ORIGINAL RESEARCH PAPER

Healthcare

A PRE-EXPERIMENTAL STUDY TO ASSESS THE IMPACT OF A STRUCTURED TEACHING PROGRAM ON HAND HYGIENE KNOWLEDGE AMONG SCHOOL CHILDREN IN BARWALA, PANCHKULA (HARYANA)"

KEY WORDS:

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ABSTRACT

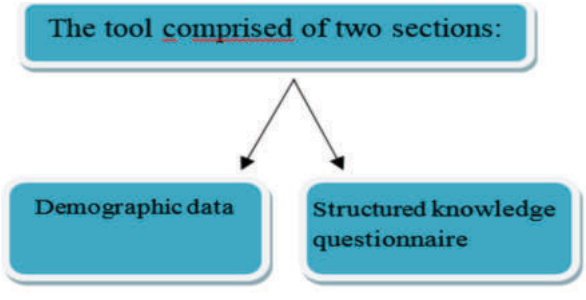
Background and Aim: According to a UNICEF report, involving children as active participants in promoting hand washing with soap in school fosters a sense of ownership and potential long-term adoption of hygienic practices into adulthood. School children have been consistently implicated in the transmission of communicable diseases, making schools crucial settings for health promotion. The study's main objective is to assess the knowledge of hand hygiene among school children. **Methods:** The study used a pre-experimental approach to evaluate the effectiveness of a structured teaching program on hand hygiene knowledge. The research included 60 children aged 6 to 12 years from selected primary schools in Barwala, Distt. Panchkula. **Results:** Implementation of the health educational package led to a significant improvement in hand hygiene knowledge among school children. Over 90 percent of the participants scored within the 'good' category, indicating a positive impact of the intervention. **Discussion and Conclusion:** The findings support the effectiveness of the structured teaching program in enhancing hand hygiene awareness among school children. Involving children actively in health promotion efforts empowers them and instills responsible habits that may persist into adulthood. Schools play a vital role in promoting hygiene practices to reduce the spread of communicable diseases among children. The study highlights the importance of engaging children in promoting hand hygiene to create a sense of ownership and encourage lifelong health habits.

INTRODUCTION

Hand hygiene is of paramount importance in preventing the transmission of infections and maintaining overall good health. It is widely recognized as one of the most effective measures to prevent the spread of infections, encompassing both respiratory and gastrointestinal illnesses (WHO, 2009). The World Health Organization (WHO) emphasizes that proper hand hygiene can lead to a reduction of up to 50 percent in healthcare-associated infections (HAIs).Moreover, regular hand hygiene practices can aid in preventing the transmission of viruses like the common cold, influenza, and COVID-19 (CDC, 2020). With the ongoing COVID-19 pandemic, global awareness regarding hand hygiene has significantly increased. Despite the growing awareness, poor compliance with hand hygiene protocols remains a concern among healthcare workers, ranging from 9 percent in low-income countries to not more than 70 percent in high-income countries. The correct hand washing technique is crucial for effective hand hygiene. The CDC reports that healthcare workers often wash their hands less than half the recommended time (Boyce & Pittet, 2002).The impact of hand hygiene on infection prevention is evident in hospital settings, where HAIs affect a considerable percentage of admitted patients. The WHO reports that 7 percent of patients admitted to hospitals in developed countries develop HAIs, while this burden rises to 10 percent in developing countries (WHO, 2020). Implementing proper hand hygiene can significantly reduce the transmission of infections and save lives. Healthcare workers are guided by the "five moments of hand hygiene," a standard guide developed to reduce the growth of microorganisms and decrease the incidence of hospital-acquired infections (Pittet et al., 2001). A systematic review published in the American Journal of Infection Control affirms that hand hygiene interventions significantly reduce the risk of respiratory infections and gastrointestinal illnesses (Squires et al., 2016). Hand washing with soap and water is considered the preferred method for hand hygiene, as it physically removes dirt, microbes, and most types of germs from the hands. In cases where soap and water are unavailable, hand sanitizers with at least 60 percent alcohol content are recommended and are effective against various types of germs, including viruses. In conclusion, prioritizing hand hygiene is crucial in mitigating the spread of infections and safeguarding public health. The adherence to proper hand hygiene practices is essential for both healthcare workers and the general population, especially during outbreaks and pandemics.

METHODOLOGY

Research approach is the most significant part of any research. Experimental approach was considered as the best to assess knowledge regarding hand hygiene in school going children. Research includes children who were studying at selected primary schools of Barwala, Distt. Panchkula. Sample size was 60 of (6-12) years. A health educational package was prepared to assess the knowledge regarding hand hygiene among school age children (6-12) years. It was felt that face to face contact would encourage the subject to give prompt information and will help in collecting data from school going children.



1. A Demographic Data Profile Sheet was utilized to assess various demographic variables, including age, education, gender, type of family, monthly family income, number of school-going children in the family, dietary patterns, availability of latrine facilities, presence of pet animals, and sources of information on hand hygiene.

2. To evaluate the knowledge of hand hygiene among school-going children, a Structured Knowledge Questionnaire comprising 20 multiple-choice questions was employed. Each correct response was awarded a score of one, while incorrect answers received a score of zero. The total achievable score was 20, and the knowledge levels were categorized as follows: 0-10 indicated poor knowledge, and 11-20 indicated good knowledge.

Analysis And Interpreetation Of Data

This chapter deals with the data analysis and interpretation of the study. The data collected was analyzed on the basis of objectives. The analysis of data was organized and presented under the following sections:

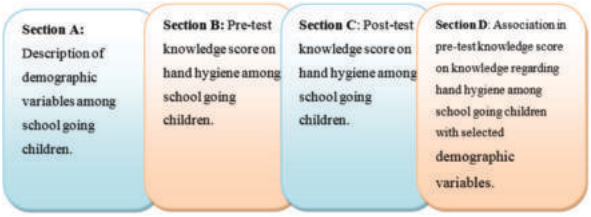


Table-1 Frequency and Percentage Distribution of DemographicVariables

Sr. No.	Demographic Variables	Frequency	Percentage
1.	Age in Years 6-10 Years 10-12 Years	40 20	66.6 33.3
2.	Standard 3rd Standard 4th Standard 5th Standard	22 19 19	36.6 31.6 31.6
3.	Religion Hindu Sikh Christian Muslim	53 05 01 01	88.3 8.3 1.6 1.6
4.	Type of Family Joint Nuclear Extended	31 25 03	51.6 41.6 5
5.	Occupation of Father Private Govt. Job Self Employed Business	34 05 15 06	56.6 8.3 25 10
6.	Occupation of Mother Housewife Govt. Job Business Private Job	44 09 02 05	73.3 15 3.3 8.3
7.	Type of Water Supply Well Water Tap Water Tank Water Filter Water	0 52 05 03	0 86.6 8.3 5
8.	Place of Defecation Sanitary Latrines Other Sources	47 13	78.3 21.6

Table 1 presents the demographic profile of the school-going children. The majority (66.6 percent) of the children belonged to the age group of 6-10 years, while 33.3 percent were in the age group of 10-12 years. Regarding their school grade, 36.6 percent were in 3rd standard, 31.6 percent in 4th standard, and 31.6 percent in 5th standard. In terms of religious affiliation, 88.3 percent of the school children were Hindus, 8.3 percent were Sikhs, 1.6 percent were Muslims, and 1.6 percent were Christians. Regarding family structure, 51.6 percent of the children belonged to joint families, 41.6 percent were from nuclear families, and 5 percent were from extended families. The fathers' occupation of 56.6 percent of the children was in private jobs, and 73.3 percent of the mothers were housewives. Concerning the household facilities, 86.6 percent of the families used tap water, and 78.3 percent had access to sanitary latrines

Section-B

Table-2 Pre-test Knowledge Score on Hand Hygiene among School Going Children

Knowledge Level	Ranging Score	School Going Children	
		f	Percentage (%)
Good	<50% Score	23	38.3
Poor	>50% Score	37	61.6

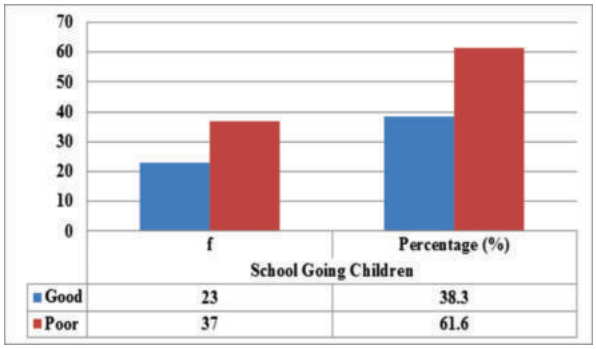


Figure-1 Pre-test Knowledge Score on Hand Hygiene among School Going Children

Table 2 and Figure 1 show that during pre-test, 23 children had good knowledge (38.3 percent) whereas 37 (61.6 percent) children had poor knowledge about hand hygiene.

Section- C

Table-3 Post-test Knowledge Score on Hand Hygiene among School Going Children

Knowledge Level	Ranging Score	School Going Children	
		(f)	Percentage %
Good	<50%	56	93.3
Poor	>50%	4	6.66

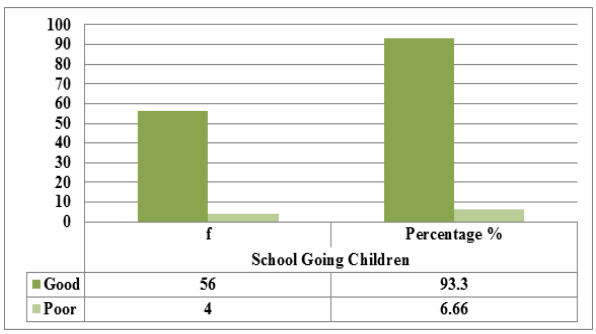


Figure-2 Post-test Knowledge Score on Hand Hygiene among School Going Children

Table-3 and Figure-2 show that 56 (93.3 percentage) children had knowledge and 4 (6.66 percentages) children had poor knowledge on post test on hand hygiene.

Section-D

Association in Pre-test Knowledge Score on Hand Hygiene among School Going Children with Selected DemographicVariable

Sample Characteristics	Good<12	Poor>12	Chi-square (x2)	df	P -value
Age (in years) 6-10 10-12	40 20	37 02	3.04	1	3.84

Standard 3rd 4th 5th	22 19 19	1 1 1	0.01	2	5.99
Family Nuclear Joints Extended	25 31 03	1 0 1	8.86	2	5.99
Father Occupation Private Business Govt. Job Self Employed	34 06 05 15	1 0 1 0	2.25	3	7.82
Mother Occupation Housewife Govt. Job Private Business	44 05 06 05	1 0 0 1	3.04	3	7.82

CONCLUSION AND DISCUSSION

An experimental approach was selected to assess the knowledge of hand hygiene among school-going children in selected primary schools of Barwala, Distt. Panchkula. The sample size consisted of 60 children aged between 6 to 12 years. The study revealed that the majority of the school-going children (66.6 percent) were in the age group of 6-10 years, while 33.3 percent were in the age group of 10-12 years. Additionally, 36.6 percent of the children were studying in 3rd standard, 31.6 percent in 4th standard, and 31.6 percent in 5th standard. Regarding religious affiliation, 88.3 percent of the school children were Hindus, 8.3 percent were from the Sikh community, 1.6 percent were Muslims, and 1.6 percent were Christians. Family structure analysis showed that 51.6 percent of the children belonged to joint families, 41.6 percent were from nuclear families, and 5 percent were from extended families. Furthermore, 56.6 percent of the children's fathers were employed in private jobs, and 73.3 percent of the mothers were housewives. In terms of household facilities, 86.6 percent of the children's families used tap water, and 78.3 percent had access to sanitary latrines.The implementation of a health educational package proved effective in increasing the knowledge of hand hygiene among school-going children. After the intervention, more than 90 percent of the children scored within the good category. The statistical analysis with the p-value indicated a significant improvement between the pre and post-test knowledge on hand hygiene among the school-going children.

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