

# To Evaluate the Knowledge, Attitude and Practice of Hand Washing and to Determine the Factors Involved in Poor Hand Washing Among the Primary School Students of Bannu

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## ABSTRACT

**Objective:** To evaluate the knowledge, attitude and practice of hand washing and to determine the factors involved in poor hand washing among the primary school students of Bannu.

**Study Design:** Descriptive Cross-Sectional Study

**Place and Duration of Study:** This study was conducted at the in various primary school students of Bannu, KPK, Pakistan from December, 2019 to March, 2020 for a period of 04 months.

**Materials and Methods:** A sample of 200 subjects was selected by consecutive sampling technique. Total 4 schools were selected. Two schools from public sector and two from private sector were selected through convenience sampling. Study tool was a questionnaire. Data was analyzed by descriptive analysis plan.

**Results:** Out of 200 students 169 were males and 31 were females. 55 % of the students wash their hands before eating and 60.5% of the students wash their hands after using toilet. 47.5% of the students use soap for handwashing while 52.5 % of the students reported that they do not use soap. Frequency of handwashing practice was less in those students whose parents were not formally educated. Also, percentage of handwashing was more in those students whose maternal education was high. Almost all of the students did not know about the WHO method of hand washing. Majority of the students (85%) reported that they dry their hands with towel.

**Conclusion:** Education is an important factor regarding handwashing behavior. Interventions regarding handwashing should be carried out to improve handwashing behavior. Maternal education in this case will be very important. Also, most of the schools are lacking facilities of hand washing, so facilities for handwashing should be provided.

**Key Words:** Handwashing, Hygiene, KPK.

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## INTRODUCTION

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Most commonly the germs spread on the hands of children and they suffer from various diseases like cold, flu and diarrhea. Hand washing keeps the germs away from the children<sup>1</sup>. Therefore, Hand washing is defined as any method that removes or destroys micro-organisms on hands<sup>2</sup>.

If we talk about Islam religion, then we come to the point that Islam religion has given a lot of importance to hand washing and hygiene. "O you who believe! When you intend to offer the prayer, wash your faces and your hands (forearms) up to the elbows, wipe your heads, and (wash) your feet up to the ankles. If you are in a state of Janaba (i.e. had a sexual discharge) purify yourself." (Quran 5:6) Half faith of Islam is cleanliness. (Sahih Muslim 223)

It also carries immense importance regarding disease control and prevention. Washing hands with soap highly reduces the rates of intestinal parasites reinfections. Without handwashing there will be parasitic infections which leads to anemia so proper handwashing significantly decreases the prevalence of anaemia<sup>3</sup>. Handwashing also highly reduces the

prevalence of diarrhea and acute respiratory infections among the children<sup>4</sup>.

There are different aspects that affect handwashing. Social norms have great influence on the behavior of hand washing. The difference in gender may also affect the handwashing behavior<sup>5</sup>. Also, education has great impact on handwashing behavior<sup>6</sup>. Regarding behavior of hand washing most of the children shows positive approach towards hand washing. The children like the handwashing but they do not have any facilities at their school<sup>7</sup>. Having good knowledge and attitude of handwashing does not indicate that there will be good practice also<sup>8</sup>. Regarding school attendance, most of the students do not come to school due to the lack of latrine facilities<sup>9</sup>. A particular study reported that intervening a hand hygiene practice among school students significantly reduces the illness and so absenteeism<sup>10</sup>. Lack of resources namely soap and water as well as inadequate sanitation facilities may be the main reasons why children do not practice hand washing properly<sup>11</sup>. Information from this study will serve as base line data for feature school-based hygiene intervention programs in Bannu schools.

## MATERIALS AND METHODS

Descriptive Cross-Sectional study conducted in various primary school students of Bannu, KPK, Pakistan for 3 months duration from December 15, 2019 to March 15, 2020.

**Sample Size:** A sample of 200 subjects was selected by consecutive sampling technique. Selection of students was from total four schools. Two schools from public and two from private sector were selected.

**Sampling Technique:** The selection was through non-probability convenience sampling.

**Inclusion Criteria:** All the students of the primary schools selected in Bannu district were eligible for inclusion in the study

**Exclusion Criteria:** All the refusals or those students who were absent were excluded from the study.

**Data Collection Procedure:** The Study tool was a questionnaire. Verbal as well as written consent was taken from the principals of all the selected primary schools and confidentiality of the data was ensured. Questionnaire was filled by doing face to face interview from the students in their own native language. The variables in the questionnaire were demographic variables and variables related to knowledge attitude and practice. The demographic variables were age, gender, father's education, father's occupation and address. Gender was grouped into male and females. Knowledge attribute was about is hand washing good for health, is hand washing keeps germs away from the body and is hand washing saves us from diseases. Attitude attribute was about what they think about the importance of hand washing. Practice attribute was about practicing hand washing. What were they using

for hand washing? Questions were asked about frequencies of hand washing per day, method of hand washing, and how to dry hands after washing.

**Data Analysis:** Frequencies and percentages were calculated for nominal data and data were analyzed by descriptive analysis plan through IBM SPSS version 22 (IBM SPSS Corp., Armonk, New York).

## RESULTS

Frequencies and percentages were calculated of all the variables. Out of total 200 students 31 (15.5%) were females and 169 (84.5%) were males. (Fig 1) Estimate of paternal literacy was approximately 82% (164), 18% (36) were not formally educated. (Fig 2) Regarding maternal education 135 mothers out of the sample was uneducated and the percentage of hand washing practice was 23 %. Only 14 subjects have maternal education was up to 8<sup>th</sup> grade and the percentage of hand washing was 84 %. Out of the 200 sample only 6 has maternal education up to matric (10<sup>th</sup> grade), and the percentage of handwashing was 95%. (Fig 3) 56% of the students whose fathers are not formally educated, do not practice hand washing at school. The percentage is less in those students whose fathers are educated, which is 15% overall. 110 (55%) of students in the samples wash their hands before eating. (Fig 4) 125 (60.5%) wash their hands after using washroom. (Fig 4) 121(60.5%) students wash their hands after sports activity. (Fig 4). 95 (47.5%) of the students reported that they use soap for hand washing and 105 (52.5%) didn't use soap at all at school. (Fig 5)

167 (83.5%) reported to have good hand washing practice at school while 33(16.5%) were classified as not having good hand washing practices at school. Out of these 16.5%, 8 (4%) were not having good hand washing practice at school just because they didn't have time. 5(2.5%) have the problem that no one reminds them. 1(0.5%) thought they were not practicing good hand washing because no one else did it, while the remaining 19 (9.5%) reported that washroom didn't have the necessary facilities.

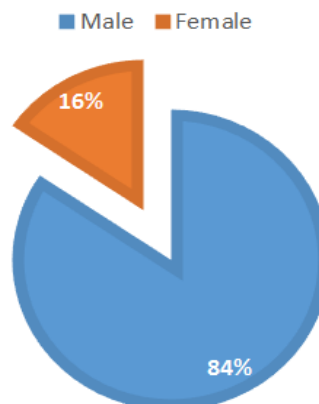


Figure No.1: Male female ratio.

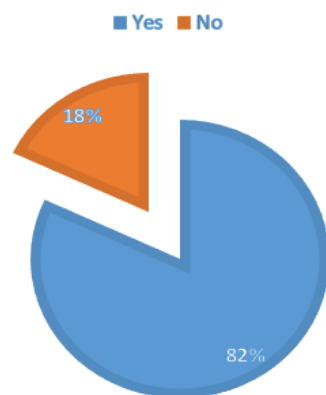


Figure No.2: Paternal literacy.

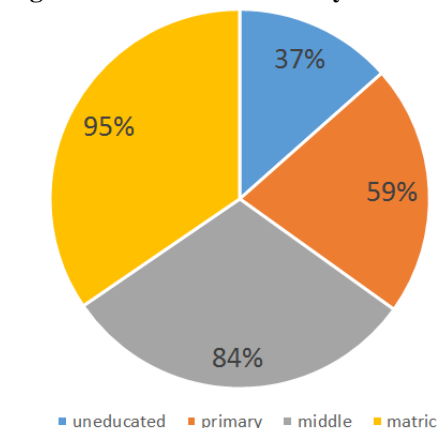


Figure No.3: Hand washing Practice

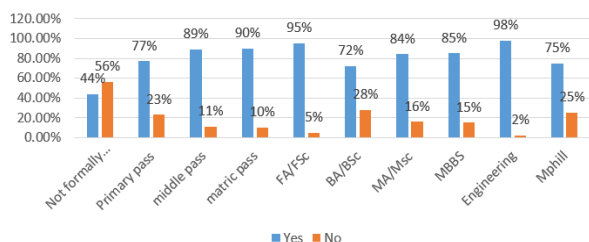


Figure No.4: Percentage of hand washing at school vs paternal education

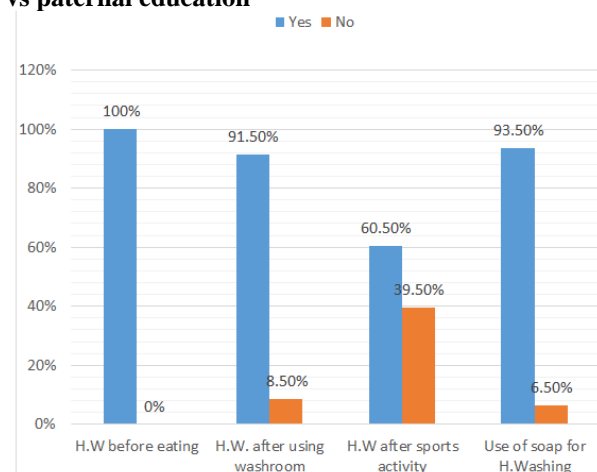


Figure No.5: Percentage of use of soap for hand washing at school

All of the students didn't know proper method of hand washing according to WHO. As in case of drying hands after hand washing, 170 (85%) of the students surveyed dried their hands with towel, 12 (6%) dry their hands through air and 18 (9%) didn't dry their hands after hand washing.

## DISCUSSION

This study was compared with KAP study on hygiene among school students in Angolela, Ethiopia<sup>12</sup>. In our study 84.5% were males and 15.5% were females, while the percentage of Angolela study were 49% females and 51% males. The paternal literacy was 82% in our study and 67.5% according to Angolela study<sup>12</sup>. The percentage of children who reported the importance and practice of hand washing before meals in our study was 100% while in Angolela study this percentage was 99% approximately 59% of the students wash their hands after using washroom in our study while in Angolela study, this percentage was only 14.8%. A study conducted in a turkey reported the percentage of handwashing before eating is 61% while the percentage in our study is 55% which is less<sup>13</sup>.

A cross sectional study conducted in china reported the percentage of using soap during handwashing is 30% while in our study this percentage is 47.5%<sup>14</sup>.

A study conducted in Bogota Colombia reported that 82.5% of students wash their hands after using toilet<sup>15</sup>. 93% of the students reported the use of soap for hand washing in our study while the study conducted in Angolela was only 36.2%. A study in Bogota Colombia (Colombian school children) reported that only 7% of the students reported having clean water and soap regularly available at school<sup>15</sup>. A UNICEF study conducted in Ethiopia found that less than one third of the schools had water points and only 5% had hand washing facilities none of which had soap<sup>16</sup>. In our study 9.5% students reported that washroom did not have any necessary facilities.

## CONCLUSION

In our study handwashing practice in those students were less whose fathers were not formally educated. So, interventions for education should be carried on which will indirectly improve the handwashing practice. Another important finding in our study was maternal education. Handwashing practice was high among those students whose mothers were educated. Therefore, improvement of female education will also increase the percentage of handwashing practices among children. Keeping the importance of education some awareness campaign must be held.

Most of the schools are lacking cleansing material and running tap water. So, schools administration should provide facilities for handwashing.

**Author's Contribution:**

Concept & Design of Study: Sami ul Haq  
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 Syed Sajid Munir  
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 Revisiting Critically: Sami ul Haq,  
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 Final Approval of version: Sami ul Haq

**Conflict of Interest:** The study has no conflict of interest to declare by any author.

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