

## A STUDY TO ASSESS THE HAND HYGIENE PRACTICE AMONG SCHOOL CHILDREN

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### *Abstract*

*Keeping hands clean through improved hand hygiene is one of the most important steps one can take to avoid getting sick and spreading germs to others. A study was conducted to assess the hand hygiene among school children. The objectives were to assess the practice level of hand hygiene among school children, to determine the association between practice of hand hygiene with their selected socio demographic variables of school children. A non experimental research approach with descriptive research design was chosen for this study. By using purposive sampling technique a total of 100 samples were included for the study. The test was conducted by check-list. The data were recorded and coded. The data analysis was done by using descriptive and inferential statistics. The result revealed that there is relatively good practice of hand washing among school children. The study implies that creating more awareness on hand washing will prevent the occurrence of infection among school children.*

**Keywords:** School children, Knowledge, Practice

### **INTRODUCTION**

Hand hygiene is a milestone of infectious disease control and promotion of improved hand hygiene has been recognized as an important public health measure. It has long been recognized to be a convenient, effective, and also cost effective method for preventing communicable diseases. According to the definition of World Health Organization, hand hygiene is a general term referring to action of hand cleansing, i.e, the act of cleaning one's hand with the use of water, soap and antiseptic solution or use of sanitizer for the purpose of removing soil, dirt and microorganisms.

Feco-oral diseases transmitted among school children is mainly due to unhygienic hands. There is connection among contaminated hands and common infection such as diarrhea, common cold and childhood fever can be reduced effectively by proper hand washing technique. Effective hand washing technique is supposed to decrease transmission of infection by reducing possible microorganisms and also by washing away the dirt, which could also port microorganisms and permit their endurance for longer periods of time. The two major deadly diseases among children are diarrhea and acute respiratory infection which can be effectively reduced by proper hand washing was pointed by many systemic reviews.

Encouraging children from an early age to wash their hands will help to ensure that this practice becomes a lifelong habit. The transmission of common communication infection such as colds and flu can be prevented by following good hand hygiene. Proper teaching techniques of hand

washing practice not only help at home but in school also. Many illness starts with poor hand washing like, salmonella, camphylobacter, MRSA, flu, diarrhea, common cold, impetigo these are just some of the viruses and infections. Common prevailing among school children because of poor hygiene. Hand washing is a significantly effective method to protect the school children from the infectious diseases, because frequent hand washing keeps germs away.

### NEED OF THE STUDY

Hand washing is significantly important in children as children are vulnerable to illness since they very playful and more exposed to dirt, soil and other source of disease-causing infections. By teaching them proper hand washing techniques, school-aged children can keep their own hands clean and also teach other children how to stop the spread of germs.

As children lack hand hygiene in schools a potential for disease transmission is at a higher risk. A school health nurse plays an important role in providing hand washing knowledge to school children. School health nurses can provide health primitive measures teaching students, parents and teachers the importance of hand washing thereby facilitating a healthy and safe environment at home and at school which will provide the foundation for a healthy and active childhood and it will also help them to incorporate this knowledge to other children in the school as well as other people in the society.

A cross-sectional study was conducted in two schools of Bangalore to find out the extent of germs present in hand and also student's perception on hand washing. The study results showed that with regard to students perception about the dirty areas of hands. It was observed that majority (78%) felt palm was likely to be more dirty while less than 70% felt that web spaces could harbor dirt. Almost 86% reported that they washed hands before eating lunch but only 21.3% said they always used soap while 47.3% never used it. Availability of soap all the time in the school was reported by only 18.4% students. The swabs of 61% children showed potential pathogens. The commonest of these was staphylococcus aureus which was seen in 44% samples. The study concluded that the students hands were contaminated before taking food. Although they washed hands before meals, they hardly used soap due non availability soap and recommended that the school authority should be asked to keep soaps in the toilets for hand washing.

### MATERIALS AND METHODS

The non-experimental research approach was adopted in the present study to assess the practice level of hand hygiene among school children. The research design selected for the study was descriptive research design. The target population was the school children of age group 9-12 yrs.' and purposive sampling technique was used to select the sample.

#### DEVELOPMENT OF TOOLS:

##### PART A:

This includes socio demographic data of the subjects. The demographic variables consisted of 5 items which included age of the children, gender, educational status, religion and type of family.

##### PART B:

This section consisted of observation checklist to assess the practice of hand washing. The 30 items were included in the check list, based on the hand hygiene practice.

Criterion Measure for level of knowledge:

Sl No.	Level of knowledge	score
1.	Good	21-30

2.	Average	11-20
3.	Low	0-10

Maximum score-30

Minimum score-0

**RESULTS AND INTERPRETATION:**

**PART A:**

**Table 1 : Description of school students by Age:**

Sl no.	Age of the school students under study	Frequency	Percentage (%)	Chi-square test (x <sup>2</sup> )
1.	9-10 years	12	12%	0.02 (significant)
2.	10-11 years	35	35%	
3.	11-12 years	53	53%	
	<b>Total</b>	<b>100</b>	<b>100%</b>	

Table 1: Depicts according to Gge, the majority of students belonged to age group 11-12 years and minority of students belonged to age group 9-10 years. The calculated value of chi test is more than table value, hence it is concluded that the association between the age group and practice of students regarding hand hygiene practice was significant.

**Table 2: Description of school students by gender**

SL No.	Gender	frequency	Percentage (%)	Chi -square test (x <sup>2</sup> )
1.	Male	45	45%	0 (significant) Df=1
2.	Female	55	55%	
	<b>Total</b>	<b>100</b>	<b>100%</b>	

Table 2 : Depicts accordingto Gender, females (55%) are in majority group and males (45%) are in minority group. The calculated value of chi test is more than table value, hence it is concluded that the association between the gender group and practice of students regarding hand hygiene practice was significant.

**Table 3 : Description of school students by educational status**

Sl No.	Educational status	Frequency	Percentage (%)	Chi-square test (x <sup>2</sup> )
1	4 <sup>th</sup> class	22	22%	16.2 Df=2 (non-significant)
2	5 <sup>th</sup> class	52	52%	
3	6 <sup>th</sup> class	26	26%	
	<b>Total</b>	<b>100</b>	<b>100%</b>	

Table 3 : Depicts according to educational status 5<sup>th</sup> class (52%) is in majority group whereas 4<sup>th</sup> class (22%) is in minority group. The calculated value of chi test is less than table value, hence it is concluded that the association between the educational status and practice of students regarding hand hygiene practice was not significant.

**Table-4 Description of school students by religion**

Sl No.	Religion	Frequency	Percentage (%)	Chi-square test
1	Hindu	68	68%	0 Df=3 (significant)
2	Muslim	10	10%	
3	Sikh	0	0	
4	Christian	22	22%	
	<b>Total</b>	<b>100</b>	<b>100%</b>	

Table 4: Depicts according to religion, Hindu(68%) are in majority group. The calculated value of chi test is more than table value, hence it is concluded the association between the religion

group and practice of students regarding hand hygiene practice was significant.

**Table:5 Description of school students by family type**

Sl No.	Family	Frequency	Percentage	Chi-square test(x <sup>2</sup> )
1	Nuclear	59	59%	0 Df=2 (Significant)
2	Joint	35	35%	
3	Extended	6	6%	
	<b>Total</b>	<b>100</b>	<b>100%</b>	

Table-5: Depicts according to type of family, Nuclear (59%) are in majority group and extended family (6%) are in majority group. The calculated value of chi test is more than table value, hence it is concluded that the association between the family group and practice of students regarding hand hygiene practice was significant.

Part- B

**Table-6: Distribution of school students under study according to hand hygiene practice.**

Sl No.	Scoring	Frequency	Percentage (%)	Level of practice
1	(0-10)	3	3%	LOW
2	(11-20)	34	34%	AVARAGE
3	(21-30)	63	63%	GOOD

**CONCLUSION**

The findings of the results revealed that in the study group students scoring between 21-30 had good hand hygiene practice which leads to 63% of the sample whereas student scoring 11-20 had average hand hygiene practice which leads to 34% and student scoring 0-10 had poor hand hygiene which had 3% scoring.

**REFERENCE**

1. Basvarnthapa fundamentals of nursing Calcutta; jaypee brothers: 2000 Pp 104-109.
2. Global hand washing day, October 15 The global public -private [internet]. Available from <http://www.globalhandwashing.org/ghw-day>
3. Guinan Severeid A study on prevalence of bacteria in the hands of children and their perception on hand washing in two schools of Bangalore and Kolkata. Indian J Public Health. 2011 Oct-Dec;55(4): 293-297.doi: 10.4103/0019-557X92408. Pubmed PMID:22298138.
4. Aiello AE, Coulborn RM, Perez V, Larson EL. Effect of hand washing on infectious disease risk in the community setting: a meta-analysis. AM J Public Health 2008;98:1372-1381.

**WEBSITE**

1. <http://www.nursingtimes.net/nursing-practice/>
2. <http://www.ncbi.nlm.nih.gov/pubmed/18381521>. 2008
3. <http://www.ncbi.nlm.nih.gov/pubmed/10124948>
4. [Http://www.ncbi.nlm.nih.gov/pubmed](http://www.ncbi.nlm.nih.gov/pubmed)
5. [http://www.providersedge.com/ehdocs/ehr\\_articles/To\\_Err\\_Is\\_Human\\_%20Building\\_a\\_Safer\\_Health\\_System-exec\\_summary.pdf](http://www.providersedge.com/ehdocs/ehr_articles/To_Err_Is_Human_%20Building_a_Safer_Health_System-exec_summary.pdf)
6. <http://www.ncbi.nlm.nih.gov/pubmed/20423443>.