

Original Research Article

A STUDY ON KNOWLEDGE, ATTITUDE AND PRACTICE OF HANDWASHING AMONG GOVERNMENT HIGH SCHOOL STUDENTS IN TELANGANA

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ABSTRACT

Background: Handwashing significantly reduces the major causes of mortality among young children i.e. acute respiratory and intestinal infections. Handwashing with soap may be more effective than any single vaccine or hygiene behaviour in view of its role in disease prevention. It has profound effect on public health. Better handwashing practice by school children decreases school absenteeism and can have community ripple effect. The objectives of the study were to determine the socio demographic profile of government high school students and to assess their knowledge, attitude and practice of handwashing and to assess the relationship between socio demographic factors and handwashing.

Materials and Methods: An institutional based cross sectional study was conducted among High school students of Government High School located in urban field practice area of Gandhi Medical College. All high school students willing to participate were included in the study. A total of 110 students participated. A pre designed semi structured questionnaire was used. The data was analyzed using MS excel and epi info 3.01.

Results: The mean age of the study population was 13.88±1.02 years. Majority of the subjects were females and had literate parents. Female gender was significantly associated with knowledge of disease transmission. Higher age groups and literate mother were significantly associated with positive attitude of the student.

Conclusion: Majority of the students had adequate knowledge and positive attitude but lacked adequate practice. Handwashing before eating and following handwashing steps were significantly associated with reduced past history of respiratory and or diarrhoeal diseases.

Keywords: Knowledge, Attitude, Practice, Handwashing, High School Students.

INTRODUCTION

Handwashing (HW) is as an act of cleaning hands with water and/or soap to remove dirt, organic material and microorganisms.^[1] The habit of handwashing with soap may be more effective than any single vaccine or hygiene behaviour in view of its role in prevention of disease transmission.^[2]

A substantial amount of morbidity and mortality in developing countries is linked to acute respiratory and intestinal infections among young children.^[3] Handwashing significantly reduces these leading

causes of mortality. It is simple, inexpensive and one of the most effective means for disease prevention, thereby have profound effect on public health.^{2, 4]} However in developing countries, still fundamental personal hygiene practices such as handwashing remains low.^[5] School going children have significant role in communicable diseases transmission. With schools acknowledged as important place for health promotion, effective school-level health education fosters lifelong hygienic habits in adulthood.^[6] Better handwashing practice by school children decreases school

absenteeism and can have community ripple effect.^[7] Hence the present study was undertaken to assess knowledge, attitude and practice of handwashing among school children.

Objectives:

1. To determine the Socio demographic profile of government high school students.
2. To assess Knowledge, Attitude and Practice of handwashing among the study subjects.
3. To assess the relationship between Socio demographic profile and Knowledge, Attitude and Practice of hand washing among the study subjects.

MATERIALS AND METHODS

An institutional based cross sectional study was conducted from August - September 2019 in a Government High School located in urban field practice area of Gandhi Medical College. All high school students willing to participate were included in the study. A total of 110 students participated.

A pre tested pre designed semi structured questionnaire was used. Information was collected regarding socio-demographic characteristics, knowledge, attitude and practices regarding handwashing. Informed consent was obtained from the parents alongside the children's assent. Administrative permission was granted by the school principal. The data was compiled, tabulated & analyzed using MS excel and epi info 3.01 software. Descriptive statistics included frequency, percentage distribution, mean and standard deviation. Inferential statistics included Chi-square test. $p < 0.05$ was considered to be statistically significant.

RESULTS

Socio - demographic Characteristics: In the present study, mean age of the study population was 13.88 ± 1.02 years. Majority of the subjects were in the age group of 14-15 years (63%), females (61%), had educated parents (67% and 57%). Only 10% student's father were unemployed and about half of their mothers were employed (40.9%). [Table 1]

Table 1: Distribution of study population according to Socio demographic Characteristics

Socio - demographic data	Frequency (n=110)	Percentage
Age		
12-13 years	41	37
14-15 years	69	63
Gender		
Male	43	39
Female	67	61
Father's Education		
Illiterate	36	33
Literate	74	67
Mother's Education		
Illiterate	47	43
Literate	63	57
Father's Occupation		
Unemployed	11	10
Employed	99	90
Mother's Occupation		
Homemakers	65	59.1
Employed	45	40.9

Knowledge of Hand washing: Majority of the study subjects had adequate knowledge about handwashing. Handwashing steps and role of handwashing in disease transmission were known to 62.7% and 73% students respectively. Essence of handwashing with soap before eating and after defecation was known to 60% and 87.3% of the students respectively. [Figure 1]

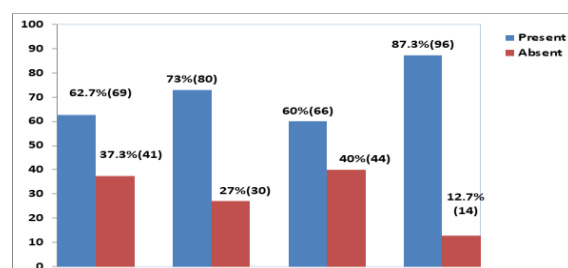


Figure 1: Distribution of study population according to Knowledge of Hand Washing

Awareness of Global Handwashing Day: No student knew about Global Handwashing day. [Figure 2]

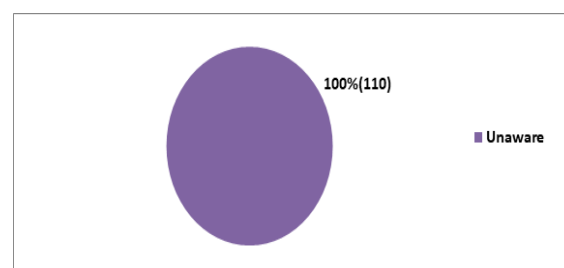


Figure 2: Distribution of study population according to awareness of Global Handwashing Day

Source of knowledge of handwashing: The source of knowledge of handwashing for the majority of the students was teachers (55%) followed by parents (25%) and others (20%). [Figure 3]

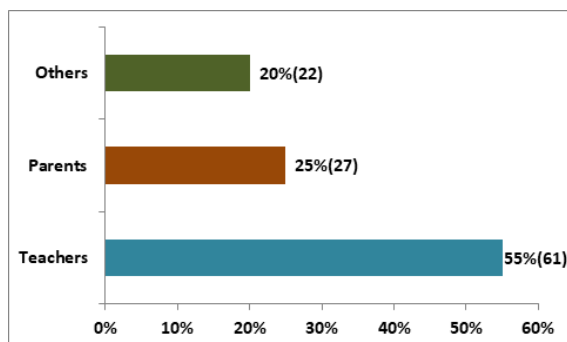


Figure 3: Source of knowledge regarding handwashing

Attitude towards handwashing: Majority of the students had positive attitude towards handwashing behavior. All the students practiced handwashing on being reminded and majority (57.3%) encouraged others for handwashing. [Figure 4]

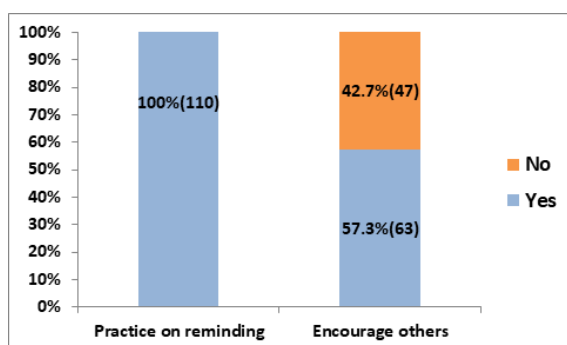


Figure 4: Attitude towards handwashing

Practice of Handwashing: Majority of the study subjects lacked adequate practice regarding handwashing. Of the total students, 43% reported that they followed correct handwashing steps, 21.9%

washed their hands with soap before eating. Majority (87.3%) reportedly washes hand with soap after defecation, while only 11% followed adequate duration of handwashing. [Figure 5]

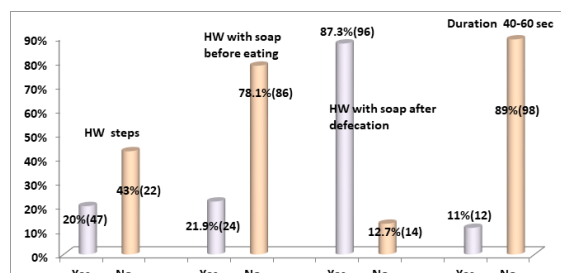


Figure 5: Practice of Hand Washing

Disease episodes: Majority (76%) of the students had either gastrointestinal and/or respiratory infections in the last 3 months. [Figure 6]

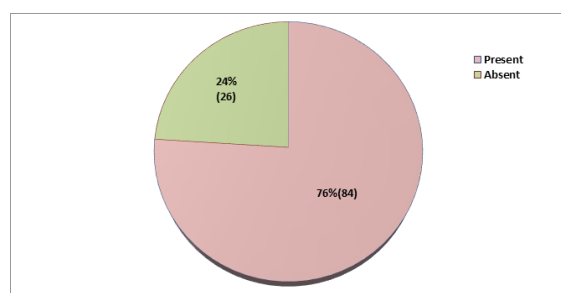


Figure 6: Past history of Disease episodes

Relationship between Socio demographic data with knowledge of handwashing steps: There was no significant statistical relationship between socio-demographic factors and knowledge of handwashing steps. [Table 2]

Table 2: Relationship between Socio demographic data with knowledge of handwashing steps

Socio demographic factor	Variable	Knowledge Present	Knowledge Absent	Chi square and p value
Age(years)	12-13	29(70.7%)	12(29.3%)	1.79 and 0.09 Not Significant
	14-15	40(58%)	29(42%)	
Gender	Male	28(65.1%)	15(34.9%)	0.17 and 0.67 Not Significant
	Female	41(61.1%)	26(38.9%)	
Father's literacy status	Illiterate	23(63.9%)	13(36.1%)	0.03 and 0.86 Not Significant
	Literate	46(62.1%)	28(37.9%)	
Mother's literacy status	Illiterate	36(76.6%)	11(23.4%)	6.75 and 0.009 Not Significant
	Literate	33(52.4%)	30(47.6%)	

Relationship between Socio demographic data with knowledge of disease transmission: Majority (83.6%) of the female students were aware that lack

of proper handwashing was implicated in spread of diseases. This association was statistically significant. [Table 3]

Table 3: Relationship between Socio demographic data with knowledge of disease transmission

Socio demographic factor	Variable	Knowledge Present	Knowledge Absent	Chi square and p value
Age(years)	12-13	29(70.7%)	12(29.3%)	0.13 and 0.35 Not Significant
	14-15	51(74%)	18(26%)	
Gender	Male	24(55.8%)	19(44.2%)	10.18 and 0.001 Significant
	Female	56(83.6%)	11(16.4%)	
Father's literacy status	Illiterate	23(63.9%)	13(36.1%)	2.1 and 0.07 Not Significant
	Literate	57(77%)	17(23%)	
Mother's literacy status	Illiterate	36(76.6%)	11(23.4%)	0.61 and 0.21 Not Significant
	Literate	44(69.8%)	19(30.2%)	

Relationship between Socio demographic data with Attitude towards handwashing

Higher age groups and student with literate mother was associated with favorable attitude towards

handwashing and this association was found to be statistically significant. [Table 4]

Table 4: Relationship between Socio demographic data with Attitude towards handwashing behavior

Socio demographic factor	Variable	Encourage others - Yes	Encourage others - No	Chi square and p value
Age(years)	12-13	15(36.6%)	26(63.4%)	11.43 and <0.001 Significant
	14-15	48(69.6%)	21(30.4%)	
Father's literacy status	Illiterate	20(55.6%)	16(44.4%)	0.06 and 0.79 Not Significant
	Literate	43(58.1%)	31(41.9%)	
Mother's literacy status	Illiterate	16(34%)	31(66%)	18.1 and <0.001 Significant
	Literate	47(74.7%)	16(25.3%)	

Relationship between Socio demographic data with Practice of handwashing with soap after defecation

There was no significant statistical relationship between socio-demographic factors and with practice of handwashing with soap after defecation. [Table 5]

Table 5: Relationship between Socio demographic data with Practice of hand washing with soap after defecation

Socio demographic factor	Variable	Practice Present	Practice Absent	Chi square and p value
Age(years)	12-13	36(87.9)	5(12.1%)	0.01 and 0.44 Not Significant
	14-15	60(87%)	9(13%)	
Gender	Male	37(86.1%)	6(13.9%)	0.09 and 0.37 Not Significant
	Female	59(88.1%)	8(11.9%)	
Father's literacy status	Illiterate	32(88.9%)	04(11.1%)	0.12 and 0.72 Not Significant
	Literate	64(86.4%)	10(13.6%)	
Mother's literacy status	Illiterate	42(89.3%)	5(10.7%)	0.32 and 0.57 Not Significant
	Literate	54(85.7%)	9(14.3%)	

Relationship between Practice of handwashing and Disease episodes

Handwashing before eating and following handwashing steps was significantly associated with reduced disease episodes in students. [Table 6]

Table 6: Relationship between Practice of hand washing and Disease episodes

Factor	Variable	Past History Present	Past History Absent	Chi square and p value
Hand washing before eating	Yes	03(12.5%)	21(87.5%)	66.37 and <0.001 Significant
	No	81(94%)	5(6%)	
Hand washing steps	Yes	26(55.3%)	21(44.7%)	20.14 and <0.001 Significant
	No	58(92%)	5(8%)	

DISCUSSION

In the present study, it was observed that the mean age of the study population was 13.88±1.02 years and majority were in the age group of 14-15 years (63%) and females (61%), whereas in a study by Ilesanmi et al, majority belonged to the age group of 12 and 14 years (50%) and were males (50.7%)^[8]

About 33% and 43% of the student's fathers and mothers were illiterate. This was found to be different from the study conducted by Ghose et al, where only 9.7% and 19.4% of the fathers and mothers were illiterate.^[9]

Among the study subjects majority had knowledge to wash hands before eating (60%) and after defecation (87.3%). Similar findings were reported by Almansour et al,^[10] where 88.4% students were aware of handwashing before eating. Contrast findings were reported by Shrestha et al,^[11] where only 22.2% and 37.3% students knew about it.

In the present study, about three - fourth of the students were aware of the importance of handwashing in relation to disease transmission. Similarly, a study by Jerry et al,^[12] found this knowledge high among study subjects. Contrast

findings were reported by Ray et al,^[13] in which only 40% were aware.

Among the study population, the source of knowledge for the majority were teachers (55%) followed by parents (25%). It was concurrent to findings of Tamilarasi et al,^[14] (95% and 54.2% respectively).

In our study, while only 21.9% practiced handwashing with soap before eating, majority (87.3%) practiced handwashing with soap after defecation. Sihra et al,^[15] reported these practices as 84.5% and 90.2% respectively, whereas Ali et al.,^[16] found only 4.24% of the subjects used soap for handwashing after defecation.

Among the study subjects it was found that proper handwashing practices was significantly associated with reduced disease episodes in students. This demonstrates the effect of handwashing on health. Concurrent findings were reported by Lopez et al.^[5]

CONCLUSION

- About two-third of the subjects were aged 14-15 years, females.

- Majority of the subject's parents were literate and fathers were employed. Less than half of the mothers were employed.
- Majority of the students had adequate knowledge and positive attitude but lacked adequate practice.
- Female gender was significantly associated with knowledge of disease transmission. Higher age groups and literate mother were significantly associated with positive attitude of the student. Handwashing before eating and following handwashing steps were significantly associated with reduced past history of respiratory and or diarrhoeal diseases.

Recommendations:

- Effective Implementation of Swachh vidyala guidelines.
- Encourage students to take up hand hygiene activities in local communities.
- Engage children in interactive activities related to hand hygiene.
- Establish "hygiene monitors" among students to enable peer support.
- Posters, charts depicting correct hand washing steps and other visual triggers should be displayed near wash basin and eating area in schools.
- Incorporate mandatory, supervised group handwashing sessions into the daily school schedule.

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