

# Knowledge and Practice Regarding Hand Washing among Mothers of under Five Children in Selected Community Area, Dehradun

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**Abstract:** *The hands are central to many of our daily activities and the infected hands are a common vehicle for the spread of infection. Insufficient hand washing is thus an important factors contributing to the spread of infection. Hand washing with soap and water is one of the most effective measures against infectious disease. So this study was conducted (1) to assess the knowledge and practice of mothers of under five children regarding hand washing (2) To find association between level of knowledge and practice with socio-demographic variables of mothers of under five children regarding hand washing (3) To correlate the knowledge score with practice score of mothers of under five children regarding hand washing. **Methodology:** Quantitative research approach was adopted for present study. Total 200 mothers of under five children were selected through purposive sampling technique. Data was collected by administering tool to the participants. Tool consists of socio- demographic Performa, structured knowledge questionnaire and self reported practice checklist. The data was analyzed by using descriptive and inferential statistics. **Results:** The study found that most (46%) of participants had average knowledge score. Hand washing practice was average among (41.5%) participants. There was statistically significant association between knowledge score and education, occupation, family income (monthly), facility for hand washing (sink with tap) and availability of clean drinking water. There was significant association between practice score of the participants and education, pre-exposure regarding hand washing, child attending school. There was weak positive correlation between practice score and knowledge score. **Conclusion:** The study concluded that there is need to improve knowledge and practice of mothers regarding hand washing. On the basis of knowledge and practice of mothers, pamphlet is developed regarding hand washing.*

**Keywords:** knowledge, practice, mothers, under five children, hand washing

## 1. Introduction

The hands are about the most important human anatomical structure that man uses to interact with his environment.<sup>1</sup> Hygiene is the practice of keeping oneself, one's living and working environment clean in order to prevent illness and disease.<sup>2</sup> Hand washing is the act of cleansing the hands with water or another liquid with or without soap or other detergent for sanitary purpose of removing soil or micro-organism.<sup>3</sup> In India, a study finding 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. Hence, it is one of the most important cost-effective measures from the public health point of view in terms perday<sup>4</sup>.

### Objectives

- 1) To assess the knowledge and practice of mothers of under five children regarding hand washing.
- 2) To find association between level of knowledge and socio-demographic variables of mothers of under five children regarding hand washing.
- 3) To find association between level of practice and socio-demographic variables of mothers of washing.
- 4) To correlate knowledge score with practice score of mothers of under five children regarding hand washing.

## 2. Materials and Methods

Quantitative research approach was adopted for present study. Cross-sectional research design was used for present study. The sample for the study was mothers of under five children in Rajiv Nagar, Diowala Block, Dehradun. Total 200 mothers of under five children were selected through non probability purposive sampling technique. Data was collected by administering tool to the participants and interview technique was used. Tool consists of socio- demographic Performa, structured knowledge questionnaire and self reported practice checklist. The data was analyzed by using descriptive and inferential statistics.

## 3. Results

**Table 1:** Frequency and percentage distribution of socio-demographic characteristics of mothers of under five children  
N=200

S. No	Sample characteristics	Frequency	Percentage (%)
1	<b>Age (in yrs):-</b> 18-26	129	64.5%
	27-35	71	35.5%
2	<b>Education:-</b> No formal education	96	48%
	Literate	104	52%
3	<b>Occupation:-</b> Working	39	19.5%
	Non-working	161	80.5%

4	No. of under five children in family:-		
	1-2	146	73%
	3-5	54	27%
5	Type of family:-		
	Joint	143	71.5%
	Nuclear	57	28.5%
6	Pre-exposure regarding hand washing:-		
	Yes	106	53%
	No	94	47%
7	Family income (monthly):-		
	3,000-13,000rs	88	44%
	14,000-26,000rs	112	56%
8	Source of water:-		
	River	59	29.5%
	Tap water(Govt. supply)	141	70.5%
9	Facility for hand washing (sink with tap):-		
	Yes	35	17.5%
	No	165	82.5%
10	Any gastric disease to children in past six months:-		
	Yes	134	67%
	No	66	33%
11	Child attending school:-		
	Yes	97	48.5%
	No	103	51.5%
12	Availability of clean drinking water:-		
	Yes	128	64%
	No	72	36%

Table No. 1 reveals that the percentage and frequency of characteristics which shows that most (64.5%) of participants falls in the age of 18-26 years, more than half of the participants (52%) were literate. Majority of the participants (80.5%) were non-working and most of the participants (73%) had children between 1-2 in numbers. Most of the participants (71.5%) were living in joint family and more than half (53%) of participants had previous exposure regarding hand washing. More than half of the participants (56%) had family monthly income between 14,000-26,000rs monthly and most (70.5%) of participants had tap water (Govt. supply) in their homes. Majority (82.5%) of participants had no facility for hand washing. Most (67%) of participant's children had gastric disease in past six months and more than half (51.5%) of participant's children could not attending school. Most (64%) of participant had availability of clean drinking water.

Table 2: Frequency and percentage distribution of knowledge score of mothers of under five children regarding hand washing.

**N=200**

Aspect	Knowledge score	Frequency	Percentage%
Poor	0-6	85	42.5%
Average	7-9	92	46%
Good	10-13	23	11.5%

Table No. 2 reveals that, highest (46%) of participants had average knowledge score, and only (11.5%) of the participants had good knowledge score regarding hand washing.

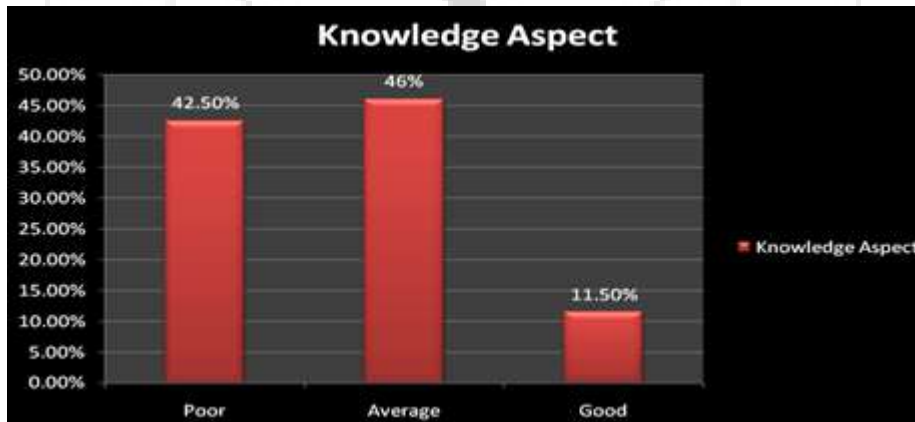


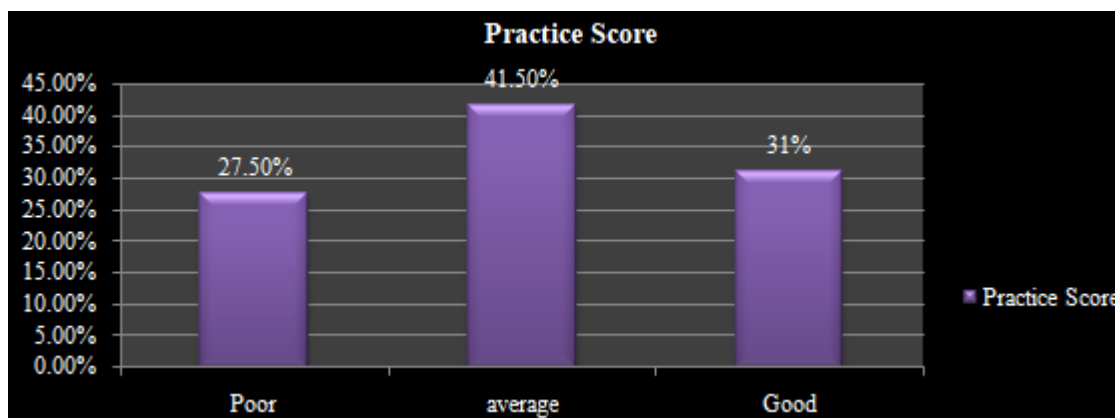
Figure 1: Bar diagram shows the percentage distribution of mothers of under five children according knowledge score

Table 4: Frequency and percentage distribution of Practice score of mothers of under five children among hand washing

**N=200**

Aspect	Practice score	Frequency	Percentage%
Poor	0-11	55	27.5%
Average	12-17	83	41.5%
Good	18-24	62	31%

Table No. 4 reveals that, hand washing practice was average among (41.5%) of the participants, (31%) of the participants had good practice regarding hand washing and only (27.5%) of participants having poor practice regarding hand washing.



**Figure 3:** Bar diagram shows the percentage distribution of mothers of under five children according practice score

**Table 3 (a):** Association between level of knowledge and selected demographic characteristics of mothers of under five children  
**N=200**

S.No	Demographic data	Below median (<7)	At& Above median(≥7)	Chi-square	p-value	Significance
1	<b>Age (in yrs.):-</b> 18-26 27-35	59 30	70 41	0.225	0.635	
2	<b>Education:-</b> No formal education Literate	53 36	43 68	8.572	<b>0.003</b>	<b>Sig</b>
3	<b>Occupation:-</b> Working Non-working	26 63	13 98	9.639	<b>0.002</b>	<b>Sig</b>
4	<b>No. of under five children in family:-</b> 1-2 3-5	62 26	84 28	1.642	0.650	
5	<b>Type of family:-</b> Joint Nuclear	64 25	79 32	0.013	0.908	
6	<b>Pre-exposure regarding hand washing:-</b> Yes No	43 46	63 48	1.413	0.235	
7	<b>Family income(monthly):-</b> 3,000-13,000rs 14,000-26,000rs	87 103	01 09	4.938	<b>0.036</b>	<b>Sig</b>
8	<b>Source of water for hand washing :-</b> River Tap water(Govt. supply)	30 59	29 82	1.365	0.243	
9	<b>Facility for hand washing (sink with tap):-</b> Yes No	10 79	25 80	4.358	<b>0.037</b>	<b>Sig</b>
10	<b>Any gastric disease to child in past six months:-</b> Yes No	63 26	71 40	1.040	0.308	
11	<b>Child attending school:-</b> Yes No	42 47	55 56	0.110	0.740	
12	<b>Availability of clean drinking water:-</b> Yes No	47 42	81 30	8.717	<b>0.003</b>	<b>Sig</b>

**Sig:** - significance  $P < 0.05$  level of significance,  $df=1$

**Description:** Table No.3 (a) shows that there is association between knowledge score and education, occupation, family income(monthly), facility for hand washing(sink with tap) and availability of clean drinking water. Hence it can be interpreted

that the participants who were literate, non-working, and had family income between the ranges 14,000-26,000 and had no facility for hand washing and had availability of clean drinking water having adequate knowledge regarding hand washing.

**Table 3(C): Association between level of practice and selected socio-demographic characteristics**  
**N=200**

S.No.	Demographic data	Below median (<12)	At & Above median (≥12)	Chi-square	p-value	Significance
1	<b>Age (in yrs):-</b> 18-26 27-35	67 33	62 38	0.546	0.460	
2	<b>Education:-</b> No formal education Literate	57 43	39 61	6.490	<b>0.011</b>	<b>Sig</b>
3	<b>Occupation:-</b> Working Non-working	23 77	16 84	1.561	0.212	
4	<b>No. of under five children in family:-</b> 1-2 3-5	57 19	89 35	2.213	0.529	
5	<b>Type of family:-</b> Joint Nuclear	70 30	73 27	0.221	0.638	
6	<b>Pre-exposure regarding hand washing:-</b> Yes No	39 61	67 33	15.737	<b>0.001</b>	<b>Sig</b>
7	<b>Family income(monthly)</b> 3,000-13,000 14,000-26,000	82 108	06 04	0.421	0.526	
8	<b>Source of water for hand washing:-</b> River Tap water (Govt. supply)	35 65	24 76	2.909	0.88	
9	<b>Facility for hand washing:-</b> Yes No	19 81	16 84	0.312	0.577	
10	<b>Any gastric disease to children:-</b> Yes No	66 34	68 32	0.090	0.764	
11	<b>Child attending school:-</b> Yes No	41 59	56 44	4.504	<b>0.034</b>	<b>Sig</b>
12	<b>Availability of clean drinking water:-</b> Yes No	63 37	65 35	0.087	0.768	

**S: - significance P<0.05 level of significance, df=1**

**Table No3(c)** shows that there is significant association between practice score of the participants and education, pre-exposure regarding hand washing and child attending school. Hence it is interpreted that the mother who were literate and had pre-exposure regarding hand washing and who's child attending school having good practice regarding hand washing.

**Table 4:** Correlation between knowledge and practice score of mothers of under five children regarding hand washing

**N=200**

	Practice
Knowledge	r=0.177 p=0.012

**P<0.01 level of significance.**

Table 4 reveals that there was significant positive weak correlation between practice and knowledge score.

#### 4. Discussion

The findings of the study reveals that, highest (46%) of participants had average knowledge score, and only (11.5%) of the participants had good knowledge score regarding hand washing. In contrary to the findings of the previous study **Aigbiremolen AO, Abejegah C., Ike CG, Momoh JA , Lawal-Luka RK, Abah SO.(2015)** revealed that over two-third (70.6%) of respondents had good knowledge of hand washing. These findings are similar to those found in Osogbo study where good knowledge of hand washing was 93% and knowledge of the importance was 99%.<sup>1</sup>

Findings of the study reveals that highest (41.5%) of participants had average practice regarding hand washing, one third (31%) of the participants had good practice regarding hand washing and only (27.5%) of the participants had poor practice regarding hand washing. These findings are supported by a study **Yerpude PN, Jogdand KS, Sumra NA (2014),**

which reveals that 71.49% mothers stated that hand washing was important in prevention of some or the other communicable disease. However, 73.97% mothers felt that washing hands with only water was sufficient. Hand washing before preparing food is being practiced by 78.86% of mothers. Still 23.14% reports that they are not practicing hand washing and Only 57.44% wash hands before serving food.<sup>7</sup>

#### **Association between knowledge of mothers of under five children regarding hand washing and selected socio-demographic characteristics of mothers:-**

The present study findings reveals that association between knowledge score and education, occupation, family income(monthly), facility for hand washing(sink with tap) and availability of clean water. The findings of the study are supported by a study **Aeskun-Olarinmoye EO. (2014)** revealed that knowledge about hand washing was influenced by respondents with higher educational level. ( $p=0.01$  respectively).<sup>3</sup>

#### **Association between practice score of mothers of under five children regarding hand washing and selected socio-demographic characteristics:-**

The finding of the study shows that there is significant association between practices score of the participants and education, pre-exposure regarding hand washing, child attending school. The findings of the study is supported by study **Aeskun-Olarinmoye EO. (2014)** revealed that age and educational status showed a statistically significant relationship with respect to their hand washing practices ( $p<0.0000001$ ).<sup>3</sup>

#### **Correlation between knowledge score and practice score of mothers of under five children regarding hand washing:-**

The study findings shows that there was no strong correlation between the practice score and knowledge (P-value is 0.012 at 0.01 level of significance), but because of unexplained factors, it has shown significant positive weak correlation. Findings of the study were supported with the study conducted by **Mohamed NA, Amin N Z, Ramli S, Isahak I, Mohamed NS. (2016)**. Results showed that there was a significant correlation between knowledge and practice.<sup>8</sup>

## **5. Conclusion**

The investigator observed that mothers have average knowledge and average practices regarding hand washing among mothers of under five children. The study findings shows that knowledge and practice score of mothers were correlate with each other. The study concluded that there is need to improve knowledge, attitude and practices of mothers of under five children regarding hand washing. On the basis of knowledge, attitude and practice of mothers, information pamphlet is developed regarding hand washing.

## **References**

- [1] Aigbiremolen AO, Abejegah C, Ike CG, Momoh JA, Lawal-Luka RK, Abah SO. Knowledge and practice of hand washing among caregivers of Under-Five children. *Journal of community, public health research.Nigeria.*2015; 5(5):159-165.
- [2] Centre for disease Control (CDC) (2009).Hand washing: Clean Hands save Lives. Available from
- [3] <http://www.cdc.gov/handwashing/>
- [4] Asekun-Olarinmoye EO, Omobuwa O, Adebimpe WO. Hand washing knowledge, attitude and practice amongst mothers of under five children .*Journal of Biology, agriculture and Healthcare.Nigeria.*2014; 4 (16): 40-48.
- [5] Begum RU, Bhavani K. Study of knowledge and practices of hand washing among mothers having children 5 years of age. *International journal of community medicine and public health.Telangana.*2016 August; 3 (8):2035-38.
- [6] Datta SS,Singh Z,Boratne AV, Bazroy J, Dimri D. Study on knowledge and practice of hand washing among mothers of under five children in rural coastal South India.*International Journal of medical public health.Puduchery.*2011 January-March;1 (1): 33-37.
- [7] Mech K, Ojah J. A study on the awareness and practice of hand washing of under five children in the slums of Guwahati. *Journal of evidence based medical heath.*2016; 3(24): 1075-1078.
- [8] Yerpude PN, Jogand KS, Sumra NA. A cross-sectional study on hand washing practices among mothers in an urban slum area.*International journal of health science and research.Gujarat.*2014 October; 4(10):1-4.
- [9] Mohamed NA, Amin NZ, Ramli S, ilina I, Salleh NM. Study on knowledge, attitude and practices of hand hygiene among parents of preschool children.*Journal of scientific & innovative research.Malayia.*2016 March; 5(1):1-6.