



Community Medicine

“A STUDY TO ASSESS KNOWLEDGE, ATTITUDE AND PRACTICE REGARDING WATER, SANITATION AND HYGIENE AMONG MOTHERS OF CHILDREN BETWEEN 6 MONTHS TO 5 YEARS OF AGE IN RHTC SEEPAT, BILASPUR”

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ABSTRACT **Introduction:** “Sanitation is a way of life. It is the quality of living that is expressed in clean home, clean firm, clean business, and clean community. Hygiene is commonly known as cleanliness or conditions and practices that serve to promote or preserve health. Improved housing, improved nutrition and improved hygiene with improved access to safe water, sanitation and good hygiene are the essential components for the war against infectious diseases and bases for clean environment, socio-economic development.

Objective:

1. To assess the knowledge regarding water sanitation & hygiene among mother groups of under-five children.
2. To determine the association between knowledge and socio demographic profile of respondents.
3. To assess the attitude & practices on sanitation & hygiene among the respondents.

Material and method: cross sectional study were carried out from 9 Anganwadi centers, from each Anganwadi center 16 mothers were selected for study, through the personal interview with pre-tested, pre-designed questionnaire, participants were mothers of children between 6 months to 5 years. The total sample size was 150. Mx-Excel and SPSS 20 was used for data analysis. **Result:** 82.70% were aware about effect of water on health. 71.30% know drinking untreated water have bad effect on health. 79.30% knows hazards of Open field defecation. 73.30% have toilet in their house. 100% were aware about hand washing after defecation. 66% have clean house surrounding. 66% uses tap water as source of drinking water. **Conclusion:** Overall knowledge of mother regarding hand hygiene and open field defecation hazards was good but their knowledge regarding proper treatment of drinking water was unsatisfactory. The most important factor affecting their knowledge was education.

KEYWORDS : Sanitation, Toilet, Knowledge.

INTRODUCTION

“Sanitation is a way of life. It is the quality of living that is expressed in clean home, clean firm, clean business, and clean community. Hygiene is commonly known as cleanliness or conditions and practices that serve to promote or preserve health.”[1] India is far behind many developing countries in the area of sanitation and hygiene. Worldwide, the second leading cause of death in under five children is diarrhoea. [2] Diarrheal disease, nearly 90% of which has been attributed to suboptimal water, hygiene, and sanitation is one of the largest causes of morbidity and mortality in children under five years of age in low and middle-income countries, where it kills more children than HIV, malaria, and measles combined.[3] Hand washing with soap before contact with food and water also reduces the secondary transmission of pathogens from the environment to a new host [4]. Beyond diarrhoeal disease, hand washing is also thought to play a role in reducing the transmission of infections such as pneumonia, influenza, helminths, trachoma, neonatal infections, HIV-associated infections and environmental enteropathies. [5] Estimates from the WHO and UNICEF show that about 1.1 billion people lack access to improved water supplies and 2.6 billion people lack adequate sanitation worldwide.[4] It has previously been estimated that as much as 50% of child under nutrition may be attributable to poor WASH practices.[6] Child stunting is linked to serious and largely irreversible consequences for survival, health, development, school performance and productivity in adult life.[7] There has been significant progress in the Water, Sanitation and Hygiene (WASH) sector since 1990, the MDG (Millennium Development Goal) baseline year. However, 748 million people still rely on unimproved sources of drinking water, almost a quarter of which rely on untreated surface water, and 2.5 billion people lack access to improved sanitation including one billion who practice open defecation.[8] In India, approximately 53% of households and 624 million people defecate in the open.[9]. This leads to intestinal infections which affect a child's nutritional status by diminishing appetite, impairing nutrient absorption and increasing nutrient losses. [10]

In order to understand the socio-cultural factors impacting on water safety, sanitation and hygiene behaviour of rural community, we conducted a study to document knowledge, attitudes and practices (KAP) with regard to water handling, sanitation, defecation practices and awareness about causation of water and sanitation related diseases in

under-five children. This study estimates the behavioural practices of mothers towards safe and hygienic sanitation influencing the number of stunted children and also number of deaths of under-five children.

AIM

To assess Knowledge, attitude and practice regarding water sanitation and hygiene among mother of children between 6 months to 5 years of age in RHTC Seepat.

OBJECTIVES

- To assess the knowledge regarding water sanitation & hygiene among mother groups of under-five children.
- To find the association between knowledge and socio demographic profile of respondents.
- To assess the attitude & practices on sanitation & hygiene among the respondents.

METHODOLOGY**Study Design:**

community-based cross sectional observational study carried out at Anganwadi centre in Seepat, District-Bilaspur, Chhattisgarh.

Study centre:

The study was conducted at Anganwadi centre in Seepat, District-Bilaspur, Chhattisgarh.

Study Duration:

The study was started on 15 July 2019 and completed on 15 November 2019, piloting was done in the month of August 2019 & data collection was completed by the end of November 2019.

Study Subject:

The participants for the study were selected mothers of children between 6 months to 5 years.

Inclusion criteria:

1. Mothers of children 6 months to 5 years.
2. Mothers those who give the consent for the study.

Exclusion criteria:

1. Mothers of children age less than 6 months and mothers of children age more than 5 years are excluded.

2. Those who are not interested and declined to give the consent.

Sample Size:

Total sample were 150, which were selected from 9 Anganwadi centres out of 10 on the basis of accessibility to reach. From each Anganwadi centre, 16 mothers were selected for study.

Sampling method:

Convenient Sampling method.

Study tools:

The data was collected from the selected sample through the direct personal interview with the help of pre-designed, pre-tested structured questionnaire, pilot study was done and then final data collection was proceeded.

Study technique:

The study was done by direct personal interview method.

Consent:

Informed verbal and written consent has taken from all the participants.

RESULT AND OBSERVATION

Table 1: Sociodemographic Profile of Study Respondents

S.No.	Variables	Frequency	Percentage (%)
1 Age			
a	<20	5	3.33
b	21-25	80	53.33
c	26-30	51	34
d	31-35	13	8.67
e	36-40	1	0.67
2 Religion			
a	Hindu	147	98
b	Others	3	2
3 Caste			
a	General	12	8
b	OBC	65	43.33
c	ST	45	30
d	SC	28	18.67
4 Education of mother			
a	Postgraduate	0	0
b	Graduate	10	6.67
c	Intermediate	22	14.67
d	High school	44	29.33
e	Middle school	34	22.67
f	Primary school	26	17.33
g	Illiterate	14	9.33
5 Occupation of mother			
a	Profession	0	0
b	Semi profession	0	0
c	Farmer	1	0.67
d	Skilled worker	2	1.33
e	Semi skilled	1	0.67
f	Unskilled	4	2.67
g	Unemployed	142	94.67
6 Occupation of head of family			
a	Profession	0	0
b	Semi profession	2	1.33
c	Farmer	25	16.67
d	Skilled worker	12	8
e	Semi skilled	38	25.33
f	Unskilled	73	48.67
g	Unemployed	0	0
7 Type of family			
a	Nuclear	77	51.33
b	Joint	73	48.67
8 Type of house			
a	Kachha	21	14
b	Pakka	111	74
c	Semi Pakka	18	12
9 Socio economic status			
a	Upper	0	0

b	Upper middle	16	10.67
c	Middle	46	30.67
d	Lower middle	59	39.33
e	Lower	29	19.33
10 No. of Family member			
a	1 to 5	77	51.33
b	6 to 10	56	37.33
c	>10	17	11.33

Table 1 shows maximum number of participants were from age group 21-25 age group 53.33% and minimum were from 36-40 age group 0.67%. maximum number of mothers were high school 29.33% and none of them were professional. 46.67% were unskilled, and 39.33% belong to lower middle socio-economic status.

Table 2. Assessment of knowledge regarding water usage, sanitation and hygiene among mothers of under 5 year children

Table 2.1. Knowledge of water usage

S.No.	Variables	Frequency	Percentage(%)
1 Quality of water affects health (n=150)			
a.	Yes	124	82.70%
b.	No	26	17.30%
2 Water you receive is safe (n=150)			
a.	Yes	127	84.70%
b.	No	23	15.30%
3 Treatment of water (n=150)			
a.	Use of filter	25	16.70%
b.	Boiling	25	16.70%
c.	Chemical	5	3.30%
d.	No need of treatment	95	63.30%
4 Diseases due to drinking untreated water (n=150)			
a.	Know	107	71.30%
b.	Don't know	43	28.70%
*If known, (n=107)			
a.	Diarrhoea	99	92.60%
b.	Typhoid	4	3.70%
c.	Hepatitis	0	0%
d.	Others	4	3.70%

Table no. 2.1 shows 82.70% were aware that quality of water affects health. 63.30% thinks there is no need of treatment of drinking water. 71.30% were aware that untreated drinking water causes diseases.

Table 2.2. Knowledge about open field defecation

S.No.	Variables	Frequency	Percentage(%)
1 Open field Defecation hazards (n=150)			
a.	Know	119	79.30%
b.	Don't know	31	20.70%
If known, (n=119)			
a.	Disease	89	74.80%
b.	Pollution	24	20.20%
c.	Unsafe	6	5%
2 Mode of transmission of disease (n=150)			
a.	Know	82	54.70%
b.	Don't know	68	45.30%
If known, (n=82)			
a.	Flies	58	70.70%
b.	Contaminated water	10	12.20%
c.	Contaminated food	7	8.50%
d.	Unclean hands	6	7.40%
e.	Others	1	1.20%
3 Toilet in house (n=150)			
a.	Present	110	73.30%
b.	Absent	40	26.70%
If absent, reason for not having toilet (n=40)			
a.	Unaffordable	29	72.50%
b.	Under construction	10	25%
c.	No space	1	2.50%

4 Importance of toilet (n=150)			
a.	To keep surrounding clean	97	64.70%
b.	Free from odour	11	7.30%
c.	Safe from diseases	19	12.70%
d.	All of the above	23	15.30%

Table 2.2 shows 79.30% knows hazards of open field defecation. 73.30% participant have toilet in their home, 72.50% of remaining 26.70% who don't have toilet in home were not able afford toilet.

Table 2.3. Knowledge regarding hand hygiene

S.No.	Variables	Frequency	Percentage(%)
1 Soap necessary for hand washing (n=150)			
a.	Yes	150	100%
b.	No	0	0%
2 Knowledge of hand washing after defecation (n=150)			
a.	Yes	150	100%
b.	No	0	0%
3 Knowledge of hand washing before food preparation (n=150)			
a.	Yes	145	96.70%
b.	No	5	3.30%
4 Knowledge of hand washing before food eating (n=150)			
a.	Yes	146	97.30%
b.	No	4	2.70%

Table 2.3 shows 100% participant were aware of hand washing.

Table 3. Assessment of attitude on sanitation and hygiene among the respondent

S.No.	Variables	Frequency	Percentage(%)
1 Benefits of hand washing (n=150)			
a.	To be clean	100	66.70%
b.	Free from diseases	41	27.30%
c.	Free from odour	4	2.70%
d.	Don't know	5	3.30%
2 Hand washing after using toilet (n=150)			
a.	Yes	145	96.70%
b.	No	5	3.30%
3 Soap is necessary in hand washing after defecation (n=150)			
a.	Yes	146	97.30%
b.	No	4	2.70%
4 Diarrhoea in last one year (children ≤5yrs) (n=150)			
a.	Yes	90	60%
b.	No	60	40%
5 Area surrounding the house (n=150)			
a.	Clean	99	66%
b.	Dirty	51	34%
6 Vector breeding place (n=150)			
a.	Present	86	57.30%
b.	Absent	64	42.70%
7 Perception on ways to maintain good sanitation (n=150)			
a.	Clean house	63	42%
b.	Proper disposal of garbage and waste water	27	18%
c.	Safe disposal of feces	8	5.30%
d.	All of the above	30	20%
e.	Don't know	22	14.70%

Table 3 shows 96.70% use hand washing after defecation. 60% (< 5yr) have diarrhoea in last one year.

Table 4. Assessment of practice on sanitation and hygiene among the respondents

Table 4.1. Practice of water usage and garbage disposal

S.No.	Variables	Frequency	Percentage (%)
1 Source of drinking water (n=150)			
a.	Tap water	99	66%
b.	Well	4	2.70%
c.	Hand pump	36	24%
d.	Others	11	7.30%
2 Waste water discharged (n=150)			
a.	Open drainage	110	73.30%
b.	Closed drainage	31	20.70%
c.	On road	8	5.30%
d.	Kitchen garden	1	0.70%
3 Solid waste disposal (n=150)			
a.	Community dustbin	65	43.30%
b.	Indiscriminate throwing	45	30%
c.	Burning	22	14.70%
d.	Others	18	12%

Table 4.1 shows 66% participant use tap water as source of drinking water. 73.30% have open drainage water discharge. 43.30 use community dustbin as solid waste disposal.

Table 4.2 Practice on usage of sanitary latrines

S.No.	Variables	Frequency	Percentage(%)
1 Place for defecation (n=150)			
a.	Open field defecation	45	30%
b.	Using toilet	105	70%
2 Reason for open field defecation (n=150)			
a.	Non availability of toilet	36	24%
b.	Stigma of using household toilet	1	0.70%
c.	Comfortable in open field	8	5.30%
d.	Not applicable	105	70%
3 Location of sanitary latrines (n=150)			
a.	Within home	50	33%
b.	Within compound	51	34%
c.	In another compound	9	6%
d.	Not available	40	26%
If within home, its location (n=50)			
a.	Near to kitchen and/or drinking water source	20	40%
b.	Away from kitchen and/or drinking water source	30	60%

Table 4.2 shows 70% participant use toilet as place for defecation.

Table 4.3 Practice regarding hand hygiene

S.No.	Variables	Frequency	Percentage(%)
1 Soap present near washing area (n=150)			
a.	Yes	143	95.30%
b.	No	7	4.70%
2 Hand washing after using toilet (n=150)			
a.	Yes	146	97.30%
b.	No	4	2.70%
3 Hand washing before food preparation (n=150)			
a.	Yes	142	94.70%
b.	No	8	5.30%
4 Hand washing before eating (n=150)			
a.	Yes	144	96%
b.	No	6	4%

Table 4.3 shows 95.30% use soap for hand washing.

Table 4.4 Practice related to hygiene of children (≤5 years)

S.No.	Variables	Frequency	Percentage(%)
1 Hand washing before feeding baby (n=150)			
a.	Yes	138	92%

b.	No	12	8%
2 Feeding milk to baby(>6 months) with bottle or cup (n=150)			
a.	Yes	106	70.70%
b.	No	44	29.30%
3 Wash bottle or cup regularly (n=106)			
a.	Yes	99	93.40%
b.	No	7	6.60%
4 Method of cleaning feeding bottle (n=99)			
a.	Boiled water	46	46.50%
b.	Plain water	33	33.30%
c.	Soap and water	20	20.20%
5 Disposal of feces of children(≤5yrs) (n=150)			
a.	Left in open	9	6%
b.	Thrown in garbage/ solid waste	84	56%
c.	Used toilet/ rinsed in toilet	54	36%
d.	Buried	3	2%

Table 5. Association between sociodemographic profile and level of knowledge of mother towards water, sanitation and hygiene

SN	Characteristics	Category	Knowledge	Level	Total	Chi-square	p value
			Good	Poor		χ^2	
1	Age						
a		≥20 years	4	1	5	1.625	0.202
b		<20 years	74	71	145		
2	Education of mother						
a		Post graduate	0	0	0	30.262	0.00001
b		Graduate	8	2	10		
c		Intermediate	9	3	12		
d		High school	30	14	44		
e		Middle school	12	22	34		
f		Primary school	9	17	26		
g		Illiterate	3	11	14		
3	Occupation of mother						
a		Profession	0	0	0	4.805	0.4927
b		Semiprofession	0	0	0		
c		Farmer	0	1	1		
d		Skilled worker	2	0	2		
e		Semiskilled worker	0	1	1		
f		Unskilled worker	1	3	4		
g		Unemployed	67	75	142		
4	Socioeconomic status						
a		Upper class	0	0	0	4.362	0.2249
b		Upper middle class	10	6	16		
c		Middle class	29	17	46		
d		Lower middle class	29	30	59		
e		Lower class	12	17	29		
5	Type of house						
a		Kachha	28	32	60	3.6436	0.16173
b		Pakka	43	29	72		
c		Semi pakka	7	11	18		

CONCLUSION

According to our study that we have conducted among the mothers of under 5 year children in Seepat, Bilaspur, we found that majority of the mothers were >20 years of age and belonging to lower middle class.

Overall knowledge of mother regarding hand hygiene and open field defecation hazards was good but their knowledge regarding proper treatment of drinking water was unsatisfactory.

The most important factor affecting their knowledge was education. Those mothers educated up to high school or above were having good knowledge regarding sanitation. Others factors like age, occupation, type of house was not influencing their knowledge to a greater extent. Study on the attitude of mother reflected their positive approach towards healthy sanitation practices. They were well aware regarding benefits of hand washing and proper ways to maintain a sound and clean surrounding.

A detailed study of practice related to the hygiene of children (<5 years of age) showed a good response. Good hand hygiene was being practiced by the mothers on a routine basis. Also they were disposing all the solid waste of their houses on a community dustbin.

Regarding their practice towards the usage of toilet we found that majority of the respondents were having toilets in their house and only few preferred to go for open field defecation. This shows that good education can influence the habits of people towards sanitation. Hence, we conclude that proper health education to mothers can promote good knowledge and healthy sanitary practices.

DISCUSSION

We have been conducted a community based study with the aim of assessing knowledge, attitude and practice of mothers of under 5 year children regarding water, sanitation and hygiene. For this purpose we have chosen seven Anganwadi centres of Seepat area of Bilaspur District (Chhattisgarh).

To begin with our project, we formulated our objectives and reviewed previous studies similar to our project. For our study purpose we used a pre-designed questionnaire. We also analyzed the association between socio demographic profile and knowledge of the mothers which was very effective as we found an association between education and knowledge of mother regarding sanitation. 82.7% respondents knew that quality of water can affect health and 71% were knowledgeable about the diseases caused due to unsafe drinking water. Majority of respondents had very good knowledge regarding hand hygiene and their overall practice towards hand hygiene was also very good. Regarding their attitude 97% of respondents knew the benefit of hand washing and nearly 95% were using soap and water for hand washing. About 80% of the respondents knew the hazards of open field defecation but only 70% were using sanitary latrines as mean of defecation. 86% of respondents were having good perceptions on how to maintain their sanitation practices. Our final interpretation provided us that the knowledge of the mothers (of under 5 year children) was good. Study result showed that knowledge on sanitation is not affected due to religion, occupation or income level. Respondent's knowledge was affected due to education level. High education level respondent had good knowledge. So we can say that knowledge of the mothers can be enhanced by educating them further.

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