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EXPLORING HAND WASHING BEHAVIOR AMONG THE STUDENTS OF CANADIAN MAPLE INTERNATIONAL SCHOOL: UNDERSTANDING KNOWLEDGE ATTITUDE AND PRACTICES

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ABSTRACT

Background: The good behavior of washing hand is the act of cleaning one's hand with any liquid or with soap for removing microorganism. Washing hand is a learned behavior, so it is required to learn proper hand washing as a child to lay down the fundamentals of lifelong responsibility of maintaining personal hygiene in childhood. Lack of knowledge and practice of proper hygiene increases the incidence of communicable diseases especially among school children in developing countries. **Aim:**This study is done to identify gaps in knowledge, poor attitudes and substandard practices in hand washing and to enhance the development of appropriate strategies to promote hand hygiene for primary and secondary school students in the future. Hand washing is key to reducing the occurrence of infectious diseases among school students. **Materials and Method:** The survey was cross-sectional which was conducted among the children of Canadian Maple International School during the period of August to October 2022 to measure the level of their concern about washing hand among the school students. Sampling was done by purposive method and data was collected through face-to-face interview by using semi-structured questionnaire. After completion of collecting data, statistical analysis was done using the Statistical Package for the Social Science. Study was conducted among 51 students of (8-14) years old. **Results:** Among 51 respondents, 49.02% were within 8-10 years of age, 35.29% were within (10-12) years of age and the rest 15.69% belonged to (12-14) years age group. All of them were Muslims. About 49.01% respondents have more than 4 family members. 98% of the respondents had the habit of daily hand washing. About 74.50% were aware of hands washing after handling money , 84.30% students clean their hands with soap water. In the midst of 51 respondents there is a considerable difference in the habit of washing hand at 5% level of significance. The study reveals that more than 80% students have the knowledge about washing hand. **Conclusion:** Although the resultant products of this survey indicated that students had satisfactory levels of knowledge, attitude and practices of hand hygiene, the information provided in this study regarding current hand hygiene knowledge, attitudes and practices among students will be helpful to identify the gaps in knowledge, poor attitudes and substandard practices. This will also be considerable for the design and implementation of the hand hygiene intervention. The knowledge regarding cleanliness about hand is needed for the health of the school community. This study assessed the levels of knowledge, attitude of hygiene regarding hand washing among Canadian Maple International School, Dhaka.

Keywords: Hand washing, Age, Knowledge, Attitude.

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INTRODUCTION

Regular and proper handwashing is an essential habit for maintaining a healthy lifestyle. The primary way in which communicable disease are transmitted is through direct hand to hand contact between individuals. In developing countries, diarrhea and pneumonia account or 90% of child mortality, yet the simple practice of washing hands with soap can lower the risk of diarrhea by about half and respiratory infections by one-third.

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Handwashing is particularly crucial for school aged children, as they may face a greater risk of disease. Hand washing is particularly crucial for school aged children, as they are more likely to face a greater risk of hygiene related illness than adults[1,2].

Numerous students in developing nations demonstrate insufficient handwashing skills. Many schools promote handwashing, a straight forwarded and affordable hand hygiene method, encouraging students to adapt this practice. Significant differences in hygiene knowledge, attitudes, and practices have been observed between male and female students. Research indications that promoting handwashing and personal hygiene among school children, as the goal of the current study, was to ascertain the degree of hand washing practices and knowledge among school children[3-6]. Building awareness initiatives to encourage hand hygiene education and practices against infectious diseases is required[7,8].

This study highlights the need of enhancing school children's hand hygiene habits. To learn more about hand hygiene practices at home and in schools and how they relate to risk factors and the spread of infectious diseases, more research is required. The findings of this study are highly helpful in opening the door for thorough interventions for effective behavior modification since improper hand washing has been identified as a primary risk factor for contracting infectious diseases, the frequency of hand washing knowledge and behavior among schoolchildren are the other objectives of this study. This study will aid in overcoming the barriers to gaining the right information and practice as well as in explaining the elements influencing school children's hand washing practices. Given the significance of hand washing, the purpose of this study is to determine the level of hand hygiene practice and the prevalence of hand hygiene awareness among Dhaka school children. The findings will aid in overcoming the barriers to acquiring appropriate knowledge and practice as well as in explaining the factors influencing schoolchildren's hand washing habits. This study not only supplemented the prior research on hand washing, but it also improved our understanding of how school children wash their hands.

MATERIALS AND METHOD

The study entitled "Exploring hand washing behavior among the students of Canadian Maple International School: Understanding knowledge attitude and practices." was a cross sectional study. It was conducted for a period of July to September 2022 .Participants were 8-14 years aged children of Canadian Maple International School. Purposive sampling was done for required sampling from the population and respondent who fulfilled the aforementioned criteria were used for the research. Data was collected by face-to-face interview through structured and close ended question. SPSS software version 20 was used for data analysis.

Ethical Implication

As a prerequisite permission from United Medical College and authorities were taken.

RESULTS

Among 51 respondents, 49.02% were within 8-10 years of age, 35.29% were within (10-12) years of age and the rest 15.69% belonged to (12-14) years age group respondents (Table 1), all of them were Muslims (Table2). Among 51 respondents, about 49.01% respondents have more than 4 family members, about 37.25% have 4 family members and the rest 13.74% have 3 family members (Figure1). Between 51 respondents, 98% of the respondents had the habit of daily

hand washing and 2% did not have the habit of hand washing (Figure 2). Of 51 respondents, 74.50% were aware of hands washing after handling money, 13.70% did not wash hands after handling money and 11.80% of students had no knowledge of the need for washing handsafter handling currency (Figure 3). Eighty-three percent of the 51 respondents cleaned their hands with soap and water, eleven percent used only water, and roughly three percent used hand sanitizer (Table 3). At the 5% level of significance, there is a significant difference in the hand washing practice among the 51 respondents, as the tabulated value of 5.99 is more than the calculated value of 0.069 at 2 degrees of freedom (DF) (Table 4).

Table 1: Distribution of the respondents according to age (N=51)

Age	Frequency	Percentage
(8-10) years	**25**	**49.02%**
(10-12) years	**18**	**35.29%**
(12-14) years	**08**	**15.69%**
Total	**51**	**100%**

N=Number of respondents

Table 2: Distribution of the respondents according to religion

Religion	Frequency	Percentage
Islam	51	100%
Hinduism	00	0%
Buddhist	00	0%
Christianity	00	0%
Others	00	0%
Total	51	100%

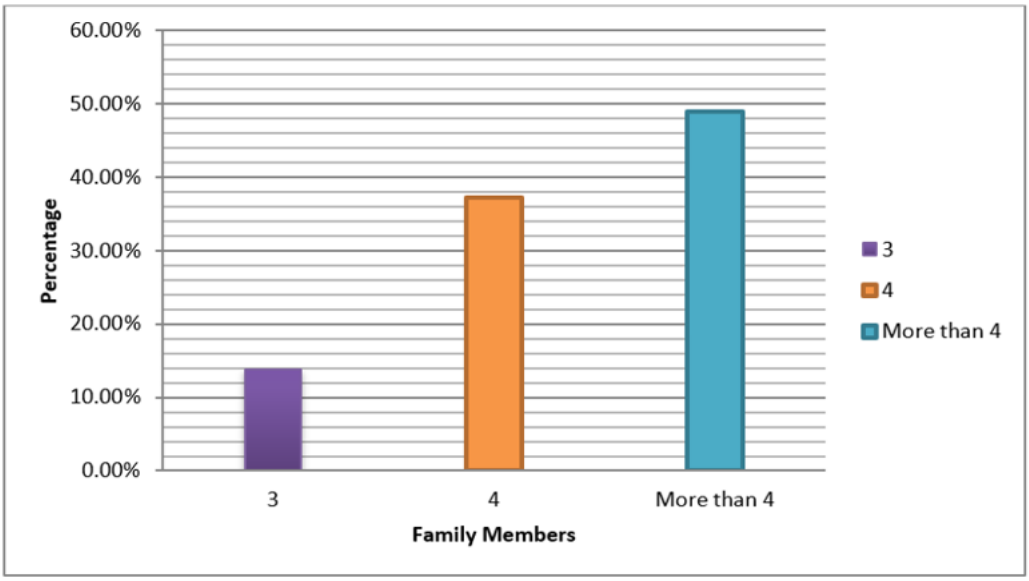

Figure 1: Distribution of the respondents according to the number of family members

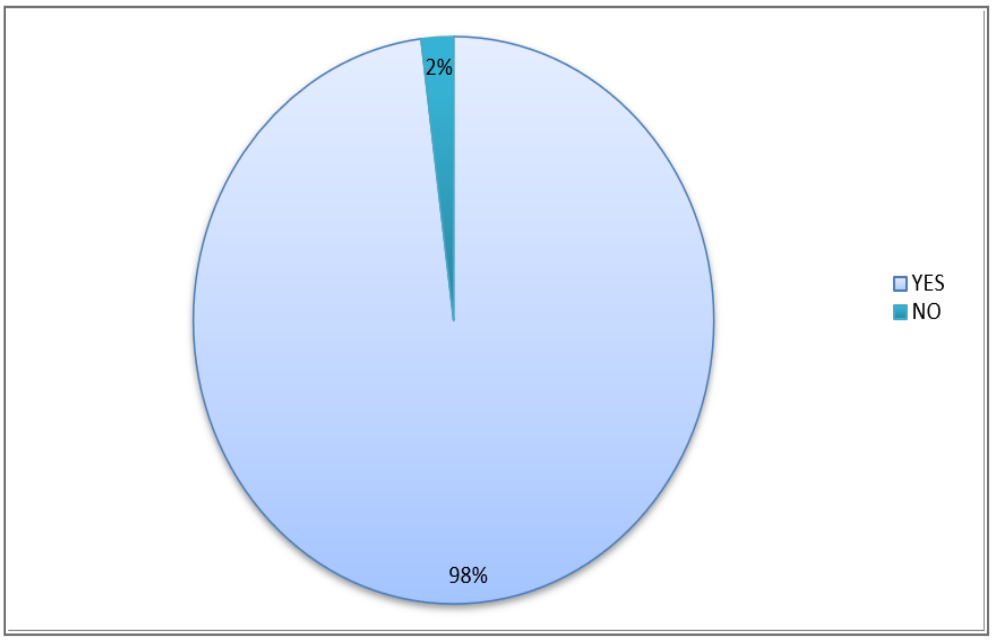

Figure 2: Distribution of the respondents according to the habit of daily hand washing

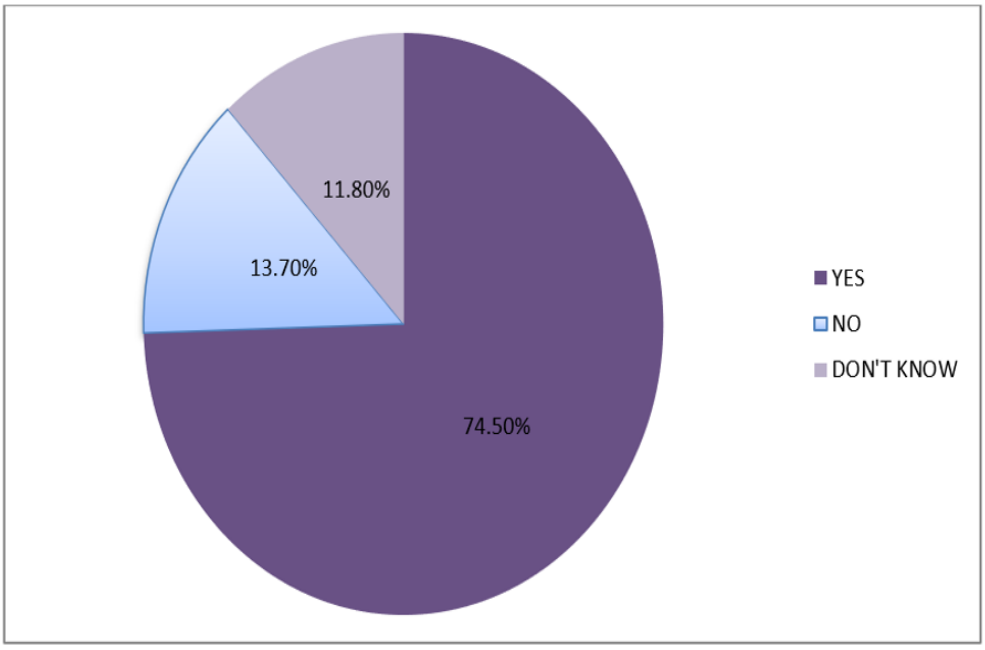

Figure3: Distribution of the respondent according to the necessity of hand washing after handling money

Table 3: Distribution of the respondents according to by the process of hand washing.

Process of hand washing	Frequency	Percentage
Water	06	11.80%
Soap water	43	84.30%
Sanitizer	02	3.90%
Total	51	100%

Table 4: Distribution of the respondents according to hand washing

Sex	Number	Yes	No	Total	Chi Square Test
Male	23	20	3	46	0.069
Female	28	24	4	54	
Total	51	44	7	102	

DISCUSSION

A conventional paper-pencil survey instrument was used to gather data for this investigation in a supervised manner. Using a purposive sample of primary school courses, 51 participants were included in the survey. In addition to demographic questions, the study evaluated respondents' knowledge, attitudes, and hand washing habits. Subsequently, hand hygiene is one of the most effective ways to prevent the spread of these infectious diseases and reduce associated morbidity and mortality [9]. The compliance of hand hygiene is influenced by the expected results of preventive measures, the perception of the ability of hand hygiene, and habit[10]. These can refer to the World Health Organization (WHO) and the Center for Disease Control (CDC) in their hand hygiene guidelines and website materials and the need for the user (e.g., hospital) to adapt it to their culture and think of hand hygiene as a whole system [11,12].

Handwashing, particularly after using the restroom, significantly reduces the transmission of parasite illnesses, which are more common among schoolchildren in many nations [13]. However, one of the most crucial venues for advancing health education and initiatives is schools.[14]. The majority of them were unaware that water temperature was a significant element for hand hygiene. In addition to demographic questions, the study evaluated respondent's knowledge, attitudes, and hand washing habits. About 98% of respondents had a daily hand washing practice, indicating a high level of general hand washing awareness .Given that 49.01% of respondents had more than four family members living with them, this could be the result of having more family members in the house. Generally speaking, the relatively basic yet essential intervention of handwashing can reduce hospital-acquired infections. Likewise, handwashing is thought to be a successful preventative strategy for children, which lowers the usage of antibiotics. However, it is noteworthy that all 51 respondents were Muslims. About 49.01% of the 51 respondents have more than four family members, 37.25% have four, and the remaining 13.74% have three.

The knowledge and practices of hand washing with soap, such as before and after tiffin, after defecation, after playing, after returning from school, after sneezing and coughing, and after handling money, have been found to be lacking in this study. Additionally, 82% of respondents reported washing their hands as often as feasible using soap. About 49.02% of the respondents in this survey were between the ages of 8 and 10 years. It suggests that the majority of the study population's students were younger.

Hand washing is very effective in preventing communicable diseases. Hand washing is particularly important for children, as they are more vulnerable to infections gained from unwashed hands and also due to their unhealthy behaviour[15]. Given that 66.67% of respondent's mothers were housewives and 47.06% of respondents' fathers served in the military, the majority of them were directly cared for by their mothers and the fathers were well disciplined in their lifestyle. Therefore, the information regarding good hand hygiene were possibly taught to the children by their parents Thus, Furthermore, knowledge and subjective norms indirectly affect handwashing via attitude [16]. The fact that 74.50% of respondents cleaned their hands after handling cash is a reflection of this.

Handwashing with soap at key events was rare at baseline in both the intervention and control groups 1% vs 2% [17]. The purpose of the study was to learn more about our nation's children's hand washing practices. However, as every respondent was Muslim, the study sample does not represent other religious groupings. The problems of handwashing and general hygiene among schoolchildren have been the subject of numerous researches. However, there are notable differences between the sexes in the knowledge, attitudes, and practices of cleanliness among students [18]. It has been discovered that school children's personal hygiene and handwashing interventions have significantly decreased the number of occurrences of diarrhea and students' absences [19]. Additionally, the handwashing intervention has greatly enhanced school children's understanding and behavior, enabling them to effectively communicate with their parents [20]. Given that the tabulated value is greater than the computed value, there is a significant difference in the hand washing habits of 51 respondents at the 5% level of significance.

CONCLUSION

Overall, the study demonstrated that students had high levels of hand hygiene knowledge, attitude, and practice. The design and execution of the hand hygiene intervention will also be beneficial from this. The research population ought to be sizable enough to reflect the entire nation or a specific region. All age group should be included in the survey. Filtered water should be ensured for drinking throughout the country. Vaccination might be ensured for each and every respondent. Textbooks should include information about hand washing to create awareness. All the children should know about ideal duration and way of hand washing. They should be provided with hand sanitizer at school.

CONFLICT OF INTEREST

There is no conflict of interest.

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