

Research Article

## Knowledge, Attitude and Practice Regarding Personal Hygiene and Awareness about COVID-19 among School Children of Government Primary School Haider Abad Town Sargodha

Ali Raza\*, Muhammad Talha<sup>1</sup>, Shah e Zaman<sup>2</sup>, Abdullah Khan<sup>3</sup>,  
Muhammad Awais<sup>4</sup>

1,2,3,4. Department of Community Medicine, Sargodha Medical College, University of Sargodha, Pakistan.

\***Corresponding Author: Ali Raza**, Department of Community Medicine, Sargodha Medical College, University of Sargodha, Pakistan.

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### Abstract

*This research will discuss about the knowledge, attitude and practice of personal hygiene and Covid-19 awareness among school-going children. Personal hygiene among children is considered the best a tool to enhance and improve community strategies and intervention practices to cope with many communicable and infectious diseases.*

*This study evaluated the knowledge, attitudes, and practices (KAP) of hygiene and Covid-19 awareness among rural school children in Haider Abad Town and aimed to create awareness among school children regarding personal hygiene and COVID-19.*

*This cross-sectional study was comprised of 100 students who were interviewed by medical students. those who participated were in grades 1-5 at Government Primary School, located in Haider Abad Town. Data consisted of personal hygiene practices like hand washing, wearing cleaned clothes, brushing teeth, bathing and COVID-19 awareness.*



*Study findings show the need for more hand washing and hygiene education in schools and more strict compliance to COVID-19 SOPs which provide objective evidence that may guide the development of improved health and hygiene intervention programs in rural schools. Successful implementation of these programs will likely reduce the transmissible disease burden borne by school children in rural settings.*

*Health promotion programs and health education lectures and seminars should be implemented for children and their families. People should be told all about COVID-19 through social media. School nurses, school staff and parents also have an important role in teaching their children about COVID and personal Hygiene.*

**Keywords:**

*Hygiene, cross-sectional study, Hand washing, School Children, Knowledge, Attitudes, Practices, School Nursing, Health Education and Promotion.*

## Introduction

Hygiene is derived from “Hygeia” - the goddess of health in Greek mythology. It is defined as the science of health and embraces all factors which contribute to healthful living. (1)

Personal hygiene includes bathing, clothing, and washing hands after the toilet, care of nails, feet and teeth. Personal hygiene aims to promote standards of personal cleanliness within the setting of the condition where people live. Every year approximately 1.5 million under-five children die from diarrhea due to unsafe water, lack of sanitary, and hygiene. (2)

The slum children are more vulnerable to the diseases arising out of poor personal hygiene practices such as diarrhea, worm infestation, and spread of respiratory infections, inadequate nutrition leading to anemia, malnutrition, and vitamin deficiency as a result of overcrowding, low socioeconomic status, inadequate water supply and lack of sanitary. (3)

Besides constituting a basis for personal and social health, hygiene is an indispensable part of living in society. Human beings are continuously affected by external environmental pollutants. Everyday activities may involve contact with many sources of environmental contamination; these may be touched with the hand, present on shoes while walking, or contained in the dust on the body and hair; moving the hand to the mouth also causes microorganisms to enter the body. (4)



Hygiene refers to the set of practices perceived by a community to be associated with the preservation of health and healthy living. While in modern medical sciences, there is a set of standards of hygiene recommended for the different situations, what is considered hygienic or not can vary between different cultures, genders and etaryan groups. Some regular hygienic practices may be considered good habits by a society while the neglect of hygiene can be considered disgusting, disrespectful, or even threatening. Personal hygiene among children is considered as the best tool to improve community strategies and intervention practices to tackle the many communicable and infectious diseases that affect the children during their period of growth and development (5)

Younger school children are more prone to poor personal hygiene than are their older counterparts. Poor personal hygiene is a major public health problem that affects many school children in many devolving countries. (6)

Moreover, poor personal hygiene affects children's health and makes them prone to excessive exposure to many infectious, respiratory, and GIT diseases such as diarrhea, cold, fever, flu, abdominal pain, vomiting, distension, gum disease, dermatitis and itching and, in the long run, affects their immunity, growth and development, and increases school absence. (7)

Several studies conducted worldwide have discussed the topic of personal hygiene and cleanliness among school children; for example, Obiyo in Nigeria examined school children aged 6–14 years regarding their knowledge and practice concerning personal hygiene and cleanliness. He found that the average knowledge and practice scores were 74.6% and 54.9% respectively. Moreover, he revealed that only 29.4% of school children wash their hands after going to the toilet, 37.0% wash their uniform daily and 46.35% of them wash their hands after playing. (8) On the other hand, a study by Kakkar in India revealed that 82.6% of school children demonstrated daily bathing, 61.1% daily teeth brushing, 53% mouth rinsing after a meal, and 80.2% of them had clean and combed hair.(9)

Recent estimates in Colombia indicate that 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 aged 5 to 14 years, and the third leading cause of infant mortality. (10)

Feachem (1984) found that hygiene practices influenced the pattern of diarrheal spread. Furthermore, water handling and washing were the specific practices that required the most attention. (11) A survey by Nandrup- Bus in 2009, revealed that mandatory hand washing in Primary schools can significantly reduce absence arising from infectious diseases.(12)



Hand hygiene is a core element of patient safety for the prevention of healthcare-associated infections and the spread of antimicrobial resistance. (13)

The 2019 novel coronavirus disease (COVID-19) first broke out in Wuhan, Hubei Province, China, on 31 December 2019, and it was later declared an international public health emergency by the World Health Organization (WHO) (27)

According to an October 22, 2020, report on children and COVID-19 by the American Academy of Paediatrics, about 11% of patients with COVID-19 are children. Children make up 1% to 3.6% of total reported COVID-19, hospitalizations, and between 0.6% and 6.9% of all child COVID-19 cases resulted in hospitalization<sup>28</sup>

## Literature Review

Hygiene is an old concept related to medicine, as well as to personal and professional care practices related to most aspects of living. In medicine and the home (domestic) and everyday life settings, hygiene practices are employed as preventative measures to reduce the incidence and spreading of disease. In the manufacture of food, pharmaceutical, cosmetic and other products, good hygiene is a key part of quality assurance i.e. ensuring that the product complies with microbial specifications appropriate to its use. The terms cleanliness (or cleaning) and hygiene are often used interchangeably, which can confuse. In general, hygiene mostly means practices that prevent the spread of disease-causing organisms. Since cleaning processes (e.g., hand washing) remove infectious microbes as well as dirt and soil, they are often the means to achieve hygiene. Other uses of the term appear in phrases including body hygiene, personal hygiene, sleep hygiene, mental hygiene, dental hygiene, and occupational hygiene, used in connection with public health. Hygiene is also the name of a branch of science that deals with the promotion and preservation of health, also called hygienics. Hygiene practices vary widely, and what is considered acceptable in one culture might not be acceptable in another (14)

The human body protects against external environmental pollutants to some extent. However, skin cracks and wounds can allow pathogens to enter the body. For this reason, personal hygiene is one of the most important practices in terms of protecting the body from diseases. Hygiene is a personal matter. Hygiene practices taught during childhood by mothers, fathers, or teachers, mostly through practice, need to be continued by the individual after childhood. Correct adoption of these habits has a direct impact on a person's future health.(15)



Hygiene behavior includes hand hygiene, personal care, home hygiene and food hygiene. Individual hygiene behaviors can be affected by many factors, including beliefs, values, habits, socio-economic and cultural factors, level of knowledge Personal preferences, family characteristics and physical and social characteristics of the work and living environments. Therefore, the hygiene habits of each individual differ, meaning that these habits are unique to the individual. (16)

Hand washing protects people poorly or not at all from droplet- and airborne diseases, such as measles, chickenpox, influenza, and tuberculosis. It protects best against diseases transmitted through fecal-oral routes (such as many forms of stomach flu) and direct physical contact (such as impetigo). (17)

Comparing hand- rubbing with an alcohol-based solution with handwashing with antibacterial soap for a median time of 30 seconds each showed that the alcohol hand-rubbing reduced bacterial contamination 26% more than the antibacterial soap. But soap and water are more effective than alcohol-based hand rubs for reducing H1N1 influenza A virus and Clostridium difficile spores from hands.(18)

Respiratory hygiene, correct respiratory and hand hygiene when coughing and sneezing reduces the spread of germs particularly during the cold and flu season by Carrying tissues and use them to catch coughs and sneezes Dispose of tissues as soon as possible. Clean your hands by hand washing or using an alcohol hand sanitize (19)

Body hygiene is achieved by using personal body hygiene products including soap, hair shampoo, toothbrushes, toothpaste, cotton swabs, antiperspirant, facial tissue, mouthwash, nail files, skin cleansers, toilet paper, and other such products. (20)

“Street-vended foods” or “street foods” which are defined as foods and beverages prepared and/or sold by vendors in streets and other public places for immediate consumption or consumption at a later time without further processing or preparation, which are sold outside authorized market areas for immediate consumption. Because of socioeconomic changes in many countries, this sector has experienced significant growth during the past few decades. Urbanization and population growth, especially in developing countries, are expected to continue into the next century and street-vended foods, which are largely but not exclusively an urban phenomenon, will expand accordingly. Street vended foods are appreciated for their unique flavors as well as their convenience, they are also often essential for maintaining the nutritional status of the population. Street food vending assures food security for low-income urban populations and provides a livelihood for a large number of workers who would otherwise be unable to establish a business for want of capital. Street food vending also offers business opportunities for developing entrepreneurs. (21)



Hygiene refers to the set of practices perceived by a community to be associated with the preservation of health and healthy living. While in modern medical sciences there is a set of standards of hygiene recommended for different situations, what is considered hygienic or not can vary between different cultures, genders and etaryan groups. Some regular hygienic practices may be considered good habits by a society while the neglect of hygiene can be considered disgusting, disrespectful, or even threatening.

Preventive measures are highly effective to prevent its rapid spread but for these to be helpful, influential policies must be taken for appropriate health education of people. This pandemic has severely affected some countries and their healthcare systems have reached the point of exhaustion. Amid the chaos and the rising human toll, healthcare services are undergoing decentralization and fragmentation in many severely affected countries (Boccia et al. 2020). Vulnerable communities are disproportionately impacted in this catastrophic situation. This pandemic is relentless. In a crisis-stricken world gripped by challenges, it has exposed the vulnerabilities of the global capitalist system, driven by the delayed response (Yang and Wang 2020)29

## Objectives

- To assess knowledge, Attitude and Practice regarding Personal Hygiene among School Children.
- To create awareness about Personal Hygiene among School Children. To create awareness about COVID-19

## Methodology

Descriptive Cross-Sectional Study

## Study Place

Government Primary School, Haider Abad Town Sargodha.



## **Study Population:**

100 School Children of Government Primary School, Haider abad Town Sargodha were interviewed. Participants were of grade 1-5.

## **Exclusion Factor**

Children of grades 6-8 were excluded due to proper knowledge developed in them.

**Sample Size** 100 male students.

**Sampling Technique** Non-Probability sampling(Convenient Sampling)

## **Data Collection**

The Data Collection was based upon a pretested, semi-structured, questionnaire(a combination of both open-ended and close-ended questions).

## **Data Analysis**

Data were analyzed by Microsoft Excel Sheet and the results were presented in the form of Pie Graphs with the percentages.

## **Ethical Issue:**

To obtain the consent of participants before data collection, a detailed explanation on the aim and objective of the study was given to the Head Master of the school and other staff faculty and Confidentiality were secured.



## Results

### **Knowledge of Standard Process of Hand Washing.**

A sample of 100 individuals was taken from students of Government Primary School, Haider Abad town District Sargodha. All students were of age 5-11. Among 100 students, 92 (92%) knew while 08 (08%) were not aware of Standard Process of Hand Washing. As shown in Figure.1

### **The attitude of students (age 5-11years) towards hand washing before eating food and after coming out from the toilet.**

Results show that among 100 students,90 (90%) students were shown to have a good attitude towards Hand washing before meals and after coming out of the toilet. While 10

(10)students didn't have a good attitude about hand washing. So overall, we can say that students of Govt. Primary School Haiderbad Town Sargodha has a good attitude towards Hand Washing. As shown in Figure 2.

### **The practice of Hand Washing among Students of age 5-11 years after coming out from the toilet.**

Results show that among 100 students of age 5-11 years, 81(81%) students washed their hands after coming out of the toilet daily. While 10(10%) students washed their hands now and then. And 9(9%) students did not wash their hands at all. Shown in Figure 3.

### **The practice of Hand Washing among Students of age 5-11 years before eating.**

The result shows that among 100 students, 83 (83%)students practiced hand washing before eating daily. While 9 (9%) students washed hands sometimes and 8 (8%) students did not wash hands at all. So we can say that overall, Practice of Hand Washing among students of Government Primary School Haiderbad Town Sargodhais good. Shown in Figure 4.

### **Material Used for Hand Washing.**

Previous Results showed that out of 100 students, about 90 students practiced hand washing. Among which 60 (67%) of students washed their hands with soap and maintained healthy hygiene. While 30 (33%) of students washed their hands with only water which is not satisfactory. Shown in Figure 5.



## **The habit of consuming Street Vended Food.**

When Children were asked about the Habit of eating street Vended food, 90 (90%) students said Yes. It means that Children of Govt. Primary School Haiderabad Town was more prone to infectious diseases because of consuming unhygienic food from vendors. Shown in Figure 6.

## **Reason for taking Street Vended Food.**

When children were asked why they used to eat street Vended food, out of 100 students 37 (37%) answered because it was cheap. 14 (14%) said it was tasty 49(49%) said it was easily available. As shown in Figure 7.

## **Knowledge about Street Vended Food causing Diarrhoea and other Infectious diseases.**

Out of 100 students, 76 (76%) students knew street Vended food causing infectious diseases while 24 (24%) did not have the proper knowledge about infectious diseases. Shown in Figure 8.

## **Attitude towards covering Mouth and Nose while Coughing and Sneezing.**

Out of 100 students, 81 (81%) students reported to had a good attitude towards covering their mouths while coughing and sneezing while 19 (19%) had a poor attitude regarding it. Shown in Figure 9.

## **The practice of covering Mouth and Nose while Coughing and Sneezing.**

Out of 100 students, 83 (83%) students covered their mouths while sneezing and coughing while 17 (17%) did not. Shown in Figure 10.

## **Attitude towards Brushing teeth Daily.**

Out of 100 students, 95(95%) had a good attitude towards brushing their teeth Daily while 05(05%) showed a bad attitude. As shown in Figure 11

## **Practice Brushing teeth Daily.**

Out of 100 students, though 80(80%) showed a good attitude 88% practiced brushing their teeth Daily while 20(20%) did not brush their teeth daily. As shown in Figure 12



### **The practice of wearing Clean Clothes Regularly.**

Out of 100 students, 86 (86%) wore clean clothes regularly while 14 (14%) wore dirty clothes. Shown in Figure 13.

### **The practice of bathing regularly.**

Out of 100 Students, 40(40%) practiced bathing regularly while 60(60%) did not bath regularly and had bad Hygiene. Shown in Figure 14.

### **The practice of Cleaning and Combing Hair regularly.**

Out of 100 students, 83 (83%) cleaned and comb their hair regularly while 17(17%) had bad Hygiene towards it. As shown in Figure 15.

### **Attitude towards wearing masks**

A sample of 100 students was taken from Students of Government Primary School, out of 100 students 99 (99%) were wearing masks and had good knowledge about benefits of it. While 1 (1%) was not aware of it. As shown in Figure 16.

### **Attitude towards Social Distancing**

A sample of 100 students was taken out of these students 98(98%) students had a good attitude and knowledge about social distancing while 2(2%) were not following it. Shown in Figure 17.

### **Knowledge of COVID-19 spread and Symptoms**

A sample of 100 individuals was taken from Students of Government Primary school out of 100,83(83%) individuals knew about COVID-19 spread and symptoms while 17(17%) had no idea about its symptoms. Shown in Figure 18.

### **COVID-19 Infection in relatives of Students**

A sample of 100 individuals was taken from Government school out of this 100 80(80%) students had no relatives who suffered from COVID-19 while 20(20%) said yes to this Question. As shown in Figure 19.



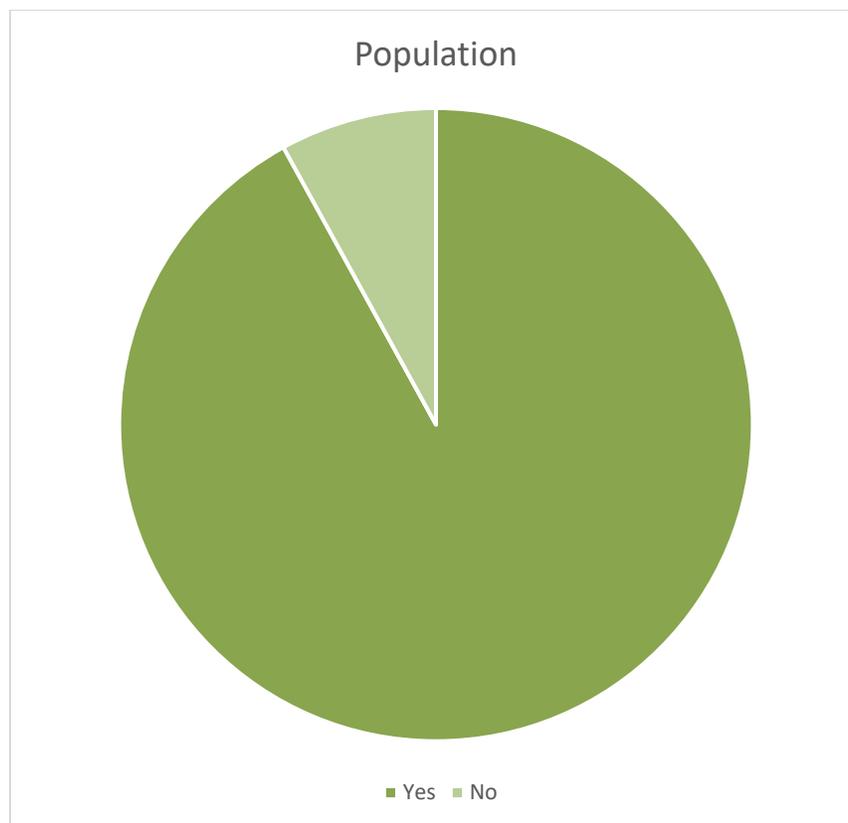
**Table no.1 :** Knowledge of Standard process of hand Washing.

Total Population :100%,

Yes = 92%,

No=8%

Total Population	yes	No
100	92	8





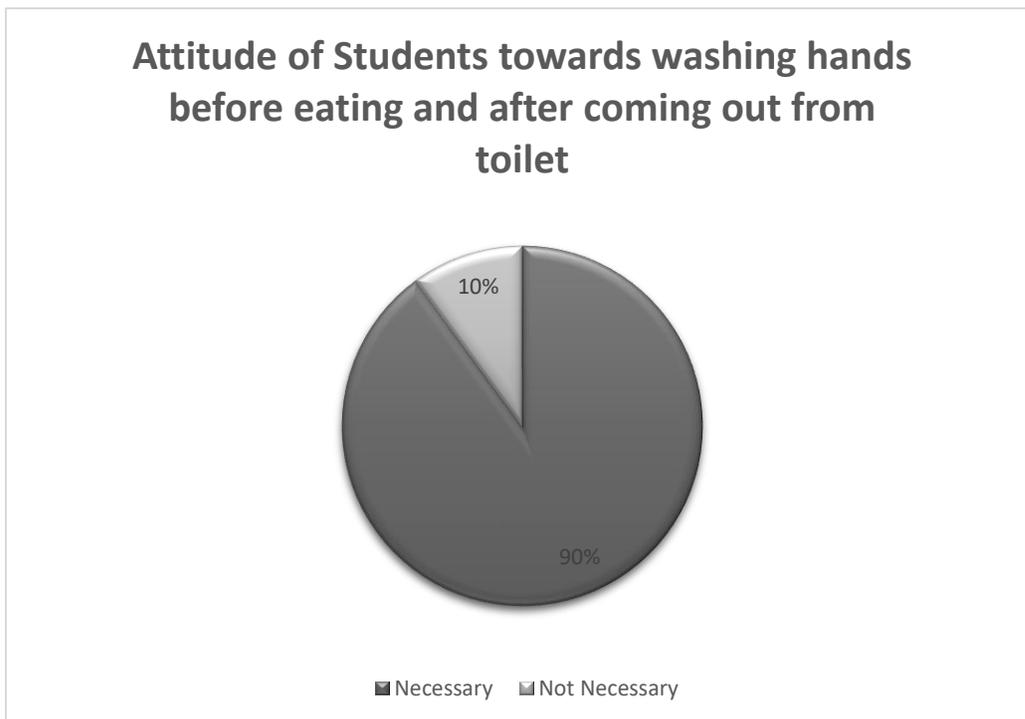
**Table no.2:.** Attitude of students (age 5-11years) towards hand washing before eating food and after coming out from toilet.

<b>Total Population</b>	<b>Necessary</b>	<b>Not Necessary</b>
100	90	10

Total Population = 100%

Necessary = 90 %

Not Necessary = 10%





**Table no.3 :** Practice of Hand Washing among Students of age 5-11 years after coming out from toilet.

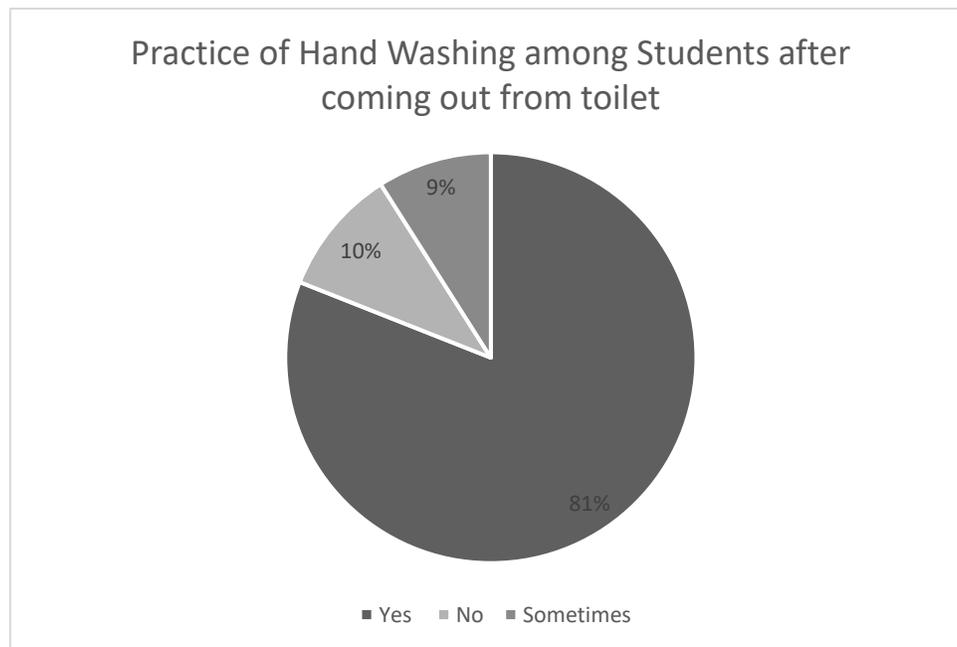
<b>Total Population</b>	<b>Yes</b>	<b>No</b>	<b>Sometimes</b>
100	81	10	9

Total Population = 100%

Yes = 81%

No = 10%

Sometimes = 9%





**Table no 4:** Practice of Hand Washing among Students of age 5-11 years before eating.

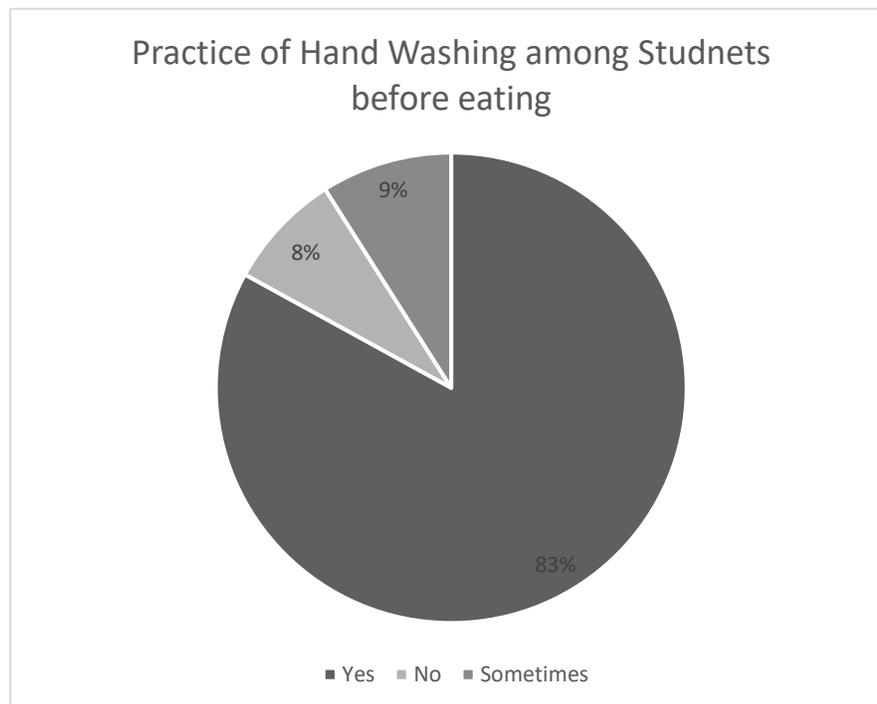
<b>Total Population</b>	<b>Yes</b>	<b>No</b>	<b>Sometimes</b>
100	83	8	9

Total Population = 100%

Yes = 83%

No = 8%

Sometimes = 9%





**Table no.5:** Material Used for Hand Washing.

<b>Total Population</b>	<b>Water only</b>	<b>With Soap</b>
100	33	67

Total Population = 100%

Water only = 33%

With Soap = 67%





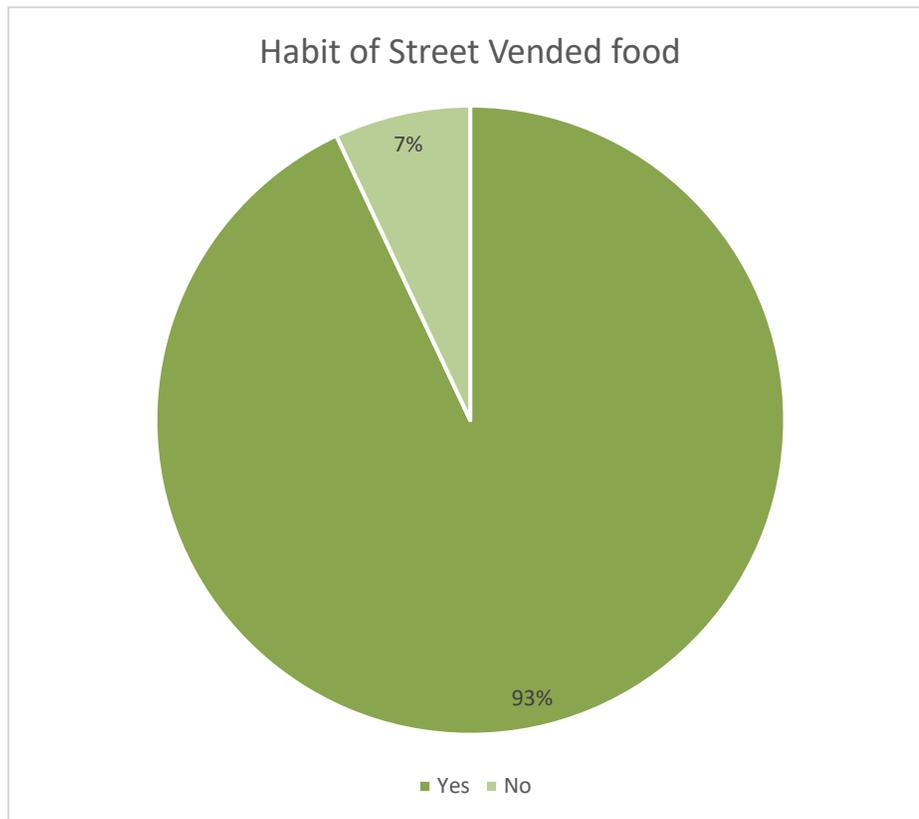
**Table no. 6:** Habit of Street Vended food.

Total Population	Yes	No
100	90	10

Total Population = 100 %

Yes = 93%

No = 07%





**Table no.7:** Reason for Taking Street Vended Food.

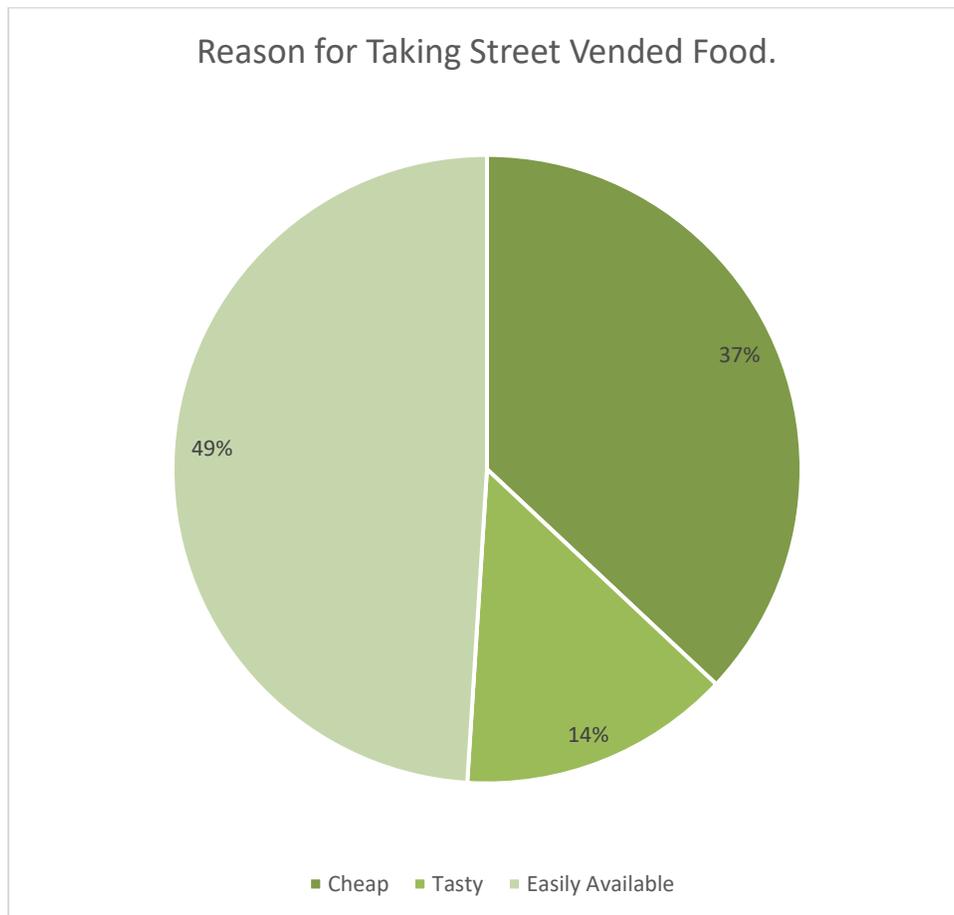
Total Population	Cheap	Tasty	Easily Available
100	37	14	49

Total Population = 100%

Cheap = 37%

Easily Available = 49%

Tasty = 14%.





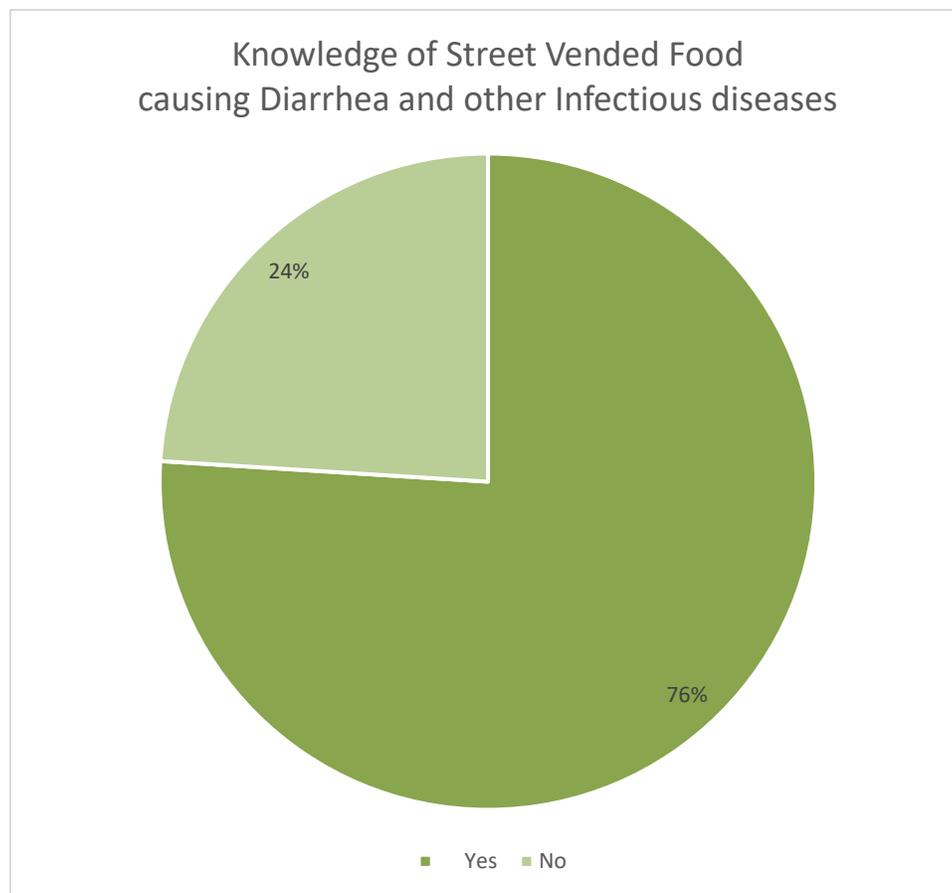
**Table no.8:** Knowledge about Street Vended Food causing Diarrhea and other Infectious diseases.

Total Population	Yes	No
100	76	24

Total Population = 100%

Yes = 76%

No = 24%





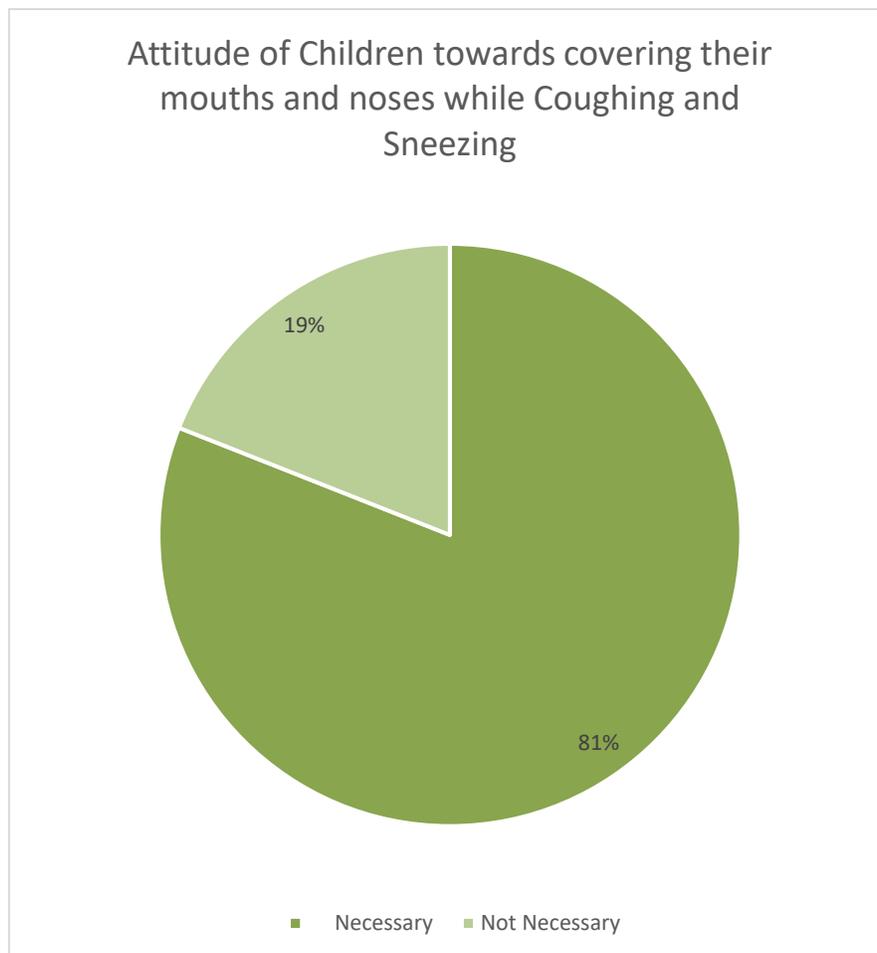
**Table no.9:** Attitude towards covering Mouth and Nose while Coughing and Sneezing.

Total Population	Necessary	Not Necessary
100	81	19

Total Population =100%

Necessary. = 81%

Not Necessary =19%





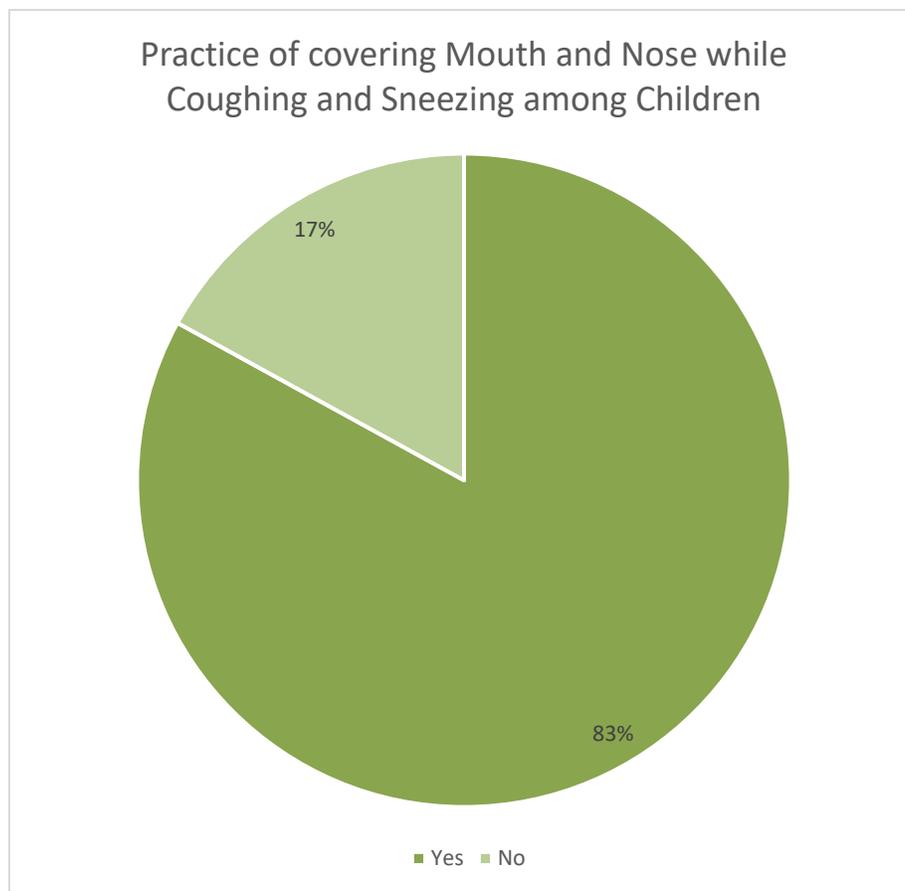
**Table no.10:** Practice of Covering Mouth and Nose while Coughing and Sneezing among Children.

Total Population	Yes	No
100	83	17

Total Population =100%

Yes =83%

No. =17%





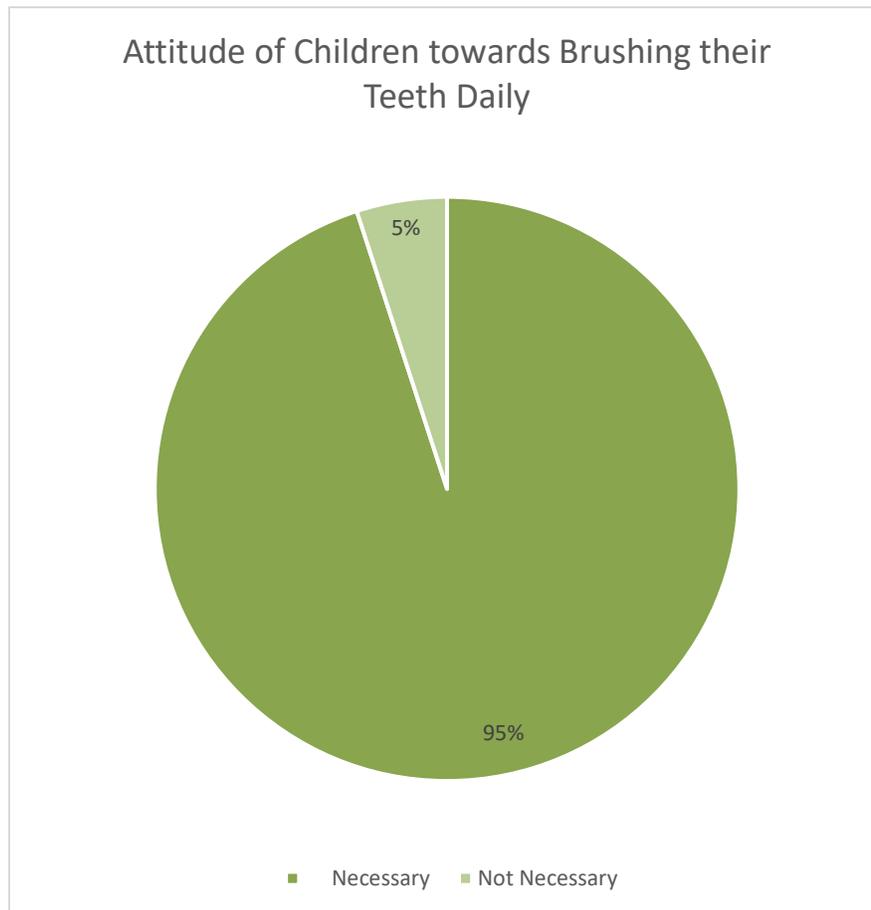
**Table no.11:** Attitude towards Brushing teeth Daily .

Total Population	Necessary	Not Necessary
100	95	5

Total Population =100%

Necessary =95%

Not Necessary =5%





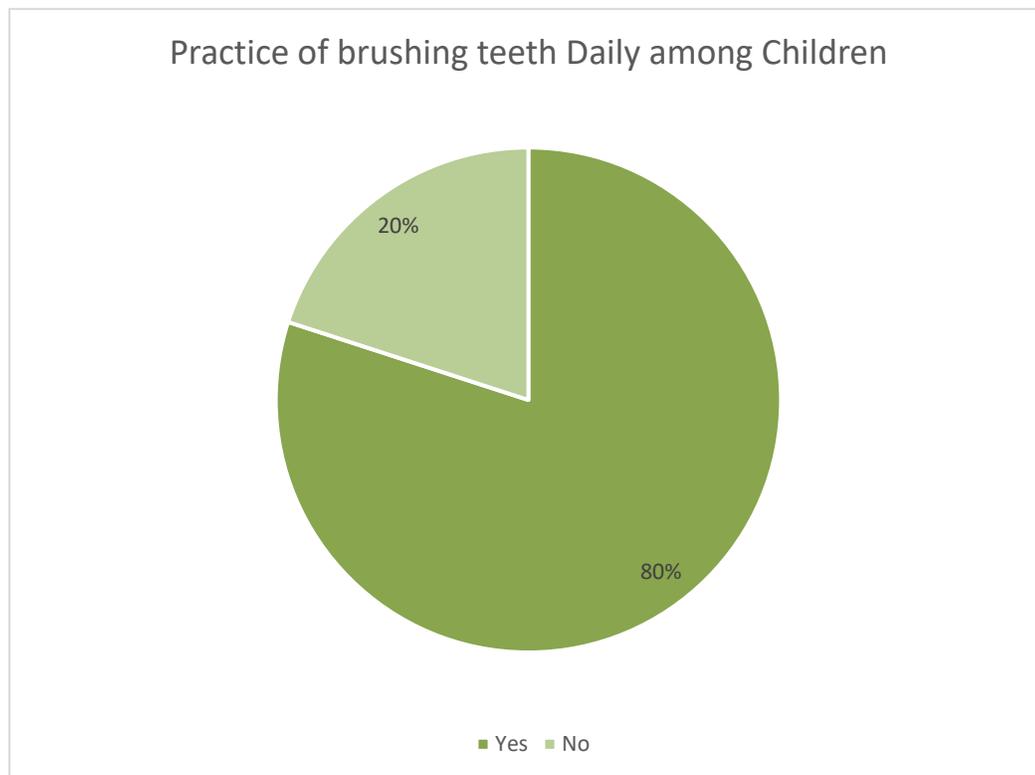
**Table no.12:** Practice of Brushing teeth Daily among Children.

Total Population	Yes	No
100	80	20

Total Population =100%

Yes =80%

No. =20%





**Table no.13:** Practice of wearing Clean Clothes Regularly.

Total Population	Yes	No
100	86	14

Total Population = 100%

Yes =86%

No =14%





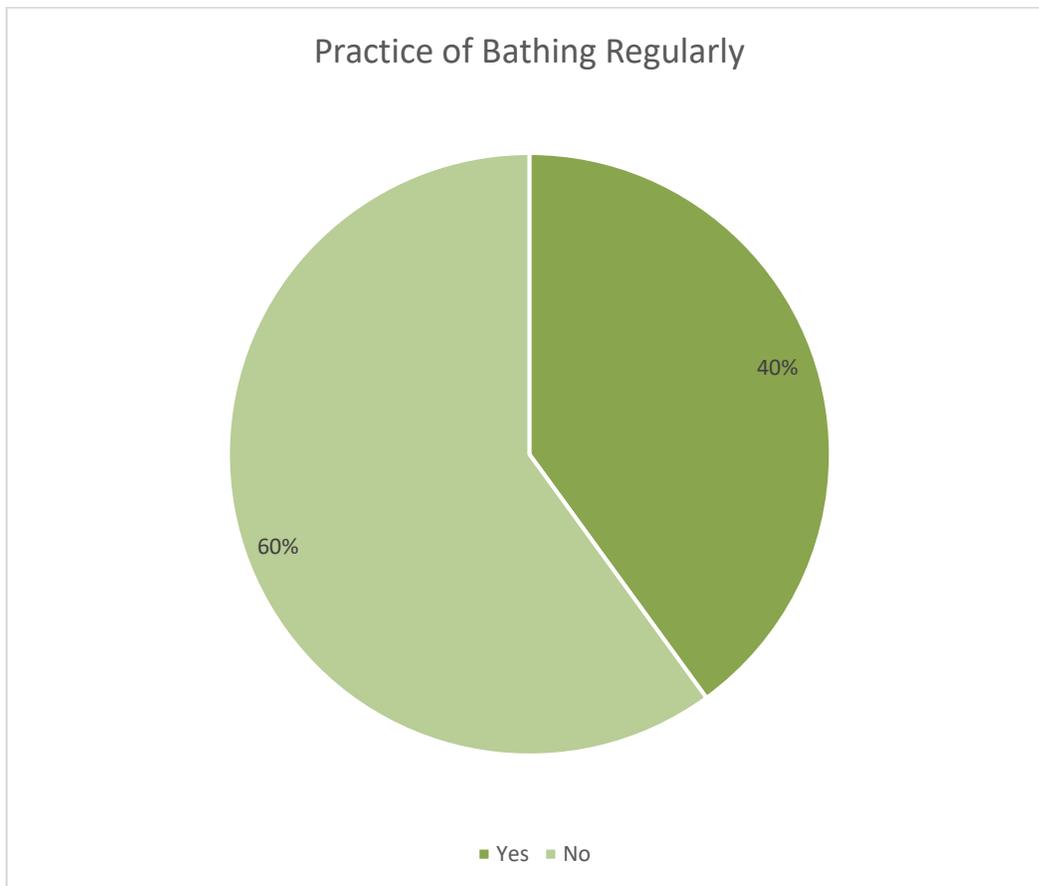
**Table no.14:** Practice of Bathing Regularly.

Total Population	Yes	No
100	40	60

Total Population =100%

Yes =40%

No =60%





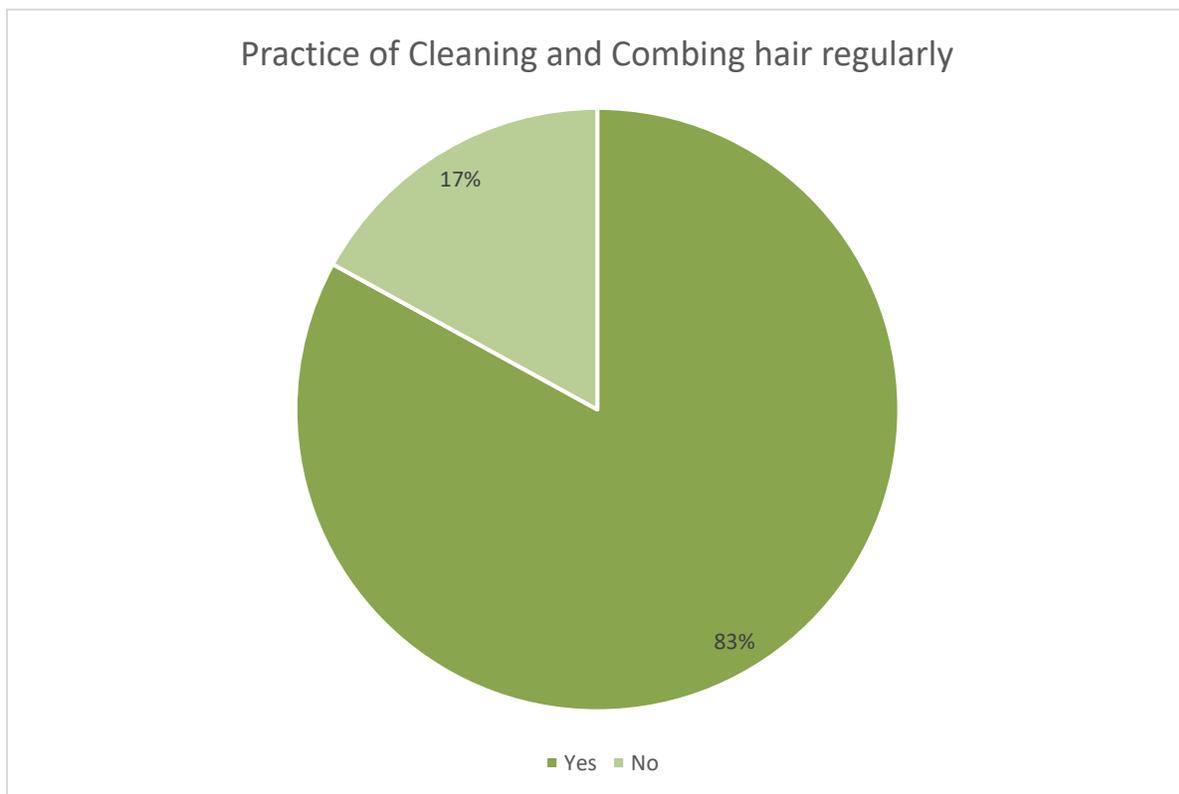
**Table no.15:** Practice of Cleaning and Combing Hair regularly.

Total Population	Yes	No
100	83	17

Total Population =100%

Yes =83%

No =17%





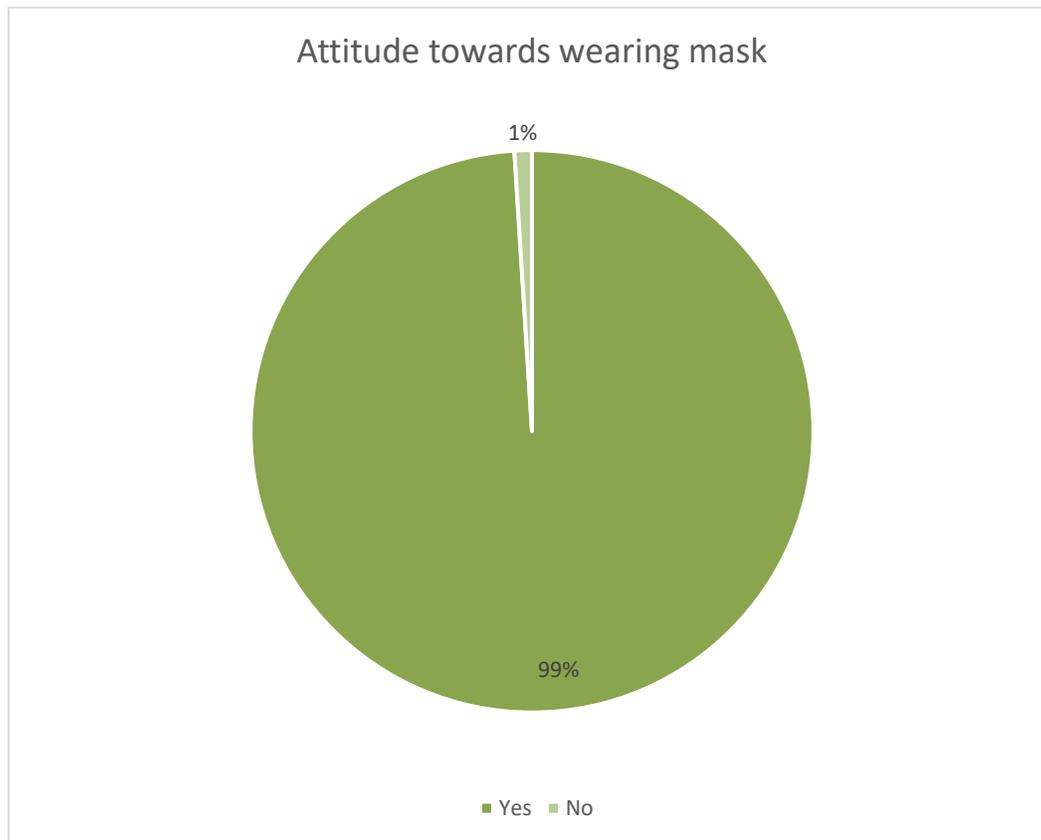
**Table no 16:** Attitude towards wearing mask

Total population	With masks	Without Mask
100	99	1

Total population :100%

With masks :99%

Without masks:1%





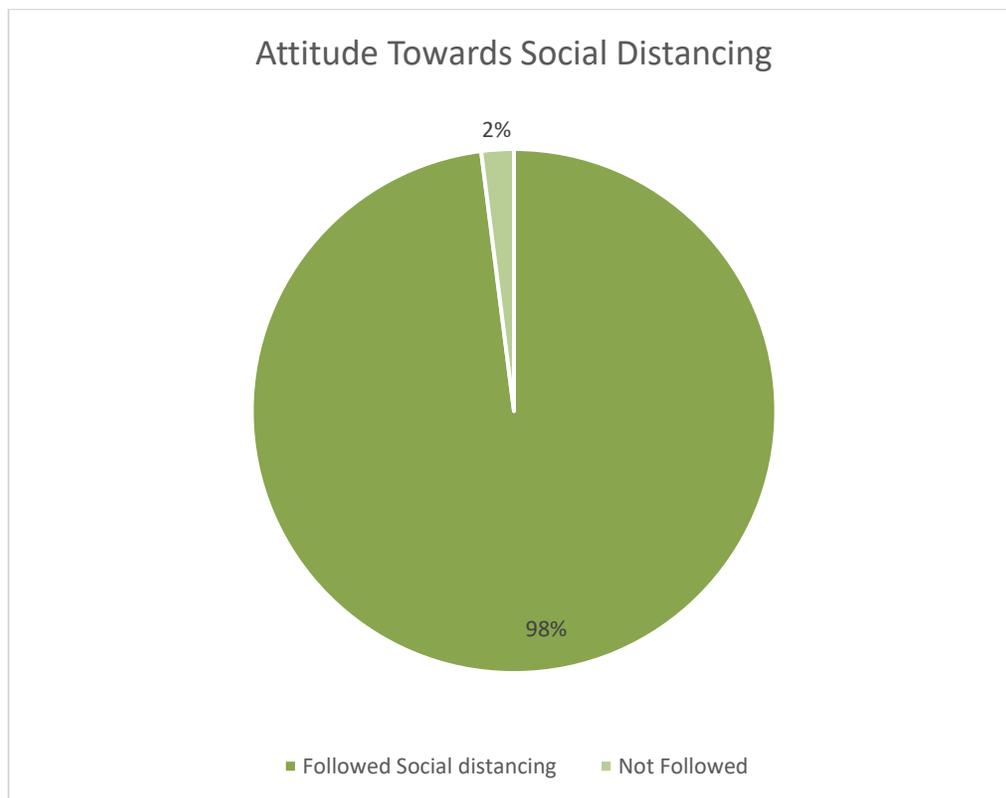
**Table no 17:**Attitude Towards Social Distancing

Total population	Followed	Not Followed
100	98	2

Total population=100%

Followed Social distancing =98%

Not Followed =2%





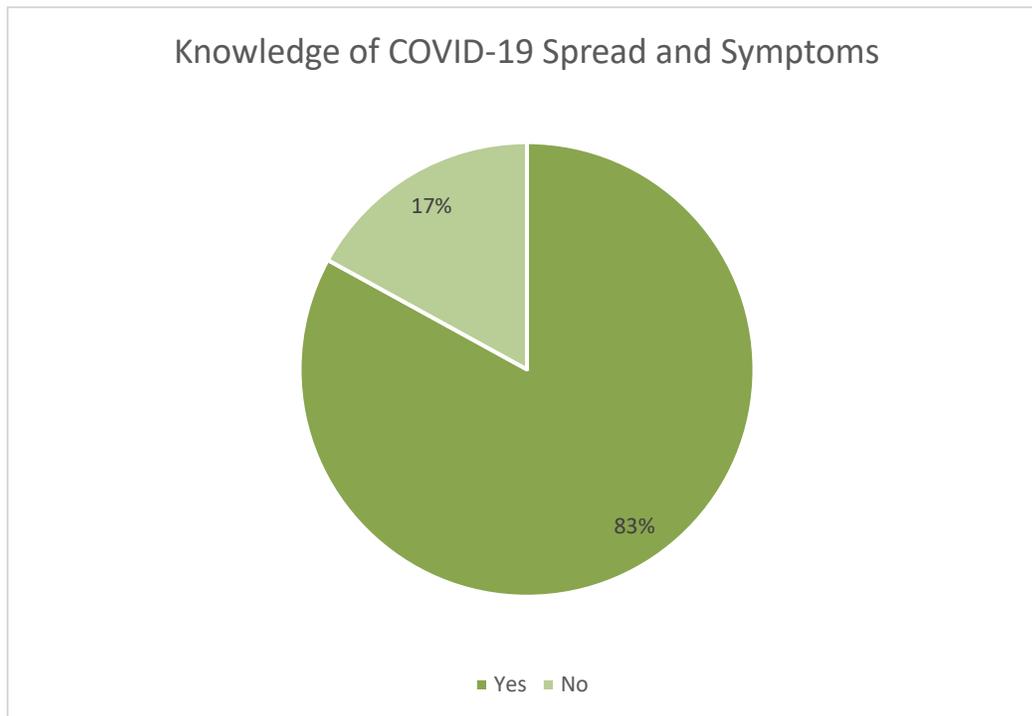
**Table no 18:** Knowledge of COVID-19 Spread and Symptoms

Total Population	Yes	No
100	83	17

Total population :100%

Yes =83%

No=17%





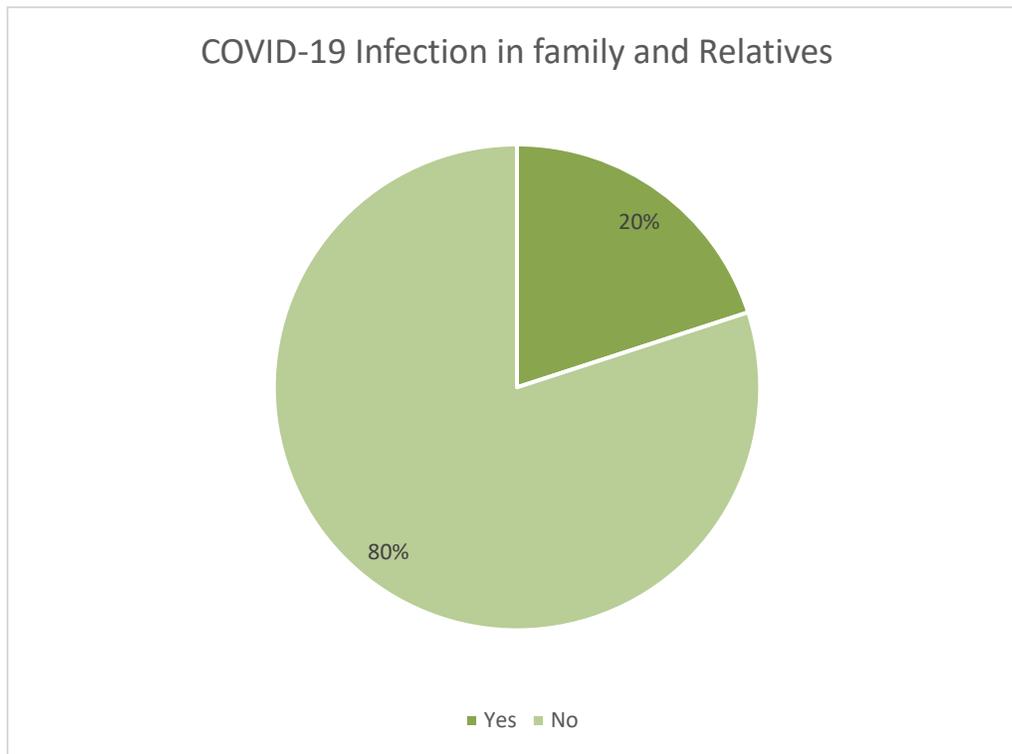
**Table no 19:** COVID-19 Infection in family and Relatives

Total population	Yes	No
100	20	80

Total Population=100%

Yes= 20%

No= 80%





## Discussion

Personal hygiene is taught to children through many parts of the school curriculum. However, there is a serious need to increase this, to cover many important issues regarding personal hygiene such as mouth care, bathing, hand washing, appropriate use of the toilet, nail and hair care and the cleanliness of clothes and uniforms. Improved cleanliness and neatness with age may be explained by children becoming more independent and able to achieve personal hygiene by themselves, related to advances in growth and development.(1)

Overall our findings are consistent with previous studies that have documented knowledge and practices of hygiene among school children in developing countries. Overall, the majority of students reported washing hands before meals. The percentages of children who reported having proper knowledge or attitude towards hand washing before eating were 90%. These high proportions are consistent with the high proportion of children who reported washing their hands before meals (83%). Notably, the self-reported frequency of hand washing before meals among children in our study is substantially higher than frequencies reported from studies of children in other countries. For instance, studies from the Philippines and Colombia indicated that 75.9% and 46.9% of students, respectively, reported washing hands before meals. The considerably higher frequency of hand washing before meals among children of Haiderabad Town may be due, in part, to their cultural tradition and ceremonial practice of washing hands before meals or the desire for clean, fresh hands before eating. However, only 67% of students who washed their hands reported using soap. This is similar to the Philippines and Turkey studies where an average of 57.7% and 62.4% of children, respectively, washed their hands with soap.(2)

Washing hands after defecation is one of the most effective ways to prevent gastrointestinal parasitic infections. While 90% of students reported that washing hands after defecation is important, 81% reported following this practice. This may be due, in part, to the attitudes of the school children. Although the students know that washing hands after defecation is important, they may be negatively influenced by factors such as laziness, the rush to play with friends, or even the lack of handwashing facilities close to the latrines. It is similar to the studies conducted in Colombia and India reported that 82.5% and 86.4% of students, respectively, wash their hands after using the toilet.(3)

In Other practices of personal hygiene, Children of Haiderabad Town showed to have good personal hygiene e.g.; wearing clean clothes regularly, covering mouth and nose while sneezing and coughing, brushing teeth regularly, cleaning and Combing Hair on regular basis. Children showed to have a habit of street Vended food were 93% because 60% considered it tasty besides having good knowledge regarding street Vended food causing infectious diseases and diarrhea. While other practices of personal



hygiene, children reported having poor bathing were 13% in contrast to a study conducted in the Philippines which found that 35% of students reported poor bathing. Another reason that can influence hygiene practice among school children is the low level of parental literacy. In most areas of Sargodha and Pakistan, the mother is typically the primary caretaker of the family and is thus charged with teaching her children proper health and hygiene practices. An illiterate or uneducated mother may be less knowledgeable about teaching her children proper hygiene practices, subsequently leading to increased rates of infection and disease amongst her children. In light of these observations, future school-based health and hygiene education programs should include strategies to involve family members, particularly mothers and siblings.(4)

The findings of the current study address the need for health promotion programs and health education lectures by school nurses and health providers to raise the knowledge, attitude and practices of the children and their families towards hygiene and sanitation. A holistic interventionist approach addressing school children's social, economic and environmental characteristics should be implemented to improve hygiene practices among school children. Hand-washing facilities and a clean toilet should be easily available and accessible to school children, taking into account the increasing number of children in each school. Moreover, motivational approaches and programs to encourage children about their basic personal hygiene should be adopted and implemented.(5)

### Conclusion

In conclusion, school-based hygiene education is important to decrease the rates of contagious diseases. Children are keener towards learning and are very likely to have healthy behavior at a very young age as compared to adults. They are also the component for the spread of information because they tell their parents what they have learned in school. Future studies regarding KAP should more keenly determine the attitudes that students have towards hygiene, availability of water and sanitation facilities at home and at school, and what are the reasons behind not washing hands. Different programs should be launched to make a lost cost-effective assessment of all hygiene measures.

The finding has revealed that a large number of primary school children we are having a good attitude towards hygiene they were neat and clean, the proportion increases with age, but it is in dire need to be improved further. Health promotion programs and health education lectures should be conducted and implemented for children and their families. School nurses and school staff also have an important role in teaching the children how to practice hygiene they should also be trained for such kind of programs Moreover it was seen that Children among this age have sufficient knowledge about Spread of Covid-19



and its symptoms and a maximum number of students were practicing the SOPs for the prevention of COVID-19. Govt. of Punjab have provided sufficient knowledge and it is all due to the effort of Govt. Strict policies to follow SOPs are implemented.

The finding revealed the students must be having compliance with all precautionary measures to protect themselves and their elders from this lethal Covid-19.

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