



ORIGINAL CONTRIBUTION

## Creating Awareness about Cleanliness and Hand Hygiene among Students at Primary Level

Dr. Wajiha Kanwal <sup>1\*</sup>, Dr. Cedric Aimal Edwin <sup>2</sup>, Dr. Abid Ahmad <sup>3</sup>, Uroosa Rafaqat <sup>4</sup>

<sup>1</sup> Chairperson/ HOD/ Assistant Professor, Department of Education, University of Wah, Wah Cantt, Pakistan

<sup>2</sup> Assistant Professor, CECOS University of IT & Emerging Sciences, Peshawar, Pakistan

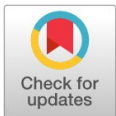
<sup>3</sup> CECOS University of IT & Emerging Sciences, Peshawar, Pakistan

<sup>3</sup> Department of Education, University of Wah, Wah Cantt, Pakistan

**Abstract**— The purpose of the study was to aware students about hand hygiene and also aware them about the negative effects of washing hands without soap. Students of public primary school were the population of the study. The school was selected by means of convenient sampling while participants were selected by purposive sampling. So, for the purpose seminar have been conducted to make students aware about hand cleanliness. One week different activities were conducted to make students habitual and adopt the habits of washing hands in their daily routine and in their schools after playing games and after using washroom. Pre and post intervention views have been taken from the teachers and students. Views of the participants indicated that organizing the seminar with practical activities was an effective practice to create awareness among students regarding hands cleanliness. This was a novel study as it explored the basic hygiene issues at primary level and proposed a solution through intervention. The awareness created by this study will be useful for the general health improvement of students. It will make teachers realize the importance and advantages of hygiene for general health of students.

**Index Terms**— Hand Hygiene, Cleanliness, Primary School, Intervention, Awareness Seminar, Diarrhea, Breathing Infection

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### Introduction

Hand washing is very important because hand washing with soap removes germs from hands. This helps stop infections because people often touch their eyes, nose and mouth without even realizing it. Removing germs through hand washing helps stop diarrhea and breathing infections and may even help stop skin and eye infections. Keeping hands clean through better hand hygiene is one of the greatest main steps we can take to avoid getting sick and spreading germs to others. Many germs are spread by not washing hands with soap and clean, running water.

The aim of my study was to make students aware about the importance of hand cleanliness at their school. The purpose of this study was to determine the practice of hand hygiene. Foodborne illness is a major cause of health disease, and cause death Food and Drug Administration (FDA, 2011). The Center for Disease Control and Avoidance (CDC) announce the term foodborne disease to describe any

\* Email: [dr.wajihakanwal@uow.edu.pk](mailto:dr.wajihakanwal@uow.edu.pk)

disease that is accepted or carried to human beings by food or beverage (CDC, 2013). It is expected that 48 million people get sick yearly because of foodborne illness, which is roughly one-sixth of the United States (U.S.) population. Between these people, about 128,000 are hospitalized and 3,000 die of foodborne diseases (Scallan, 2011).

The projected yearly financial expenses linked to foodborne illness are about \$77 billion (Scharff, 2011). So, foodborne illness is a vital difficulty that threatens the fitness of individuals and creates significant public financial harms. Hand hygiene is a major problem now. There are about 5378 articles about hand hygiene that had been studied (Aiello, Coulborn, Perez & Larson, 2008). Regardless of much long-established training, the hand hygiene duty is quite short in the field of healthcare situations (Boyce & Pittet, 2002; Aiello, 2008). Introduced activities and plans used to recover the obedience of hand hygiene, but quiet the application of hand hygiene to the healthcare students is very low. That's why a hand hygiene problem is appealing for the healthcare of students about their performance close the practice.

This study was conducted to create awareness related to hand cleanliness among primary level students in public schools. The review of literature emphasizes on researches linked to hand hygiene awareness and practices. The literature related to the study has been described under the following.

- Hand washing
- Importance of hand hygiene at school
- Students have bad hygiene habits
- Devices for hands and arms
- Method of specified
- Terrifying facts
- Impact of hand washing
- Diarrhea diseases
- Causes of diarrhea
- Washing hands the right way
- Follow five steps of washing hands
- 5 ways to protect yourself from flew
- Method of hand washing
- Long hand wash
- Attitudes of hand washing
- Correct amount of water needed
- Water temperature
- Time when hand washing required
- Soap
- The choice of soap
- The action of hand rubbing
- Helpful effects of handwashing

### **Purpose of the Hygiene**

Johnson, (2017) said that children must be thought hygiene as soon as possible. The importance of handwashing taught daily as part of daily work. The parents can sing a song or do the actions of the game to confirm that children take care of their own self. Nelson stated (2011) that good hand hygiene habits can help decrease the danger of several health difficulties it also affects the social and psychological aspects of lives. Hand hygiene helps to reduce, spread of the disease.

### **Hand Hygiene at School**

Some children are mainly helpless to carelessness of basic hands hygiene Postma, (2004) originates that hands are possibly the single most main stage of conduction of infection in the home and community as they are frequently in the direct contact with mouth nose and eyes. Hands are also related with food and water.

### **Importance of Hand Hygiene at School**

Hand hygiene at school plays an important role in helping to decrease the spread of diseases. But, there has been a steady decline in the promotion of hygiene practices in schools mainly due to changing schools burdens and structure (Scott, 2013). Children are usually

trained to wash their hands when they are young, but reinforcement of handwashing by parents frequently decreases when children reach school (Guinan, 2002).

### **Students have bad Hand Hygiene Habits**

A modern study in the American periodical of infection control observed that effect of poor hand hygiene by school students (Prater, 2016). Specifically, the study related poor hand cleanliness practices include infections, health diseases and absence from class. School student's face great danger for the spread of dangerous diseases.

### **Hand Washing**

One of the major issues contributing to foodborne disease is insufficient hand washing. (Shojaer, Shooshtaripoor & Amiri, 2005). Hand washing is important for a diarrheal disease anticipation quantity based on Curtis and Cairncross's research (2001). They found that the relative risk of diarrheal illness related with not washing hands and handwashing with high-quality soap can decrease the risk by 47%. A modern study in the American periodical of infection control observed at the influence of poor hand hygiene by school students (Prater, 2016).

The most suitable way of cleanliness suggested by previous studies is conducting seminars and awareness campaign at school level. So therefore current studies has been designed to aware students about hand hygiene. As before stated, insufficient hand washing is one of the main possible threat issues contributing to foodborne disease. It is usually believed that the hands of food handlers are main vehicle of food cross-contamination and that better quality personal hygiene and good hand washing would donate to the basic method of feces-to-hand-to-mouth variety of probably pathogenic temporary germs (Shojaer, Shooshtaripoor & Amiri, 2005).

### **Impact of Hand Washing on Health**

According to Mayo Clinic (2009), hand washing is the way of eliminating getting sick and distribution illness. Hand washing help in decreasing the number of diseases when done properly. Washing hands regularly can help maximize the transmission of germs, diseases and other bacteria. It is possible that people do not wash their hands as regularly as they must. Hand washing reduces chances of both diarrhea and respiratory infections successfully when done correctly and at dangerous times. The dangerous times must be detected and aware struggles made to clean hands at such times.

### **Washing Hands the Right Way**

Washing your hands is easy, and it is one of the most effective ways to stop the spread of germs. Clean hands can stop germs from spreading from one person to another and throughout an entire community from your home and workplace to childcare facilities and schools. Scottish scientists about there are five-step method that's most effective at killing bacteria. It's recognized by the World Health Organization and is advertised as better than the one advocated by the U.S. Centers for Disease Control.

Follow Five Steps of Washing Hands (Scottish Scientists)

- **Wet** your hands with clean, running water warm or cold, turn off the tap, and apply soap.
- **Lather** your hands by rubbing them together with the soap. Lather the backs of your hands, between your fingers, and under your nails.
- **Scrub** your hands for at least 20 seconds. Need a timer? Hum the "Happy Birthday" song from beginning to end twice.
- **Rinse** your hands well under clean, running water.
- **Dry** your hands using a clean towel or air dry them.

### **Correct Amount of Water Needed**

Correct amount of water should be used for handwashing (Curtis & Cairnoross, 2000).

### **Water Tmperature**

All family resources (1999) say that one must use warm water for washing hands. CDC, (2010) suggested that use clean warm or cold water can be used (Dimberg, 2005), says that hot water is not sufficient to kill bacteria and germs scientific studies by Michael (2002), and (Dimberg, 2005), says that using warm water will not decrease germs from hands.

### **Problem Statement**

Hands cleanliness is very important for our health and during my teaching practicum; I have observed that students do not pay attention to washing their hands. This situation is very common in public schools, as per my experience, students are not aware of the negative consequences of dirty hands, they are not aware of the importance of hands cleanliness. For this purpose present study has been designed to give awareness to students about the importance of handwashing to make them aware that dirty hands are the reason of many diseases.

### **Rational of the Study**

I designated this study because during teaching practicum it is observed that poor hand hygiene habits among students of primary public school are very common. Awareness about hand hygiene is very important among students at primary level. Therefore, current study has been conducted to give awareness to students that dirty hands are the cause of many dangerous diseases. Because of dirty hands, students face many health issues they also face many issues in their studies and which also cause of absenteeism. Therefore it is need to conduct a study about hand hygiene among primary grade students.

### **Research Objectives**

- To provide awareness about hand cleanliness among students at primary level.
- To analyze the views of participants before and after an intervention.

### **Research Questions**

- What is the influence of giving awareness about hands cleanliness on students, habits?
- Is there any difference between the views of the participants before and after intervention?

### **Delimitation**

Observance in the view the availability of resources and time the current study was delimited to:

- Public school of Rawalpindi city.
- The students are studying at primary level.

### **Significance of the Study**

The findings of the study may be helpful in making students aware about the importance of hands cleanliness. After the intervention of one week, students may adopt the habits of hand washing in their daily routine (Prater, 2016). As a result health condition of the students may be improved and they are actively involved in learning process. Study may also be helpful for teachers and school administration by providing them a chance to adopt different ways for hand cleanliness awareness among their students. The main focus of the study is to improve the habit of hand washing among primary grade students and develop the habit of washing hands in long term. The important goal of this research is to raise the awareness about hand hygiene.

### **Research Methodology**

In this stage the researcher define the technique of data collection, research design population, sample, instruments, data analysis technique and procedures. The main point of this study was to find out the information of pupils about hand hygiene. To develop the sources of awareness between the students about hand hygiene and to focus the hygiene practice of the students. The technique approved for this study is termed as below.

### **Research Design**

The research design of the study was action research. It is descriptive research in which seminar was conducted for giving awareness to students about hand hygiene. One week activity plan was implemented in which different types of activities were conducted related to hand cleanliness. Different videos related to hands hygiene (in Urdu language) have been shown to students to provoke their interest. Seminar and one week activities mainly focused the advantages of hand cleanliness and disadvantages of carelessness. Views of teachers and students have been taken before and after intervention (Dean, 2017)

### **Population**

The target population of this study was pupils that are studying in the public primary school of Rawalpindi city. The criteria for selecting teachers from primary school were actually based on the following traits:

- These teachers are also considered to be the finest in their experience and must know about the hand hygiene and its implementation.
- They are willing to give their responses to the problem as some of them refused to be a part of discussion because of their busy schedules.
- The teachers were selected for the views which have conducted morning assembly in the daily routine.

### **Sample and Sampling Technique**

One Public school was selected through a convenient sampling technique. Students and teachers were selected by using purposive sampling technique. Students of grade 3 and 4 were selected as samples. The total number of students in sample was 100. This sample was selected because it was observed that the problem of hand hygiene was observed more in primary section during practicum. Two teachers were selected for views who conducted morning assembly in the school, So that these teachers may continue awareness about hands hygiene in the morning assembly.

### **Instrument and Data Collection**

Views of participants before and after intervention have been taken related to hands cleanliness practices. Study focused on creating awareness among students related to hands hygiene and for the said purpose one week activity plan and one day seminar was conducted about hands hygiene. Very first-day introductory meeting with principal and school staff was scheduled. Purpose of the study was shared with participants and views of teachers and students have been taken regarding hands cleanliness on the same day. Then one week activities and seminar was conducting regarding hands hygiene. Views of teachers and students were taken after intervention.

### **Data Analysis**

Researcher analyzed the collected data by transcribing the views of the participants. Views of the participants before and after intervention have been taken and analyzed separately.

### **Work Procedure**

At first, I took a permission letter from the Department of Education (FJWU) so that I may collect the data. The school was selected where I have completed my teaching practicum. After taking permission and consent from the school principal and teachers I started research work. First, teachers were invited to share their views regarding hands cleanliness practices. I decided to sit in the library so that the teachers listen to my questions carefully and answer them in a quiet, those teachers were invited who conducted morning assembly in the school. The views of these teachers have been taken regarding hands cleanliness condition of their students. Their views were recorded. They have shared their experiences about the hand hygiene in their school. Views of students also been taken related to hands hygienic practices. Total population of students from grade 1 to 5 was 60. Fifty one students have attended the seminar. Seminar was lead in one section activities, flash cards, posters and work sheets were given to students that are related to hand hygiene and also tell its significance in daily life future on in school stage students were involved in personal hygiene activities. Seminar duration was two hours, and I showed videos related to hands cleanliness, I took 10 minutes introduction about hands hygiene; I shared information related to hand hygiene in 20 minutes. Then videos related to hand hygiene were shown to students in 30 minutes. Presentation was given to students about hand hygiene and its significance in daily life. Students were involved in hand hygiene activities to give them a real knowledge for keeping the hands and nails hygienic. In 30 minutes, students' views were taken and in the last 30 minutes, students practice to wash their hands with soap and to dry with clean towel. Students shared their healthier views after seminar when their views have been taken.

### **Data Analysis**

One week intervention was held to aware students about handwashing and hand hygiene. Views of students and teachers are presented below Pre-Post Intervention Views of Students.

### **Pre - Intervention Views of Students**

In pre-intervention views I asked some questions from the students about hands cleanliness and the effects of not washing hands with soap. I also asked students when we should wash our hands. Students gave their responses according to their own knowledge the answers of all students different from each other's mostly students were aware about the knowledge of handwashing with soap, but they are not using soap while washing their hands with soap in their daily life. They were not aware of the disadvantages of washing hands without soap.

### **Post - Intervention Views of Students**

In post intervention views I asked same questions from the students in this time the responses of students showed change as they were aware of advantages and disadvantages of hands cleanliness. They are using soap while washing their hands and they also know when they have to wash their hands.

### **Pre - Intervention Views of Teachers**

Post-intervention views of teachers showed that they have concern about hands cleanliness and they checked students' hands wash their hands in morning assembly on regular basis. Teachers also shared their views about cleanliness with students in the morning assembly on a daily basis. They decided one day in a week for handwashing activity in the school. There is a difference between pre and post intervention views of the teachers.

### **Findings**

This study has revealed the answers of research questions.

#### **Findings Related to First Research Question**

According to first research question "What is the influence of giving awareness about hands cleanliness on students' habits" the findings of the study show that students started to wash their hands with soap after using washroom and after playing games (Soboksa et al., 2020). It also depicted that awareness is the first step towards a desired action. Handwashing was considered more important and was more frequent by students after being aware of the advantages of this action as well as the harms which are associated with dirty hands. These findings are in line with the studies done before (Guinan, 2002).

#### **Findings Related to Second Research Question**

According to second research question is "Is there any difference between the views of students before and after intervention?" the findings of the study show that there is a difference in post-intervention views, more students started to wash their hands with soap after the intervention. The views were totally changed as a result of intervention. Students mostly washed their hands before and after school. They did not think it necessary during school. But after intervention they were of the view to wash hands frequently, especially before eating and after using washroom. Their views about use of soap were also changed. (Berry et al., 2015) They realized the importance of soap for actual cleanliness of hands

### **Discussion**

In this study the researcher analyzed the collected data by taking views from teachers and students pre and after an intervention. The findings of the study showed that much improvement in their knowledge and practices. The result showed a difference between the views of the students' before and after seminar. The awareness of hands hygiene through seminars and activities is effective for students' awareness about hand hygiene practices.

The result of the study showed that before intervention some of the students were aware of the hand hygiene but after giving awareness study indicated mostly the students were aware about hand hygiene and the importance of hand hygiene in their life. The purpose of this research is to teach students how they reduce the effects of bacteria and how they can take care of their health. Similarly Newgent, (2001) said that hand washing is an important method to stop the spread of dangerous germs, especially important in the winter cold and flu season. The result of this study also showed that in pre-intervention most of the students responded that they do not practice hand hygiene always but in seminar researcher described about how to wash hands, advantages of using soap, and how to keep nails and

hands clean. So in the post intervention student's responses were changed because they were motivated. In seminar the researcher also motivated those students who practiced hand hygiene in their daily life. So study indicates if students practice hand hygiene daily and their teachers motivate them students must practice hand hygiene. Similarly findings of the Berry et al., (2015) revealed that awareness campaigns have a positive effect in raising awareness among individuals about their health hygiene.

### **Conclusion**

Findings of the study showed that after intervention many students washed their hands after using the toilet as well as after playing games. Many students learned about the negative effects of never washing hands with soap. The washing agent best used was soap. This may be the outcome of struggles being made to aware school children to wash their hands with soap. This study showed that the use of soap after playing games and after using washroom is helpful to fight against germs and prevent many health diseases, which is the aim of hand washing. On the basis of findings it is concluded that awareness programs are helpful in creating awareness among students about hands cleanliness.

### **Recommendations**

It is therefore recommended that:

- Teachers may be aware of students about hand cleanliness in morning assembly on regular basis.
- School may arrange practical activities in school regarding washing hands with soap.
- Speeches by senior students may be organized regarding hands cleanness and overall hygiene weekly.

### **Future Research Directions**

- It is recommended that, there should be a descriptive research with a big sample and random sampling to get more generalizable findings.
- The research in the future can devise an unbiased method for collecting data.
- In future researches the intervention can be different for teachers and students as per their roles in implementing the hand hygiene effectively.
- Similar studies could be done at other academic levels e.g., elementary secondary etc., as well as in different strata of society other than students.

### **Ethical Consideration**

The study was conducted by strictly follow the ethical values. There were no element of favoritism and biases in creating awareness about cleanliness and hand hygiene among students.

### **Limitations**

The study could not cater for the random sampling. The seminar for awareness was or intervention was only one, same for students and teachers. The tendency and frequency of washing hands was based on self-report which could be biased data.

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