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## **A study to evaluate the effectiveness of structured teaching program in terms of knowledge regarding hand washing techniques among school going children in selected school of Barara, Ambala**

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### **Abstract**

The current study aimed to evaluate the effectiveness of structured teaching program in terms of knowledge regarding hand washing techniques among school going children in selected school of Barara, Ambala. To assess and compare knowledge regarding hand washing techniques among school going children before and after structured teaching programme. To determine the association of level of knowledge with selected sample characteristics. A quantitative research approach using one group pre-test-post-test design studying in Government Girl High School of Barara, Ambala. Sample Characteristics, structured knowledge questionnaire were used to collect the data. The study observed that the mean posttest knowledge score (11.27) was significantly higher than the mean pretest score (7.9) where the 't' value (0.72 ) was 9.32 at p-value was 0.05. The study conclude that structured teaching programme was found effective in increasing knowledge of school going children regarding hand washing techniques.

**Keywords:** Effectiveness, structured teaching programme, Knowledge, hand washing techniques, school going children

### **1. Introduction**

According to WHO hand washing is a general term referring to any action of hand cleansing i.e. it is the act of cleaning one's hands with use of soap and water or another liquid for the purpose of removing soil, dirt, and microorganism [1].

Globally, respiratory infections and diarrheal disease are the two leading cause of disease burden and causing half of all child death each year. The burden of communicable disease remains predominately acute in developing regions of the world and children remains particularly vulnerable [2]. Fecal oral disease transmission among school children is mainly due to unhygienic hand [3]. Recent estimate in Colombia indicate that the acute respiratory and intestinal infections are the main cause of mortality among children aged 1 to 4 years, the second leading cause of death among girls of aged 5 to 14 years and the third leading cause infant mortality [4]. Recent studies have shown 42.50% reduction in the incidence of diarrhea and 30% reduction in respiratory infection possibly through hand washing [5]. The WHO and the Centers for disease control and prevention publication emphasized that hand washing has key role among the infection control method, which should be considered to reduced the spread of pathogen.<sup>8</sup> It has been reported that performing trainings devoted to provide and develop hand hygiene on a continuous and regular basis will be beneficial to protect school health and to reduced absenteeism during epidemic periods [6]. Hand hygiene is a milestone of infectious disease control, and promotion of improved hand hygiene has been recognized as an important public health measure

### **2. Methodology**

A quantitative approach with Quasi - experimental "one group pre-test post-test design" was adapted. The study was conducted in Government Girl High school of Barara, Ambala.

Convenience sampling technique was used to select the School Going Children studying in 4<sup>th</sup>, 5<sup>th</sup>& 6<sup>th</sup> for the present study. The data were collected using Sample characteristics, structured knowledge questionnaire on knowledge regarding hand washing techniques. Data collection was carried out during month of February 2017 after taking formal permission from Principal of Govt. Girl High school Barara, Ambala. It was found that it took approximately 15-30 minutes to complete the Structured Teaching program. Sample characteristics consisting of 11 items like age, class, gender, religion, education of father, occupation of father, education of mother, occupation of mother, type of family, do you have previous about hand hygiene. How frequent you wash your hand per day. Structured knowledge questionnaire comprise of 15 items regarding hand washing techniques. Validity of the tools was established by the suggestion of 7 experts. Tool was found to be reliable by using Kadar Richardson-formula ( $r=0.69$ ). Consent was taken from the school going children

**3. Results**

**Table 1:** Frequency and Percentage Distribution of School Going Children in Term of Level of Knowledge Regarding Hand Washing Techniques N=74

Level of Knowledge	Range	Pre-test f (%)	Post-test f (%)
Very good	11-15	12 (16)	47 (63)
Good	6-10	48 (65)	25 (34)
Fair	1-5	14 (19)	2(3)

Maximum Score =15  
Minimum Score = 0

Data presented in the table 1 shows that in pre-test, most of the students (65%) had good knowledge followed by (19%) fair and (16%) had very good knowledge regarding hand washing techniques. Whereas in post-test majority of the students (63%) had very good followed by (34%) good, (3%) fair knowledge regarding hand washing techniques

**Table 2:** Mean, Mean Difference, Standard Deviation of Difference and “t-value” of Pre-test and Pre-test and Post-test Knowledge Score of School Going Children Regarding Hand Washing Techniques N=74

Knowledge score	Mean	Mean D	SD D	t-value
Pre-test	7.9	3.36	3.13	9.23
Post-test	11.27			

$t(73)= 0.723$   $p < 0.05$

The calculated t value of (9.23) was found to be statistically significant at 0.05 which showed that the mean difference of knowledge score between the pre-test and post-test was true difference and not by chance. Hence, null hypothesis  $H_0$  was rejected and research hypothesis  $H_1$  was accepted. Therefore, it can be inferred that structured teaching programme was effective in enhancing knowledge of school going children regarding hand washing technique Chi square was used to show the association of mean knowledge score regarding hand washing techniques with sample characteristics, there was no significant association between them. Thus, research hypothesis  $h_4$  was rejected and null hypothesis was accepted

**4. Discussion**

The result of the present study reveals that in post-test majority of the students (63%) had very good followed by

(4%) fair knowledge score, and (3%) had good knowledge regarding hand washing techniques, similar findings were reported by Rubanprem Kumar S.A. *et al.* (2012) who conducted a study to identify the effectiveness of hand hygiene teaching on knowledge and compliance of hand washing among student at selected school that the post-test, (65%) of the student has adequate knowledge and (35%) has moderately adequate knowledge on hand hygiene The present study indicated that the knowledge ( $t=9.23$ ,  $p < 0.05$ ) regarding hand washing technique among school going children was improved after structured teaching programme. These findings were consistent with a study conducted by Ashutosh Shrestha and Mubashir Angolkar shows that the hand washing before meal and after defecation, use of soap in hand washing before meal and after defecation was effective in improving knowledge (5.17,  $p < 0.05$ )

**5. Conclusion**

The mean post-test knowledge score  $11.27 \pm 2.43$  was higher than the pre-test knowledge score  $7.90 \pm 2.67$ . Therefore, the study concluded that the structured teaching programme was effective in enhancing the knowledge regarding hand washing techniques among school going children

**6. Recommendation**

A similar study can be conducted in different school to find significant difference between schools. A similar study can be conducted to compare the effectiveness of hand rub and alcohol soap based hand washing. The comparative study could be conducted between the urban and rural students. A descriptive study can be carried out to identify the barriers of hand washing techniques among college students. A study can be conducted to assess the knowledge and practice among staff nurses regarding hand washing techniques.

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