	150	100.00	0	0.00	0	0.00	150(100.00%)
Important to use soap.	98	65.33	49	32.67	3	2.00	150(100.00%)

Table 2: Distribution of mothers in relation to awareness about hand washing practices

*Awareness regarding the steps and time required for hand washing -100% not aware.

Hand washing	Practiced (N=150)	
	No.	%
Before cooking	98	65.33
Before feeding a child	121	80.67
After defaecation	150	100.00
After cleaning a child who has defaecated	150	100.00
After touching dirty thing while doing household work	131	87.33

Table 3: # Distribution of mothers in relation to practice of hand washing at various events

#Multiple response. ±

Crucial events	No. of respondents (N=150)					
	Water		Use of soap		Other	
	No.	%	No.	%	No.	%
Before feeding a child (n=121)	102	84.30	19	15.70	0	0.00
Before cooking (n=98)	84	85.71	14	14.29	0	0.00
Cleaning a child after defaecation (n=108)	55	50.93	51	47.22	2	1.85
After defaecation (n=150)	0	0.00	150	100.00	0	0.00

Table 4: Distribution of mothers practising hand washing according to their use of materials at *critical events

*Important events where contaminated hands can transmit disease causing pathogens.

+Others- ash, sand.

(Multiple response table)

The major source of water supply in the study area was tap water which was intermittent. 91.33 % of the mothers used tap water and stored water was used for all household purposes including hand washing.

All mothers in the study area had accessibility to community latrine. 79.33% were using sanitary latrine. No washing facilities and running water were present near the community latrines.

As shown in Table 1, 100.00% of mothers were aware about the importance of hand washing in prevention of diseases and 67.33% about the importance of use of soap.

In relation to the practices of hand washing at different events, 100.00% washed their hands after defaecation, after cleaning a child who has defaecated, and 87.33% after touching dirty thing during their household work. Hand washing was practised by only 65.33% of the mothers before cooking as shown in table 3. Overall, 87.33% of the mothers used plain nonmedicated soaps for hand washing in the study area.

DISCUSSION: In the present study, there is 100% awareness among the mothers regarding the importance of hand washing in prevention of diseases. Similar findings from studies by Yerpude[12] and Datta SS[13] reported 71.49% and 83.41% knowledge respectively about the role of hand washing in prevention of diseases. However, in both these studies awareness in relation to prevention of specific diseases like diarrhoea, ARI, skin and eye infection was poor amongst the mothers.

65.33% of the mothers in the present study were aware about the importance of use of soap in hand washing. S.Pati[14] reported that 96% of the women felt that hand washing with soap was important. Although the study reported a high prevalence of awareness, it was not translated to practice. It is observed that proper knowledge regarding the transmission of diseases through contaminated hands can bring about a behavioural change and improve hand washing practices at critical events.

All the respondents in the present study had availability of soaps in their homes. Hand washing with soap was practiced by 100.00% of mothers after defaecation. 15.70% washed their hands with soap before cooking and 14.29% before feeding a child.

Similar findings were also observed by Datta[13,14] who reported hand washing practices with soap was limited before preparing food, before feeding and after cleaning a child. Majority of the mothers there washed their hands with water before preparing food (71.86%) and feeding the child (67.39%).

Ray[15] in his study in two communities reported low hand washing practices after cleaning a child (39% to 44%), before cooking (35% to 30%) and before eating (38%). None of the mothers in the present study practised the appropriate steps and time[2,3] required for hand washing. Similar findings were also observed in studies conducted in

India, Kenya.[15,16] Another study finding in Bangladesh[17] observed that appropriate hand washing technique should involve the following procedure of use of both hands, use of an agent, rubbing of hands and rinsing with water and finally drying.

In the study area, all the mothers used stored water for hand washing as well as for other purposes. In India, similar findings have been observed by Datta[14] and Ray[15] that availability of running water and sanitary latrine are important factors to improve hand washing practices amongst the mothers to reduce under-five child morbidity.

CONCLUSION: The present study shows a high level of awareness among the mothers about the role of hand washing in prevention of diseases. But there is a need to improve the practice of hand washing with soap at critical events like cooking, before feeding a child and after cleaning a child. To improve hand washing practices, health education with active involvement of the community is needed to bring about a behaviour change.

LIMITATIONS OF THE STUDY: Due to resources and time constraints, purposive sampling was done to determine the sample size and the study was confined to only two slums. Some important critical events relating to practice of hand washing amongst mothers have also not been taken into account due to the above limitations in the present study.

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