1. INRODUCTION

Poor hygiene practices and inadequate sanitary conditions play major roles in the increased burden of communicable diseases within developing countries. Hand hygiene has achieved the reputation of being a convenient means of preventing communicable diseases. There is an established causal links between hand hygiene and rates of infectious disease.

According to the definition of World Health Organization, hand hygiene is a general term referring to any action of hand cleansing, that is, it is the act of cleaning one's 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.

Thousands of people die every day around the world from acquired infections, and hands are the main pathways of germ transmission during routine work. Hand hygiene is therefore the most important measure to avoid the transmission of harmful germs. Maintaining good hygiene is essential. Children being unaware and involved in activities like running around with tiny hands touching everything, sharing toys, crayons, playing in sand, touching furniture, putting hand finger or thumb in mouth are more prone to spreading of germs. This degree of physical contact is arguably the perfect environment to be spreading infectious diseases. Therefore, it is essential to work towards keeping the environment as hygienic as possible.

To stop the risk of cross infection schools are the best medium to spread awareness amongst the children about sound hygiene habits that will continue on for a lifetime. One of the best ways to support good hygiene practices is by washing and drying hands regularly, if this is carried out frequently it will help to minimize the transfer of infections. Good

hand washing is the first line of defense against the spread of many illnesses — from the common cold to more serious infections, such as meningitis, bronchitis, flu, hepatitis A, diarrhea most importantly. There will be less chances of children getting ill, acquiring infections and reduce absenteeism from school, further promoting healthy lifestyle and environment.

According to the National Health and Medical Research Council, the hand washing procedure:-

- Wet your hands with running water
- Cover your hands with liquid soap and rub your hands vigorously
- Wash your hands all over, being sure to clean in between fingers, under fingernails, around wrists and both the palms and backs of hands
- Rinse your hands thoroughly to remove all soap and germs and to help prevent dermatitis.
- Use a paper towel to turn off the tap
- Pat dry hands with a paper towel

Good habits if taught to children at the right time can go a long way like washing hands before and after eating, especially after using toilets, touching dirty objects, covering mouths when coughing, not sharing food or drinks if having cough or cold to prevent infection, using hand sterilizer when soap not available. Parents following hygienic habits set a good example in front of their children. Strict hygiene practices in areas such as kitchen, bathrooms, sleep/rest areas and play areas will also promote hygiene.

Also children if taught hand washing at school will bring that knowledge home to parents and siblings, this can help family members get sick less and miss less work and school.

Washing hands with water alone is not enough

Although people wash their hands with water, very few wash their hands with soap at critical moments (for example, after using the toilet, while cleaning a child, and before handling food). But washing hands with water alone is significantly less effective than washing hands with soap in terms of removing germs. Lack of soap is not a significant barrier to hand washing at home. Studies have shown that the vast majority of even poor households have soap in their homes. The major problem is that soap is rarely used for hand washing. Laundry, bathing and washing dishes are seen as the priorities for soap use.

Hand washing with soap is the single-most cost-effective health intervention

Hand washing with soap is the most effective life-saving intervention, which is within the technological and financial reach of all communities. It is the most inexpensive way to prevent diarrheal diseases and pneumonia, which together are responsible for the majority of child deaths.

In West and Central Africa alone, making this simple practice an entrenched habit could save about half a million children each year, making a significant contribution to the Millennium Development Goal of reducing deaths among children under the age of five by two-thirds by 2015 (MDG 4).

2. REVIEW OF LITERATURE

Despite the proven importance and benefits of washing hand, proper hand washing is not as pervasive as desired to prevent infections until now, especially in the developing countries that bear the greatest burden of infectious diseases. (1) A survey undertaken in Bangladesh indicated that hand washing practice with soap before eating was much lower than after defecation, and a gap persists between perception and practice of proper hand washing practices with soap (2).

Hand hygiene is a milestone of infectious disease control, and promotion of improved hand hygiene has been recognized as an important public health measure (3). It has long been recognized to be a convenient, effective, and also cost-effective means of preventing communicable diseases. A causal link between hand hygiene and rates of infectious disease illness has also been established earlier (4).

Globally, more than 3.5 million children younger than 5 years, mainly concentrated in developing countries, die from diarrhea and acute lower respiratory tract infections (5). The transmission of communicable diseases is responsible for >164 million lost school days per school year among students up to twelfth grade worldwide. Approximately 2.4 million deaths can be prevented annually by good hygiene practice, reliable sanitation, and drinking water (7). A meta-analysis on 30 hand hygiene studies found that improvements in handwashing reduced the incidence of upper respiratory tract infections by 21% and gastrointestinal illnesses by 31%. Evidence showed that hand washing with soap could reduce the risk of diarrheal diseases by 42%–47%, and hand washing promotion could save millions of lives (6)

Many studies have reported an association between improvements in hand hygiene and reductions in rates of infectious illnesses in the community (7). Nevertheless, there are still important questions that must be addressed before guidelines regarding the use of specific interventions for reducing rates of infectious illness in the community can be devised. This makes it difficult to make consistent recommendations to consumers regarding the merit and utility of various hand-hygiene regimens for the prevention of common infectious illnesses (9).

Analysis of the impact of hand-hygiene interventions for reducing infectious illnesses in the community is important for several reasons (11). First, there has been an explosion in the options and use of hand-hygiene products in the community. Second, hand hygiene is considered an important intervention measure for pandemic public health threats, such as severe acute respiratory syndrome and avian influenza. Third, research has suggested that there may be risks, including the emergence of antibiotic-resistant bacteria, associated with the use of some hand-hygiene products such as antibacterial soaps (12).

3. AIM

The aim of this study is to assess the knowledge, attitude and practice regarding hand hygiene among children of Government secondary school, Harsaru, Gurgaon.

3.1. SCOPE

The study primarily assesses knowledge, attitude and behavior with respect to Hand hygiene among the target population. The geography includes Government High School, Harsaru, Gurgaon and target group includes secondary school children that consist of students from class 6^{th} to 10^{th}.

3.2. OBJECTIVES

- To understand the level of knowledge amongst the target population regarding Hand hygiene.
- To assess and understand the attitude of the target population about Hand hygiene.
- To gather information on the current practices among the target population with respect to hygiene practices.
- To establish whether there is a relationship between parent's education level (especially mother's) and hygiene practices among children.
- To gather information on personal hygiene practices

4. RESEARCH QUESTIONS

- Do you know about six steps of hand washing?
- What should be used for proper hand washing?
- What are the critical moments of hand washing?
- How much time is needed for proper hand washing?
- Do you have availability of permanently running water?
- What the possible reasons are of not wash their hands?
- What is the frequency of falling sick in past six months?

5. METHODOLOGY

The study used mixed method of primary data collection and review of existing literature.

Study design

It is a school based cross-sectional study which used quantitative method of data collection among randomly selected students of secondary section. A semi-structured questionnaire was designed for the primary subjects.

Study Population

Eligible students were selected using simple random sampling technique from the existing sampling frame. The survey population comprises of secondary school children from class 6^{th} to class 10^{th}.

Study area

The study area is a Government secondary school. The school is located in Harsaru village of Gurgaon. Harsaru is a small town located in the Gurgaon district of Haryana.

Sources of data collection

The study was conducted in the month of March and April. The primary data sources include 70 respondents. As per study design, respondents consisted of school children from class 6^{th} to 10^{th}.

Secondary sources

The secondary data sources included different reports published by Ministry of Health and Family Welfare, WHO, journals, various international organisations and already published researches.

- Review of publications and documents from organizations working in the area of Hygiene and sanitation
- Review of previously conducted quantitative surveys or qualitative research studies that may have included topics related to the issues

Sampling, sampling frame and Geography

The sampling of primary subjects was done randomly in the target geography. The sample size is as follows:

	Target population	**Sample size**
Primary subjects	Secondary school children (Class 6^{th} to 10^{th})	70

Data collection procedures and instruments

Primary Survey: Data was collected using a semi-structured questionnaire

A semi-structured and pre tested questionnaire was used to collect the data. This pre-designed, pre-tested and semi-structured questionnaire included topics relating to demographic details of the respondents, knowledge about hand hygiene; attitude towards hand hygiene; Practices regarding hand hygiene; General health seeking behavior and source of information regarding hand hygiene. The quantitative questionnaire consisted of closed ended questions. Study tools were pre-tested to ensure their relevance, reliability and validity.

Data analysis

Data analysis was done using Microsoft Excel. First, all the responses were collated. After this all responses were entered in excel sheet and analysis was performed using Microsoft Excel on various study indicators.

Ethical consideration:

Ethical clearance was obtained from the Principal of the school. Each study participant was adequately informed about the purpose, benefits and risks of the study and their right to discontinue or refuse to participate in the study

Limitations:

- Majority of respondents were unaware about some of the demographic details asked.
- The students were not able to understand the few of the questions asked.
- The sample size was not very large so the findings cannot be generalized to the entire population.

6. RESULTS

7. Demographic details

7.1. General Details

A total of 70 respondents were randomly selected from the total students. Socio-economic and demographic details of the students was collected. Almost all the respondents were Hindus. All the respondents were from the local area where the school was located, that is Harsaru, Gurgaon.

7.2. Educational level of mothers

Table 7.2.1 Educational level of mothers

Education	Frequency	Percent
Primary and below	34	48%
Middle and above	36	52%

52% of mothers were educated up to middle school and above, where as 48% were educated up to primary school and below.

7.3. Educational level of fathers:

Table 7.3.1 Educational level of fathers

	Frequency	Percent
Illiterate	5	7%
Primary	11	16%
Middle	22	31%
Secondary	30	43%
Above secondary	2	3%

43% of the Fathers were educated up to Secondary school, followed by middle schooling which is 31%. The level of literacy among the mothers was found to be less as compared to the fathers. A very small percentage of fathers were also found to be educated above secondary level, where none of the mothers were educated above secondary level.

7.4. Father's Occupation:

Table 7.4.1 occupation of father

Occupation	Percent
Transportation work	20%
Security guard	9%
Labour class	21%
Salaries Employees	21%
Small business	24%
Did Not Respond	4%

Data was collected on father's occupation of the respondents. Majority of them were small business owners, followed by salaried employee, labour class and transport workers.

7.5. Household size and Type of toilet facility:

Table 7.5.1 status of toilet facility and size of household

Status of Toilet facility	**Household Size**	**Percent**
Household toilet facility	Below 1 BHK	9%
	1 BHK	20%
	2 BHK	26%
	3 BHK	30%
	Above 3 BHK	13%
Total		**97%**
Open defecation	Below 1 BHK	3%
	1 BHK	0
	2 BHK	0
	3 BHK	0
	Above 3 BHK	0
Total		**3%**

97% of respondents have toilet facility in their households. Most of the respondents had 3 BHK household, followed by 2 BHK and 1 BHK.

Only 3% of the respondents go for open defecation. The reason for the same can be attributed to the size of household which is below 1 BHK.

Table 7.5.2 Type of toilet facility in households having toilets

	Type of Toilet	**Percent**
For households having toilet facility	Kaccha	3%
	Sanitary	90%
	Modern Commode	7%
	Others	0

For those having toilet facility in their households, 90% of them had sanitary toilet (Indian toilet), whereas 7% had modern commode. Only 3% of the households had kaccha toilet.

8. Section I: Personal Hygiene

8.1. Taking bath

Table 8.1.1 Frequency of taking bath among the school children

	Girls	Boys	Total
Daily	86%	100%	91%
Once in 2-3 days	11%	0%	7%
Once in a week	2%	0%	1%
More than a week	0%	0%	0%

86% of the girls took bath daily, whereas 100% boys said that they took bath daily. Rest of the girls said that they took bath once in 2 to 3 days.

Table 8.1.2 Relation of mother's education level with taking bath daily

	Girls	Boys	Total
Primary and below	43%	42%	43%
Middle and above	43%	58%	49%

49% of all the respondents who took bath daily belonged to mothers who were educated up to middle school and above. For mothers who were educated up to primary or below, 43% said that they took bath daily.

8.2. Brushing Teeth

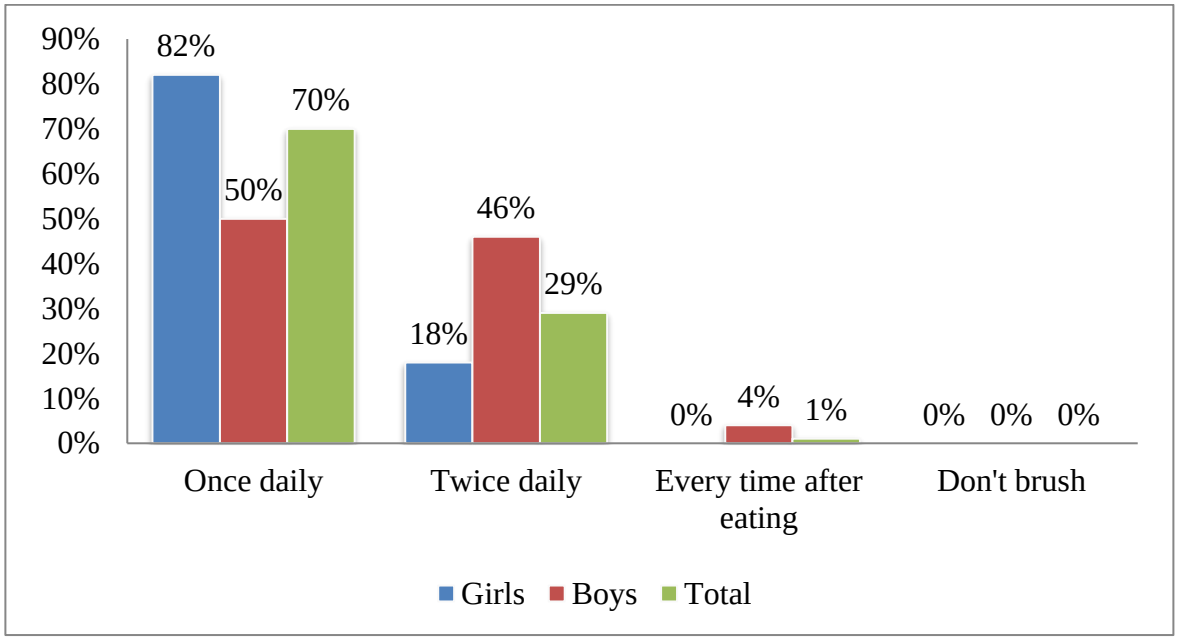
Table 8.2.1 Frequency of brushing teeth

	Girls	Boys	Total
Once daily	82%	50%	**70%**
Twice daily	18%	46%	**29%**
Every time after eating	0%	4%	**1%**
Don't brush	0%	0%	**0%**

70% of respondents brush their teeth daily. Only 29% of the respondents said that they brush their teeth twice in a day.

The percentage of boys brushing teeth twice in a day is higher than that of girls. 46% of boys brush their teeth twice daily whereas for girls it is only 18%.

Figure 8.2.1 frequency of brushing teeth



8.3. Wearing washed clothes

Table 8.3.1 Frequency of wearing washed clothes

	Girls	Boys	Total
Everyday	84%	54%	73%
After every 2 days	16%	42%	26%
After 4 to 5 days	0%	0%	0%
After a week	0%	4%	1%

84% of girls said that they changed their clothes every day. Among boys, only 54% of them changing clothes everyday which is very less. The percentage of boys changing clothes after every 2 days is 42%, which is almost similar to those who changed their clothes every day. Among girls, only 16% changed their clothes after every 2 days.

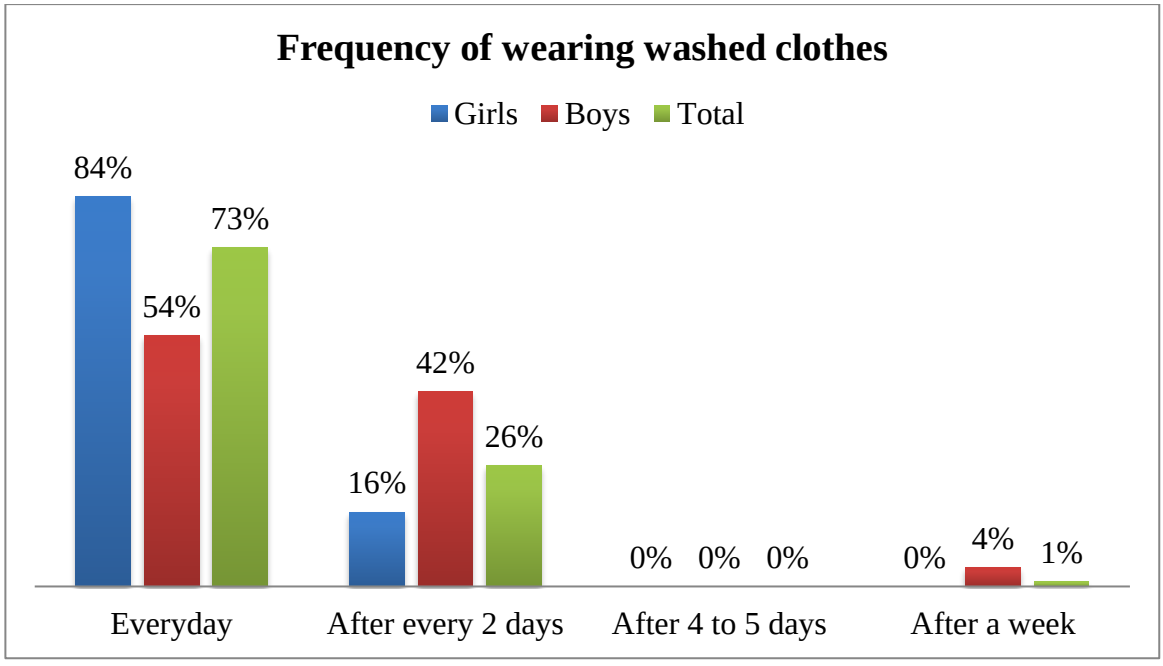


Table 8.3.2 Mother's educational level and frequency of wearing washed clothes

Mother's educational level	Frequency of wearing washed clothes	Girls	Boys	Total
Primary and below	Everyday	45%	19%	**36%**
	After every 2 days	7%	19%	11%
	After 4 to 5 days	0	0	0
	After a week	0	4%	1%
Middle and above	Everyday	39%	35%	**37%**
	After every 2 days	9%	23%	14%
	After 4 to 5 days	0	0	0
	After a week	0	0	0

Almost equal percentage of respondents changed their clothes daily in both the categories. This shows that mother's education level as such has no impact on the frequency of changing clothes.

Majority of girls changed their clothes everyday whereas the percentage of boys is equally distributed among those who changed their clothes daily and those who change after every 2 days. This shows that girls follow more hygiene with respect to their dressing.

8.4. Wearing footwear

Table 8.4.1 Relation between mother's educational level and wearing foot wear

Wearing foot wear	Mother's educational level	Girls	Boys	Total
Yes	Primary and below	43%	27%	37%
	Middle and above	41%	50%	44%
Total		**84%**	**77%**	**81%**
No	Primary and below	10%	16%	12%
	Middle and above	7%	8%	7%
Total		**17%**	**24%**	**19%**

81% of respondents said that, they put on foot wear every time they go out of the house. Among these, majority of the children were those whose mothers were educated up to middle school and above. 19% said that they do not wear footwear every time before going out of the house. Majority of respondents belonged to mothers who were educated up to primary or below.

9. Section II: Knowledge regarding Hand Hygiene

9.1. Awareness regarding six steps of hand washing

Table 9.1.1 Awareness regarding six steps of hand washing

	Girls	Boys	Total
Yes	100%	92%	97%
No	0	8%	3%
Total	100	100	100

Almost all the respondents were aware about six steps of hand washing. Only 3% of the respondents were not aware about six steps of hand washing, who were all boys.

Figure 9.1.1 Awareness regarding six steps of hand washing

Table 9.1.2 Source of information regarding hand washing

Source of information	Percent
School	86%
Family	10%
Advertisement	0%
Health awareness camps	1%
Others	0%
DNR	3%
Total	100%

School was found to be the major source of information regarding hand hygiene and six steps of hand washing. 10% of respondents said family as the major source of information regarding hand hygiene. Only 1% of them said that they got to know about it through health awareness camps.

Figure 9.1.2 Source of information regarding hand hygiene

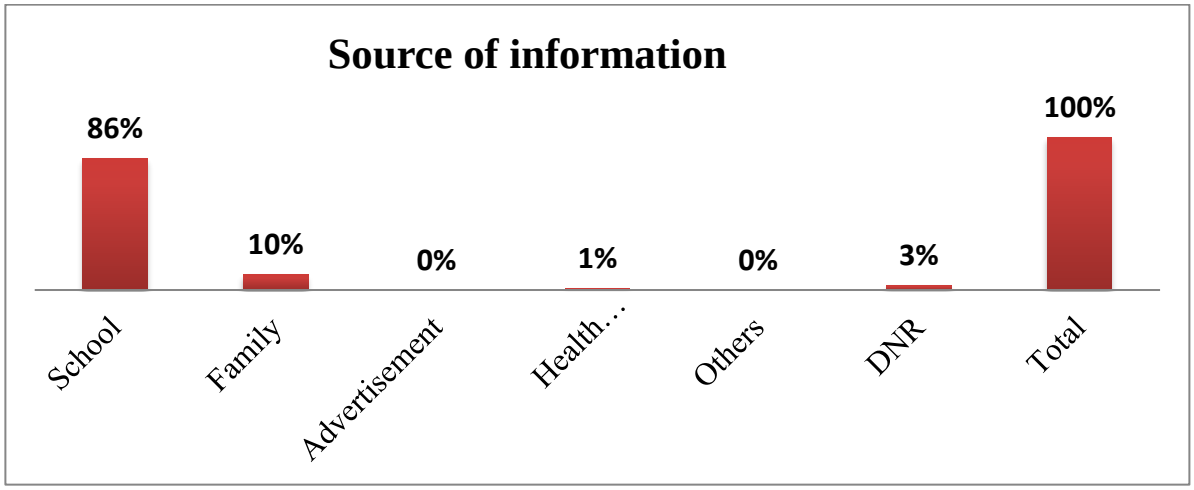


Table 9.1.3 Knowledge regarding time required for hand washing

	Girls	Boys	Total
10 second or less	36%	69%	49%
10-20 seconds	61%	27%	49%
30 seconds	2%	4%	3%
More than 30 seconds	0%	0%	0%
Don't Know	0%	0%	0%
Total	100%	100%	100%

49% of respondents said that hands should be washed for 10 seconds. Another 49% said that 10 -20 seconds is required for proper hand washing. Only 3% of respondents said that 30 seconds is required for hand washing.

Table 9.1.4 Knowledge regarding agent used for hand washing

	Girls	Boys	Total
Only water	5%	4%	4%
Water with soap	95%	96%	96%
Water with ash	0%	0%	0%
Water with mud	0%	0%	0%
Others	0%	0%	0%
Total	100%	100%	100%

10. Section III: Practices regarding Hand Hygiene

10.1. Hand washing behavior before eating and after using toilet/defecation

Table 10.1.1 Hand hygiene practices before eating and after using toilet

Hand washing behavior		Girls	Boys	Total
Before eating	Yes	100%	100%	100%
	No	0	0	0
After using toilet/defecation	Yes	100%	100%	100%
	No	0	0	0

All the respondents said that they wash their hands before eating and after using toilet or defecation.

Table 10.1.2 Agent used for hand washing before eating

	Girls	Boys	Total
With water	43%	42%	43%
With soap or detergent	55%	58%	56%
With mud	2%	0%	1%
Others	0%	0%	0%

Respondents were asked regarding the agent used for washing hands before eating. Only 56% of respondents said that hand washing should be done with soap and water before eating. Almost half of the respondents said that only water can be used for hand washing.

1% still said that, hand washing can be done with mud before eating.

Table 10.1.3 Mother's education level and agent used for hand wash before eating

		Girls	Boys	Total
Primary and below	Water only	27%	19%	24%
	With mud	2%	0	1%
	With soap	**23%**	**23%**	**23%**
Middle and above	Water only	16%	23%	19%
	With soap	**32%**	**35%**	**33%**

33% of all the respondents who used soap for washing hands, their mothers were educated up to middle school and above. Respondents whose mothers were educated up to primary or below, only 23% used soap for washing hands before eating. More number of respondents who said they use water for washing hands belonged to mothers who were educated up to primary and below.

Table 10.1.4 Mother's education level and hand wash after using toilet

		Girls	Boys	Total
Primary and below	**with soap**	**41%**	**23%**	**34%**
	with Water	11%	19%	14%
Middle	**with soap**	**32%**	**46%**	**37%**
	with Water	16%	12%	14%

For respondents, whose mothers were educated up to primary and below, the hand washing behavior was found to slightly lower than those whose mothers were educated up to middle and above.

Table 10.1.5 Relation between mother's education level and hand wash after defecation

		Girls	Boys	Total
Primary and below	**with soap**	**52%**	**35%**	**46%**
	with Water	0	8%	3%
Middle and above	**with soap**	**45%**	**42%**	**44%**
	with Water	2%	15%	7%

The respondents were asked regarding the hand washing agent after defecation. The hand washing behavior for both primary and middle school educated mothers was similar.

10.2. Frequency of health facility visit and hand washing behavior

Table 10.2.1 Frequency of health facility visit and hand washing before eating

Agent used for washing hands	Frequency Of Health Facility Visit	Girls	Boys	Total
water only	1 to 2	23%	15%	20%
	2 to 4	7%	8%	7%
	None	14%	19%	20%
With mud	2 to 4	2%	0%	8%
With water and soap	1 to 2	23%	35%	27%
	2 to 4	7%	8%	7%
	more than 5 times	5%	0%	3%
	None	20%	8%	16%
	Did Not Respond	0%	8%	3%

Majority of students visited the health facility for 1 to 2 times. For those who used soap for washing hands tend to visit health facility more often.

Table 10.2.2 Frequency of health facility visit and hand washing after defecation

Behaviour	Frequency Of Health Facility Visit	Girls	Boys	Total
With soap	1 to 2	45%	42%	44%
	2 to 4	14%	15%	14%
	more than 5 times	5%	0%	3%
	None	34%	19%	29%
With water only	1 to 2	0%	8%	3%
	2 to 4	2%	0%	1%
	None	0%	8%	3%
	(blank)	0%	8%	3%

Similar pattern is observed in this table also, where frequency of health facility visit and hand wash with soap is directly proportional to each other.

11. Section IV: Attitude towards Hand Hygiene

Table 11.1 Number of times of hand washing in a day

	Girls	Boys	Total
1-2 times	2%	19%	9%
3-5 times	50%	46%	49%
6-10 times	45%	31%	40%
11 or more	2%	0%	1%
Never	0%	0%	0%
DNR	0%	4%	1%

Majority of respondents wash their hand 3 to 5 times in a day. 40% said that they wash their hands 6 to 10 times in a day. Very few of them, approximately 9% said that they washed their hands only 1 to 2 times in a day.

Table 11.2 Frequency of cutting finger nails

	Girls	Boys	Total
Weekly	82%	81%	81%
1-2 times	14%	15%	14%
3-4 times	5%	4%	4%
More than a month	0%	0%	0%

81% of respondents cut their hands on a weekly basis. 14% said that they cut their fingernails 1 to 2 times in a week. None of them cut their fingernails for more than a month.

12. KEY FINDINGS

1. A total of 70 respondents were selected on a random basis. Most of the respondents belonged to Harsaru, where the school was located.
2. All the respondents belonged to lower socio-economic strata of the society, which can be reflected from the profession of their fathers.
3. The study found that the level of literacy of the mothers was up to primary and middle school. And majority of fathers were educated up to secondary school.
4. Majority of the respondents had toilet facility in their house. Only a small percentage practiced open defecation, which had household size less than 1 BHK.
5. Data was collected on the general hygiene practices of the respondents. Hygiene practice of both the male and female respondents varied on different parameters.
6. All the boys took bath daily whereas 86% of girls took bath daily. The rest of the girls took bath after every 2 to 3 days.
7. Majority of girls changed their clothes everyday as compared to boys, who changed their clothes after every 2 days. Girls were more hygienic with respect to wearing washed clothes. The reason for this can be attributed to girls being involved in the household work can wash clothes on their own.
8. The knowledge regarding hand hygiene was found to be on a positive side. Majority of respondents were aware about the various aspects of hand hygiene. School was found to be the major source of information.
9. Those respondents whose mothers were educated up to middle school and above, their hygiene practices was found to be slightly better as compared to those whose mothers were primary or below educated.

10. Majority of respondents said that water along with soap should be used for hand washing. Very few of them said that hand washing can be done with water only.
11. Data was collected on practices regarding hand hygiene. All the respondents washed their hands before eating and after defecation.
12. Majority of respondents used soap and water for washing their hands before eating and after defecation. Among those who used soap, respondents whose mothers were middle school or above educated were on higher side as compared to primary and below educated mothers.
13. Relation between frequency of health facility visit and agent used for hand washing was assessed. Those who used soap for washing their hands tend to visit health facility more often as compared to those not using soap. The reasons for the same can be attributed to, those visiting health facility are more aware about the hygiene practices. The source of information can be health facility itself.
14. The attitude towards hand hygiene was also found to be positive. Majority of respondents washed their hands 3 to 5 times in a day, followed by respondents who wash their hands 6 to 10 times.
15. The frequency of cutting fingernails was also found to be on a positive side. Majority followed hand hygiene practices.

13. DISCUSSION

The present study was carried out in Government secondary school of harsaru, Gurgaon. 70 students were interviewed by a pre-tested questionnaire aimed to find out the Knowledge, attitude and practices regarding hand hygiene of these children. Study was carried out during the period of February to April 2017.

Data was gathered on the education level of Parents, and it was found that 48% of the mothers were educated up to primary school and below, and 52% of them were educated up to middle school and above.

43% of the fathers were educated up to secondary school, followed by 31% of them up to middle school. The level of literacy of fathers was found to be more as compared to the mothers. A very small percentage of fathers were also found to be educated above secondary level, whereas none of the mothers were educated above secondary level.

On comparing the status of toilet facility and size of household, it was found that, 97% of the respondents have toilet facility in their households, while only 3% go for open defecation. It was also found that those going for open defecation had their household size below 1 BHK.

On assessing the personal hygiene level, it was observed that 86% of the girls took bath daily, whereas 100% of the boys took bath daily. Rest of the girls took bath once in 2 to 3 days. Association between mother's education level and hygiene practice among children was also assessed. It was found that, majority of children who took bath daily; their mothers were educated up to middle school and above.

Out of all the respondents, 70% brush their teeth daily. 29% brush twice in a day. 46% of the boys brush their teeth twice daily whereas only 18% of girls brush their teeth twice in a day.

The awareness regarding six steps of hand washing was found to be on a positive side. 96% of the respondents were aware about it. Only 3% did not know about six steps of hand washing. Majority of the information regarding hand hygiene was inculcated from school only.10 % said that the source of information is family and 1% from health awareness camps.

49% of the respondents took 10 seconds or less for hand washing and same percentage took 10 to 20 seconds for hand washing. Only 3% of respondents took more than 30 seconds for washing their hands.

96% of respondents washed their hands with water and soap while 4% washed only with water. 33% of all the respondents who used soap for washing hands, their mothers were educated up to middle school and above. Respondents whose mothers were educated up to primary or below, only 23% used soap for washing hands before eating. Again, the respondents were asked regarding the hand washing agent after defecation. For primary and middle school educated mothers, the hand washing behavior was almost similar.

Majority of respondents wash their hand 3 to 5 times in a day, followed by 6 to 10 times. Very few of them, approximately 9% said that they washed their hands only 1 to 2 times in a day.

81% of respondents cut their hands on a weekly basis. 14% said that they cut their fingernails 1 to 2 times in a week. None of them cut their fingernails for more than a month.

14. CONCLUSION

It has been observed that majority of the respondents were aware about the six steps of hand washing and the source of information was found to be school.

Knowledge regarding various aspects of hand hygiene such as six steps of hand washing, time required, agent used for washing hands was found to be positive among the respondents, because school based intervention has already imparted knowledge regarding hand hygiene.

Despite having knowledge on hand hygiene, the practices regarding same was not positive. The percentage of children washing hands before eating was low as compared to their knowledge. It can be said that in spite of the respondents being aware about different aspects of hand hygiene, the level of practice was not up to the mark.

Majority of respondents showing positive behavior regarding different aspects of hand hygiene were found to be falling in the category where their mothers were educated up to middle school and above.

It was also found that the practice regarding various aspects of personal hygiene such as taking bah, brushing teeth, wearing washed clothes varied among boys and girls. In some of the practices girls were better and in other boys were better.

The status of toilet facility and the household size was also assessed. It was found that, those going for open defecation had their household size below 1 BHK. Socio-economic status can be one of the reasons for practicing open defecation.

15. RECOMMENDATIONS

Hygiene practices can be encouraged amongst the children by involving them in various school based activities like

- competitions
- Awards for maintain cleanliness
- Increasing their knowledge and teaching them through demonstrations
- Conducting regular workshops by involving parents also regarding various aspects of hygiene.
- Explaining the effects of poor hygiene and open defecation and how it can affect health adversely
- Ensuring proper follow up of any intervention on hand hygiene

16. ANNEXURE

Socio-demographic Profile of Respondent

General Information about Respondent		
Respondent Sl. No (For office use only)		
Class:		
Name of the Respondent (Write Full Name)	**Age:**	**Sex:**
Educational level of mother	1. primary 2. Middle 3. secondary 4. Above secondary 5. Illiterate	
Educational level of father	1. primary 2. Middle 3. secondary 4. Above secondary 5. Illiterate	
Father's Occupation		
Monthly income of family		
Household size	1. Below 1 BHK 2. 1 BHK 3. 2 BHK 4. 3 BHK 5. Above 3 BHK	
Caste	1. General 2. Schedule Caste 3. Schedule tribe 4. Other Backward Caste 5. Don't know	
Religion	1. Hindu 2. Muslim 3. Christian 4. Sikh 5. Other (specify)	

Section I: Personal hygiene

1.	Do you think taking bath daily is important?	1. Yes 2. No	
2.	How often do you take bath?	1. Daily 2. Once in 2-3 days 3. Once in a week 4. More than a week	
3.	How often do you brush your teeth?	1. Once daily 2. Twice daily 3. Every time after eating 4. Don't brush	
4.	How do you brush your teeth?	1. with toothpaste 2. with neem stick 3. with tooth powder 4. others	
5.	Do you wear washed clothes?	1. Yes 2. No	
6.	How often do you change your clothes?	1. Everyday 2. After every 2 days 3. After 4 to 5 days 4. After a week	
7.	Do you put on foot wear every time you go out of the house?	1. Yes 2. No	
8.	How many times you have visited any health facility in the last 6 months?	1. None 2. 1-2 times 3. 2-4 times 4. More than 5 times	
9.	Have you suffered from any respiratory tract infections in past 1 year?	1. Yes 2. No	

Section II: Hand Hygiene

Knowledge regarding hand hygiene:

1.	Are you aware about six steps of hand washing?	1. Yes 2. No	
2.	If yes, from where did you get to know about six steps of hand washing?	1. School 2. Family 3. Advertisements 4. Health awareness camps 5. Others	
3.	How much time is needed for proper hand washing?	1. 10 seconds or less 2. 10-20 seconds 3. 30 seconds 4. More than 30 seconds 5. Don't know	
4.	With what you should wash your hands?	1. Only water 2. Water with soap 3. Water with ash 4. Water with mud 5. Others	
5.	What according to you are the critical moments for hand washing? (multiple response possible)	1. Before and after eating 2. After using toilet 3. After playing 4. After touching body fluids 5. Others	

Practices regarding hand hygiene:

1.	Do you wash your hands before eating?	1. Yes 2. No	
2.	How do you wash your hands before eating?	1. With water 2. With soap or detergent 3. With mud 4. Others	
3.	What is the status of toilet facility at your residence?	1. Household toilet 2. Community toilet 3. Open defecation 4. Others	
4.	Which type of toilet facility is present at your residence?	1. Kaccha 2. Sanitary 3. Modern commode 4. Others	
5.	Do you wash your hands after visiting toilet?	1. Yes 2. No	
6.	How do you wash your hand after using toilet?	1. With water 2. With soap or detergent 3. With mud 4. Others	
7.	How do you wash your hands after defecation?	1. With water 2. With soap or detergent 3. With mud 4. With ash 5. Others	
8.	How long do you wash your hands?	1. 10 seconds or less 2. 10-20 seconds 3. 30 seconds 4. More than 30 seconds	
9.	Do you cut your fingernails?	1. Yes 2. No	
10.	Do you have availability of 24*7 water supplies at your home?	1. Yes 2. No	

Attitude regarding Hand hygiene:

1.	How many times do you wash your hands in a day?	1. 1-2 times 2. 3-5 times 3. 6-10 times 4. 11 or more 5. Never	
2.	If you do not wash your hands, than what is the reason?	1. Poor water supply 2. Soap not available 3. No available time 4. laziness 5. No need 6. Keep forgetting 7. others	
3.	How often do you cut your finger nails?	1. Weekly 2. 1-2 weeks 3. 3-4 weeks 4. More than a month	
4.	Do you think hand washing is important to prevent disease?	1. Yes 2. No	
5.	Do you consider hand washing as a part of personal hygiene?	1. Yes 2. No	

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