**IMPACT OF SCHOOL SANITATION AND HYGIENE EDUCATION PROGRAM IN RURAL AREAS OF DISTRICT PESHAWAR –**

**KHYBER PAKHTUNKHWA**

**(Case Study Of three villages)**

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**ABSTRACT**

The study was carried out in rural areas of district Peshawar in union council Badhaber Khyber Pakhtunkhwa. – Pakistan. Badhaber is one of the union council in district Peshawar-Pakistan, which is comparatively backward, having poor sanitized situation and unhygienic environment. The data were collected from Mariam Zai, DawodZai and UmerZai villages. The study was to find out the Impact of school sanitation and hygiene education program by SABAWON in Rural Peshawar-Pakistan. A large sample size gives better result but due to lack of time, financial, and human resource, only 10% of the total benefices i.e. 89 students, were interviewed. A questionnaire was compiled in both English and Urdu languages, so that the respondents can easily understand. The collected data was analyzed with the help of SPSS and data analysis like percentages and t- test was applied to study the before and after situation. The study reveals that (47%) of the sample respondents belonged to age group 6-10 years, moreover majority (45%) of the sample respondent’s education level was middle level. Maximum, (75%) of the sample respondents stated that their school is free of defecation. While majority (70%) of the sample respondents reported that, they felt positive change in their behavior because of interventions in study area. T-test has been used, so t-calculated value i.e., tcal=6.20, ttab=2.14, falls in critical region. So we reject null hypothesis and concluded that sample respondents show significant change.

**Key words:** Sanitation, Hygienic Education, Defecation, interventions, behavioral change

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**INTRODUCTION**

School Sanitation and Hygiene Refers to the combination of hardware and software components that is necessary to produce a healthy school environment and to develop or support safe hygiene behaviors. The hard ware component include drinking water, hand washing and sanitary facilities in and around the school compound. The software components are activities that promote condition at school and practices of school staff that help to prevent water and sanitation related disease and parasites such as worms (UNICEF and IRC 1998).

Sanitation is the [hygienic](http://en.wikipedia.org/wiki/Hygienic) means of [promoting health](http://en.wikipedia.org/wiki/Health_promotion) through [prevention](http://en.wikipedia.org/wiki/Prevention) of human contact with the [hazards](http://en.wikipedia.org/wiki/Hazard) of [wastes](http://en.wikipedia.org/wiki/Waste). Hazards can be physical, microbiological, biological or chemical agents of disease. Wastes that can cause health problems are human and animal feces, solid wastes, domestic wastewater (sewage, sullage, greywater), industrial wastes, and agricultural wastes. Hygienic means of prevention can be by using engineering solutions (e.g. sewerage and wastewater treatment), simple technologies (e.g. latrines, septic tanks), or even by personal hygiene practices. (WHO 2000)

Sanitation is a basic, as well as a long-standing, public health issue. When early people settled in communities and started to cultivate crops and raise animals, sanitation became a primary concern for society. Today, as urban areas grow more pressure has been put on local water supplies, for the quality of the water that is available to a community greatly impacts all aspects of health. Worldwide, 40 percent of the population does not have ready access to clean, safe drinking water, and approximately 60 percent does not have satisfactory facilities for the safe disposal of human waste. Infectious agents in drinking water and food cause the diarrheal deaths of several million children annually. Globally, some 1.1 billion people are currently without access to improved water supply and about 2.4 billion don't benefit from any form of improved sanitation services. In the United States, every person uses almost 100 gallons of drinking water per day, though only a small portion of this amount is actually used for drinking. Other uses include toilet flushing, bathing, cooking, cleaning, and lawn watering (McKenzie 1997).

The provision of safe water and sanitation facilities in schools is a first step towards a healthy physical learning environment, benefiting both learning and health. However, the mere provision of facilities does not necessarily make them sustainable or produce the desired impact. It is the use of latrines and the related appropriate hygiene behavior of people that provides health benefits. In schools, hygiene education aims to promote those practices that will help to prevent water and sanitation-related diseases as well as encouraging healthy behavior in the future generation of adults (Burgers, 2000).

In the past two years, UNICEF has supplied safe drinking water and latrines to nearly 303,000 students in over 3,200 schools in earthquake-affected areas in Pakistan. In addition, over 8,000 latrines were constructed in these schools, with UNICEF support. Nearly 4,500 primary school teachers were trained in school sanitation and hygiene education and more than 316,000 students received sanitation and hygiene education sessions in these schools in NWFP. (UNICEF 2007)

On the same line the Government of North West Frontier Province (NWFP) has established a School Sanitation and Hygiene Education (SSHE) Centre with support of UNICEF. It aims to promote appropriate hygiene behaviors and sustainable use of water and sanitation facilities in schools through capacity development on life skills based hygiene education which includes proper maintenance, of water and sanitation facilities in schools which is necessary to reduce transmission of diseases. Main objective is to increase school enrollment and retention as well as enhance learning capacities of school children. (SABAWON 2008)

Hygiene education is key to the success of these new facilities at the school”, “Parallel to the set up of water supply and latrines; we UNICEF conducted a hygiene promotion campaign. Teachers and students had poor knowledge of good hygiene practices: most children were coming to school with dirty nails; they wouldn’t wash their hands before eating. During sessions, UNICEF helped children and their teachers develop useful life skills on health and hygiene Water and Environmental Sanitation has a profound impact on the health, development and general wellbeing of a community. Poor sanitation and unhygienic conditions causes sporadic diseases. According to an estimate, people living in unhygienic conditions have to spend 6 times more on medical treatment than those who avail the facility of clean water, proper sanitation and hygienic environment. Besides, it is well known that diseases in peri urban areas spread quicker than rural or urban areas as housing units are small, congested and living conditions favor easy spread of disease. The specific objectives of the study are to the Impact of school sanitation and hygiene education program by SABAWON in Rural Peshawar-Pakistan (SABOWON 2008).

**Objectives of the study:**

1.   To examine school sanitation program

2.     To evaluate benefits of intervention of launched in the schools in the project areas.

3. To suggest recommendation based on study findings.

**2. LITERATURE REVIEW**

Roy (1996) concluded that access to safe satiation facilities is essential to maintain public health and improve quality of life .How ever , only 95% of rural families in India had access to such facilities during 1991.The major weakness of the existing system that it is more dependent on government subsidies rather than on building up people's awareness and developing a better delivery system at village level through extension of low cost technology developing  the capacity of local level organizations, training of masons, etc.A new approach has been tried in Midangur district of west Bangal , with active participation of  panchayats, and with support of  UN and the national and state Government. The approach, based on better community participation has been very successful and is being copied in other districts of state.

Gorter and Ford (1997) showed that the combine effect of water supply and sanitation improvement indicate 30% median reduction in diarrhea, 36% reduction due to sanitation and alone 33% due to hygiene. The findings of a study based on data collection in Northern area and chitral district also indicate about 60% reduction in diarrhoeal disease due to combine effect of water supply, sanitation and hygiene intervention. This study also show that population with no access to safe drinking water 0% and 5% sanitation are for 6 time more likely to have diarrhoeal disease as match up to to those who have  access to safe drinking water and sanitation facilities and have improved hygiene behavior.

Rao, et al (1997) presented a brief review of latrine project in an India village which failed because all the inhabitants were scarcely brought in to its planning and execution. The project is contrasted with a moderately successful scheme in another village (in Tamil) where a concerted effort was made to educate the community about the value of latrines and to get the people's participation.

GOP-UNICEF (1998) Government of Pakistan with the help of UNICEF initiated a GOP-UNICEF “water supply and environmental sanitation program”. From Government of Pakistan side, local Government and rural development primary education department have responsibility of implementing the INES programme. According to estimate 25100 hand pumps, 160 gravity fed pipe water supply scheme and about 150, 00 pan and slabs for washrooms installation are provided to the community. One of objective of this programme was to target the reeducation of water and sanitation related disease such as diarrhea among children, which ultimately likely to reduce infant child motility retain the country.

  Najibullah (2000) describe a multi-sectoral initiative to rebuild hygiene education in Afghanistan. National Policy were produced aiming to provide a set of essential messages on hygiene and guidelines on good practice in delivering them Afghanistan are a land locked country in the heart of Asia that has been destroyed by war. Most of the water supply and sanitation has been heavily damaged by war. Public health activities are limited and basic indicators of health and development are poor. The Ministry of Public Health (MoPH) estimate that more than 57% of hospital beds are occupied by patients suffering from waterborne and related diseases. There is no sewerage system in any cities, even in the capital Kabul. Public awareness about hygiene is very low. Health inspectors regularly visited schools, and rural areas, but higher than now in urban areas. During wartime, there was limited hygiene education as part of health education programmes for secure areas, refugee camps, and IDP’s centers.

Gallup, (2001) conducted study knowledge, attitude and practice (KAP) in Punjab province indicates a negative relationship between improved hygiene behavior and incidence of disease the finding show that latrine presence in household contribute to improved hygiene practices and 68% of house hold with out latrine throw child faeces in open space compare to only 16% with latrine it further reported that only about 26% of respondents mentioned latrine presence and hygiene behavior advantages against protection of disease .This means that majority of population in rural Punjab lack awareness, capacity building and clear understandings about the impotence of hygiene in improving their health status and quality of life. More over people with out latrine in the household are not frequent user of soap.

         UNICEF (2007) “Hygiene education is key to the success of these new facilities at the school”, UNICEF to provide improved services to communities located in these remote areas of Pakistan. From March 2007, UNICEF initiated the construction of transitional shelters in targeted locations to provide children with a safe learning environment. With a life span of 10 to 15 years, these transitional shelters are built in high-altitude, harsh weather in remote areas where tents are not a long-term solution. In June 2007, Kander inaugurated its transitional shelter equipped with improved water and sanitation facilities.

**Conclusion**

The above review of literature on the subject highlights the importance of School Sanitation and Hygiene Education in developing countries of the world. In Pakistan very little research has been conducted on this issue. In the present study an attempt has been made to study and examine school sanitation and hygiene education in selected villages in rural areas of Peshawar district.

**3. METHOD OF MATERIALS**

The study was carried out in Peshawar, union council Badhaber N.WF.P for this research study.Badhaber is one of the union council in district Peshawar which is comparatively backward, poor sanitation situation and unhygienic environment. Data was collected from Mariam Zai, DawoodZai, and UmerZaiGop schools. (Govt. of Pakistan)

**3.1 Selection of sample**

A large sample size gives better result but due to lack of time, financial, and human resource, only 10% of the total benefices i.e. 89 students, was interviewed, details are given in below table #. 1.

**Table 1:Details are given in the following table.**

|  |  |  |
| --- | --- | --- |
| **Name Of Village** | **No. Of  Beneficial** | **@ 10% Of Beneficial** |
| **Mariam Zai** | 315 | 31 |
| **DawodZai** | 284 | 28 |
| **UmerZai** | 305 | 30 |
| **Total** | 949 | 89 |

**3.2 Sampling Procedure**

              To achieve the prime objective of the study a questioner was compiled in both English and Urdu languages, so that the respondents can easily understand what is ask from them and they can answer it in friendly manner it was distributed in schools and special guide lines were given to students before filling questionnaire.

**3.3 Data Collection**

For purpose the questionnaire designed in the light of the study objective was distributed in schools among students in union Council Badhaber to collect data as mention in the universe of the study. Students of high classes filled the data by them self while students of low classes were helped by teachers.

**3.4 Data Analysis**

All The data was shifted to sheets after collection and then it was shifted to tabulated format and was arranged for further analysis. The data collected was analyzed with the help of suitable software and data analysis like percentages and t- test was also applied to study the before and after situation.

The formula of t –test given as follow:

(t-test)  distributed as  under Ho where 

Unknown = 

= variance of sample 1

 = variance of sample 2

= No. of respondent in sample 1

 = No. of respondents in sample 2

**3.5 Hypothesis** :

H1 : Hygiene Education Project brought significant changes in behavior and schools environment .

H0: Hygiene Education Project didn’t bring significant changes in behavior and schools environment.

So we reject our Null Hypothesis and concluded that Hygiene Education Project brought significant changes in behavior and schools environment.

**4.0 RESULTS AND DISCUSSION**

This chapter deals with the results and discussion with respect to the Impact of school sanitation and hygiene education program by SABAWON in Rural Peshawar.

**4.1 General Characteristics of Sample Respondents**

This section of the chapter is concerned with the results and discussion regarding the age group, education of the sample respondents

**4.2 Age of the Sample Respondents**

Ages are the important role in the adoption or rejection of an innovation. Attitude of a person towards the adoption/use of an innovation are directly related with age. A person having age between 6-15 usually has more adoption capacity and visualized the consequence of an innovation. (Rogers 2003)

Table 2: show that majority (47%)of the sample respondents belonged to age group 6-10years and 45% of the sample respondent belong age group of 11-15. While 8% of the sample respondents belong to age group of 16- 20. It is commonly observed that students belonging to age group between 6-15 are quick learner and adopt things very quickly. SABAWON project school sanitation and hygiene education were also focused on students, to minimized diseases in students which spread among them due to unhygienic environment and poor sanitation system in schools. Students are also good mean of conveying message to home and other communities.

**Fig. 2: Age Group of the Sample Respondents**

Source:        Survey

**4.3 Educational Level of Sample respondents**

Education means the desirable change in the behavior of a person. It is not only important for the development of a country but also gives political consciousness to the citizens of the country, so educated person can easily adopt himself to a social change than an illiterate person. (Reference. ?)

Table 3: Indicate that majority (45%) of the sample respondents belonged to middle level while 42% belonged to primary level and 13% were in metric. The literacy level of Dawoodzai village was high i.e. (50%) than others villages. High literacy level in Dawoodzai village was due to higher number of students in rolled in metric level.

**Table 3: Educational Level of Sample respondents**

Source:              Survey

**4.4 Behavior Change of Respondent after SABAWO Interventions**

The table shows thatBehavior of sample respondents was changed after intervention of SABAWON and now children were educating their parents about hygiene education at home, which is the sign of positive change in their behavior. The data shows that people are satisfied from project intervention. Majority (70%) of sample respondents reported that they felt positive change in their behavior because of interventions.

Source: Research Field Survey

**4.5 Practicing of Hand Washing of Sample Respondents after defecation**

Hand washing after using latrine is very important in daily life. But, generally majority of rural population is unaware of this fact that most of disease spread due to not washing hands after defecation. In order to convey this important message SABAWON works hard in the project area.

Table 4.9 presents finding regarding the sample respondents practice of hand washing after defecation. Results show that after SABAWON sanitation and hygiene project, majority (74%) of the sample respondents were washing their hands after defecation. The reason might be that the respondents got more and more education and information regarding hygiene from SABAWON project. They also got sufficient awareness how to keep them selves clean and safe from disease. Whereas before SABAWON project only 26% of the sample respondents were washing hands.

T-test has been used to test the hypothesis that either it is significant or non significant. Since the t-calculated value i.e., tcal = 6.20 >ttab = 2.14 fall in in the critical region, so we reject our null hypothesis (0.05) and conclude that there is significant difference between the means. Sample of respondents show significant change.

figure 4.9 Practicing Hand Washing of Sample Respondents after Defecation.

Source: Research Field Survey

**4.6 School’s Condition regarding Defecation**

Table 4: tells us about school condition of project area that either schools are free of defecation or not. As SABAWON carried out sanitation project in these villages and now people have the knowledge how to get free of defecation. Maximum, (75%) of the sample respondents stated that their school is free of defecation. The reason for this is that majority of respondents was aware about diseases caused due to defection and interested in getting knowledge about sanitation. On the other hand, 25% of the sample respondents didn’t respond regarding free defecation. The reason might be that, they were not taking interest in sanitation and hygiene project and their priorities were other than sanitation. Table further indicates that, 90% of sample respondents in Mariam zai village, 68% in Dawoodzai village and, 67 % in Umerzai village stated that there school are free from defection, where as 10%, 32%, 33% respectively show negative response.

**Fig. Schools Free of Defecation**

Source: Research Field Survey

**5.0 SUMMARY, CONCUSION AND RECOMMENDATIONS**

**5.1 SUMMARY**

The research was conducted to study the impact of school sanitation and hygiene education project by SABAWON in union council Badaber. There were 949 beneficries in three villages out of which data was collected from 89 respondents, which comprises 10% of the whole universe. For data collection a questionnaire was developed and was distributed among the respondents in the project areas.

After analyzing the data, it was found that, 47% of the sample respondents belonged to age group between 6-10 and, 45% 11-15 age group. Forty Five percent of the sample respondents were in middle level 42% in primary while 13% of the sample respondents were in metric. It was found that, 71% of the respondents favored SABAWON sanitation work in project area. The result further stated that, 61% of the respondents told that SABAWON carried out different intervention which includes awareness, community development, and vocational training.

**5.2 CONLUSION**

   The study generally concludes that effect of the school sanitation and hygiene education project on school community, of Badaber executed by SABAWON has played important role in sanitation and in conduction of other different intervention in the project area. The school sanitation and hygiene education project has been successful. Maximum of the sample respondents favored for SABAWON work and found familiar with SABAWON that, has been carried out different sort of intervention i.e. awareness, education, community development and vocational trainings. Proper method of using latrines and time of hand washing has been learnt by maximum respondents. As a result, majority of the sample respondents clean themselves with water and soap. Majority of the sample respondents showed satisfaction on getting sufficient amount of clean water from water tanks and hand pumps. Most of the respondents suggested that drainage system provided by SABAWON, is well organized. School sanitation and hygiene education project executed by SABAWON changed the environment of schools and also changed the attitude of students regarding clean and healthy environment

**5.3 RECOMMENDATIONS**

Keeping in view the findings of the study, the listed recommendation are made.

1. The SABAWON should extent their interventions in all villages of union council Badahber.

2. That health education in primary schools needs to be reviewed with the aim of making the education system practice-orientated rather than knowledge based as is the case at present.

3. Hygiene promotion should be included in all levels of the educational curriculum. Specifically, in the syllabi of both primary and secondary schools.

4. Government of Pakistan should pay attention to promote School Sanitation and hygiene Education on country level.

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