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Research Article

Hand washing knowledge among primary school children in Belagavi Karnataka, India; Community-based Descriptive study.

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ABSTRACT

Background: Hand wash has been widely accepted worldwide as a cost-effective intervention to prevent the transmission of communicable diseases. However, despite proven efficacy, the practice of hand washing has been found to be poor in developed countries. Since children are vulnerable to communicable diseases, a million lives could be saved annually by simple hand-washing practices in the community. The study was conducted to evaluate the awareness of hand washing and related factors among primary school children in Devagiri, Belagavi.
Method: A Descriptive survey was carried out among 60 children. Data were collected using questionnaires regarding socio-demographic characteristics and knowledge of hand washing.
Result: 60 students participated in the study that comprised 58.33% girls and 41.33% boys. About 40(66.66%) of the children had inadequate knowledge regarding hand washing whereas around 15(25%) of children had moderate knowledge and minimal 05(8.33%) of children had adequate knowledge.
Conclusion: Effective hand-washing education in schools is required to enhance hand-washing skills and hand-washing facilities in schools have been found to be insufficient. For this purpose, hand-washing facilities and latrines, which include sufficient quantities of soap and water, are essential for the promotion of hygiene.

Key words: Hand Washing, Knowledge, Primary School

INTRODUCTION

"Our hands do so much for us. They are capable of a wide variety of functions like touching, grasping, feeling, holding, manipulating, caressing, and performing daily activities and more. They are a vitally important part of who we are and how we see ourselves"**.**
Good hand hygiene is one of the most important prevention methods in the management of outbreaks. Hand hygiene is defined as any method that removes or destroys microorganisms on hands. It is well known that successful hand washing is the most critical step to avoid the spread of pathogens.
Generally children are receptive to learn new behaviors, when it is taught by their teachers, parents or elders. When the practice of hand washing is inculcated in their mind they adhere it strictly and develops it as their own behavior. Children need to understand why it is important to wash their hands. To do this they need help from their parents, caregivers, and teachers or from a member of staff at their schools. Children love to play with mud and sand, which host a lot of germs which can cause illness. Teaching them the significance of proper hand washing is a very crucial step towards living a healthy life. 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 communicable infections such as colds and flu can be prevented by following good hand hygiene. Teaching proper techniques of hand washing to children will not only help to influence their hand washing practices at home but also at school.
Many illnesses starts with poor hand washing. Salmonella, campylobacter, MRSA, flu, diarrhea and sickness, the common cold, impetigo these are just some of the viruses and infections. Commonly prevailing among

school children, because of poor hand hygiene. Hand washing is a scientifically proved effective method to protect the school children from the infectious diseases, because frequent hand washing keeps germs away.

MATERIALS AND METHODS

A Descriptive research design was adopted for the study. This study was carried out in Government primary school, Devagiri village, Belagavi, Karnataka on 28 January 2024. 60 Government primary school children studying in the 5th-7th standard were chosen as a sample of the analysis using a convenient sampling technique.

SAMPLING CRITERIA

Inclusion criteria

- School going children from 5^{th} to 7^{th} Grade
- Willing to participate in the study.

Exclusion criteria

- Those who are Sick
- Those who are absent at the time of data collection.

Method of Data Analysis

The data obtained was analyzed by descriptive and inferential statistics by considering the objectives of the study. Experts in the field nursing and statistics were consulted for the plan of the data analysis.
The investigator planned to analyze the data in the following manner.

1.Organization of data on a master sheet.

2. Tabulation of data in terms of

- Frequency and percentage distribution are used to analyses demographic and health related variable data of school children.
- Mean, median, mode and standard deviation are used to assess the level of knowledge of school children.

3. Classify the knowledge scores as follows:

Inadequate knowledge	≤ 50 % Score
Moderate knowledge	51-75 % Score
Adequate knowledge	> 75 % Score

Ethical

The ethical approval was obtained from the ethical committee of KAHER Institute of nursing sciences Belagavi.

Results

Table: 1 Socio-demographic characteristics of participants

Characteristics	Category	Respondents	
		Number	Percent (%)
Age group (years)	10-11 Years	09	15
	11-12 Years	51	85
Gender	Boys	25	41.66
	Girls	35	58.33
Domicile	Urban	00	00
	Rural	60	100
Education status of Father	Primary	24	40
	Higher secondary	19	31.66
	Graduate	06	10
	Others	11	18.33
Education status of Mother	Primary	29	48.33
	Higher secondary	18	30
	Graduate	00	00
	Others	13	21.66
Occupational status of father	Labor	26	43.33
	Agriculture	16	26.66
	Government employee	07	11.66
	Business and others	11	18.33
Occupational status of mother	Home maker	28	46.66
	Agriculture	18	30
	Government employee	03	05
	Business and others	11	18.33
Family Income per month	Below Rs.5000/	44	73.33
	Rs.5001 to 10000/	06	10
	Rs.10001 to 15000/	06	10
	Rs.15001/- and above	04	6.66

Types of family	Nuclear	32	53.33
	Joint	28	46.66
	Extended	00	00
Number of siblings	One	10	16.66
	Two	24	40
	Three	17	28.33
	Four and above	09	15
Sources of water supply	Public well water	14	23.33
	Municipality water	14	23.33
	Bore well water	28	46.66
	Others	04	6.66
Nature of drainage system	Open	27	45
	Closed	33	55
Toilet practice	Open field defecation	09	15
	Closed field defecation	51	85
Pet animal	Dog	20	33.33
	Cat	25	41.66
	Birds	07	11.66
	None	08	13.33
Previous source of knowledge	Teacher	52	86.66
	Mass media	08	13.33
	Health personnel	00	00
	None	00	00
Total		**60**	**100.0**

Table: 1 Reveals the maximum number of subjects 51(85%) belongs to the age group of 11-12 years, among 35(58.33%) were girls, and 60(100%). Were from rural area, educational status of the Father, 24(40%) primary education, educational status of the Mother, 29(48.33%) primary education, occupation of the Father 26(43.33%) were labors, occupation of the Mother 28(46.66%) were Homemakers, 44(73.33%) a family income of <5000rs, 32(53.33%) belongs to the Nuclear family, 24(40%) were had two siblings, 28(46.66%) families had water supply from bore wells, 33(55%) of the families had closed drainage system, 51(85%) had closed field defecation practice, 25(41.66%) subjects had cat as pet, 52(86.66%) got information from the teachers.

Table: 2 knowledge scores of school children regarding hand washing.

N= 60

Knowledge Level	Category	Respondent	
		Numbers	Percentage
Inadequate	<50% score	40	66.66%
Moderate	51-75% score	15	25%
Adequate	>75% score	5	8.33%
Total		60	100%

Table: 2 Reveals that the analysis of the data shows that 40(66.66%) of the children had inadequate knowledge regarding hand washing whereas around 15(25%) of children had moderate knowledge and minimal 05(8.33%) of children had adequate knowledge.

Figure: 1 Reveals knowledge regarding hand hygiene with the difference means of mean score (6.78), mean percentage (45.2%), median (5), standard deviation was (3.07) and coefficient variance (45.28). There are almost 40(66.66%) of the children had inadequate knowledge regarding hand washing whereas around 15(25%) of children had moderate knowledge and minimal 5(8.33%) of children had adequate knowledge.

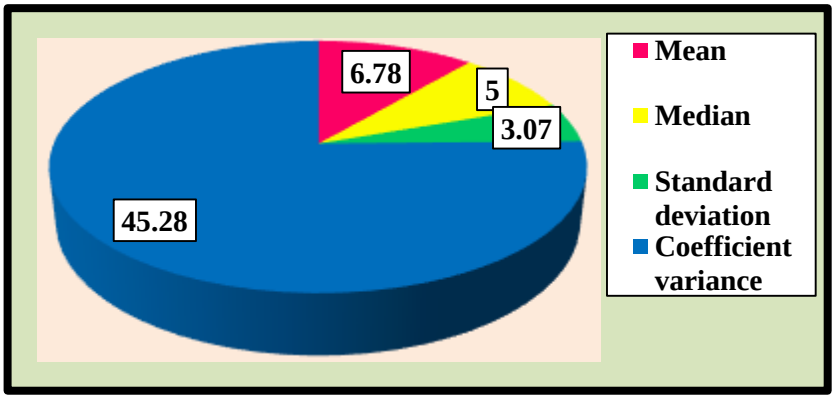

Figure: 1. Mean Median and Standard deviation of the knowledge of school children regarding hand washing

Association between the knowledge scores of hand washing and selected socio-demographic variables.

Chi-Square of knowledge level of students in order to age is (X^2= 0.23, df=1), gender(X^2=0.3, df=1), domicile (X^2=1.00, df=1), education of father (X^2=0.86, df=3) education of mother (X^2=0.84, df=2),occupation of father(X^2=0.37,df=3), occupation of mother(X^2=0.26,df=3), family income (X^2=0.2, df=3), type of family (X^2=0.78, df=1), number of siblings (X^2=0.02, df=3), source of water supply (X^2=0.07, df=3), type of drainage (X^2=0.11, df=1), toilet practice (X^2=0.32, df=1), pet animal (X^2=0.39, df=3) and previous source of knowledge (X^2=0.51, df=1). Previous source of knowledge were less than the tabulated chi square value so it reveals that there is no significant association between socio demographic variables and knowledge of school children regarding hand washing.

Discussion

Hand washing knowledge among primary school children in present study was 40(66.66%) of the children had inadequate knowledge regarding hand washing whereas around 15(25%) of children had moderate knowledge and minimal 05(8.33%) of children had adequate knowledge. The cross sectional study was done to assess the knowledge and practice of hand washing among the school going adolescents in Chennai city, from September 2014 to December 2014 included 450 adolescents of 10 to 19 years age using Semi-structured questionnaire. Multistage sampling method was used. Descriptive and inferential statistics were used for data analysis. The results are out of the 450 students 54.7% were males and 45.3% were females. Adequate knowledge and practice of hand washing was described as hand washing with soap and water during two critical times (before eating, after using toilet). 85.6% of had adequate knowledge but only 24.9% were practicing adequate hand washing. 95% participants knew that adequate hand washing is must before eating but only 32% were practicing the same. 90% of the students knew that adequate and washing after using toilet was essential but only 69% were practicing the same. This study found sub optimal hand washing knowledge and poor hand washing practice among students. So this study concludes that the students have significant level of hand washing knowledge but effective measures and long term motivating activities should be taken to improve their hand washing behavior.

Conclusion

Our study reported that knowledge on hand washing was found to be ineffective while practices did not meet with the recommended standard. The study revealed that both behavioral changes in education and infrastructural improvements are equally important for the long-term development of hand washing practices.

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