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MAXIMIZING THE BENEFITS FROM WATER AND ENVIRONMENTAL SANITATION

Health and hygiene situation in Northern Areas of Pakistan: Pre and post WASEP interventions

Nek Alam, Pakistan

The overarching goal of Water and Sanitation Extension programme (WASEP) is to reduce diarrhoeal morbidity by 50% in its partner communities. WASEP includes water supply, sanitation, drainage, water quality and health and hygiene education in its interventions. To calculate the possible impact of health oriented intervention, it is very important to have knowledge of existing health situation and it is always valuable to know about local beliefs and practices concerning hygiene behavior. Unfortunately, hygiene education has been an ignored subject and has not been key objective to the organizations responsible for providing rural water supply schemes and has never been an attractive option to the villagers of Northern areas and Chitral. Health should be one of the prime objectives for investing money in a water supply and Sanitation programmes. The prevailing situation requires a thorough thought to address this subject. There is a large vacuum in this field, which needs to be filled with better planning. There are many aspects of rural life in the Northern Areas and Chitral region of Pakistan where people have unhygienic traditional practices. Unfortunately, sometimes these unhygienic practices are linked with beliefs and religions. Some people for example believe that all flowing water is clean i.e. river; channels etc. regardless of its source. Also, cloths after washing with soap are not considered clean (Paak) if not dipped in water at least one meter deep. Women are main procurer and user of water and entirely responsible for sanitation and hygiene of the family at home. In many parts of northern areas, acute shortage of water, ignored sanitation and hygiene have made life difficult for women. A water and sanitation programme, should therefore involve women in the development process. The central role of women in water, sanitation and hygiene has been emphasized in throughout WASEP's five years programme. WASEP has been aiming to provide safe water at injection rather than at source or at tap stand. As discussed above, women shoulder responsibility of providing water to their families. Therefore, primary target group was the women who also carry out the risk practices. i.e. cleaning children, handling children's stool and responsible for excreta disposal.

Prevailing situation

Unfortunately, hygiene education has been an ignored subject and not been key objective to the organizations responsible for providing rural water supply schemes and has never been an attractive option to the villagers of Northern areas and Chitral. Health should be one of the prime objectives for investing money in a water supply, Sanitation and health and Hygiene. However, the prevailing situation requires a thorough thought be given to address this subject. There is a large vacuum in this field, which needs to be filled with better planning. There are many aspects of rural life in the Northern Areas and Chitral region of Pakistan where people have unhygienic traditional practices.

Collecting baseline data

To investigate and find out need, existing practices and requirement of target community, information is collected through individual house hold visits, for the design of health and hygiene programme. WASEP's health and Hygiene Promoters collect pre- intervention baseline data through individual household visits on personal hygiene, domestic

hygiene and environmental hygiene. The parameters (shown in the table) were used as indicators to test out the existing knowledge of the communities (women) about exiting hygienic practices. In fact these were taken as foundation for the improvement of personal and domestic hygiene and emphases were given to these parameters in achieving the overall objective of the WASEP' health and hygiene program. Through direct observation and using some of PRA tools, information was gathered from the villages. Each indicator was given a score say 1 to 10 through observation. For example:

Condition of storage vessel

a. Dirty and uncovered	0
b. Dirty and covered	4
c. Clean and uncovered	6
d. Clean and covered	10

Data was analyzed and presented in the graph. This data was collected from on an average 20 villages each year covering 100 house holds from each village. It is worth mentioning

Table 1 Parameters for Health and Hygiene assessment

Name of indicator	
1) Use of clean utensils	2) Knowledge that dirty water may cause diarrhoea
3) Covering of utensils against dust and flies	4) Knowledge that flies may cause diarrhoea
5) Provision of cover on water storage vessel	6) Knowledge that germs may cause diarrhoea
7) Presence of human faeces in courtyard	8) Knowledge that open defaecation (faeces) may cause diarrhoea
9) Presence of human faeces outside of houses	10) Knowledge that dirty hands may cause diarrhoea
11) Presence of animal faeces in courtyard	12) Hand washing before eating
13) Cleanliness of courtyard	14) Hand washing after defaecation

that same health and hygiene promoters collected this data pre and post intervention.

Data is also collected for diarrhoeal incidences and other water and sanitation borne diseases. i.e. cholera, typhoid and hepatitis etc. However, only diarrhoeal diseases were considered because many other factors contribute to the incidences of other diseases and those are difficult to measure. Data from household is verified from nearby health facility (Hospital, dispensary etc) and group discussions during PRA exercises.

Parameters in Table 1 were considered as indicators for the improvement of health and hygiene practices pre and post implementation of WASEP interventions.

Involving women

There is still a large room to improve despite the women's decade (1975-1985) is over.

Women are main procurer and user of water and entirely responsible for sanitation and hygiene of the family at home. In many parts of northern areas, acute shortage of water, ignored sanitation and hygiene have made life difficult for women. A water and sanitation programme, should therefore involve women in the development process.

The central role of women in water, sanitation and hygiene has been emphasized in throughout WASEP's five years programme. WASEP has been aiming to provide safe water at injection rather than at source or at tap stand. As discussed above, women shoulders responsibility of providing water to their families. Therefore, primary target group was the women who also carry out the risk practices. i.e. cleaning children, handling children's stool and responsible for excreta disposal.

Community Health Intervention Programme (CHIP)

This programme was started with individual household visits by Health Promoters in partner villages to achieve following objectives:

- To create awareness about personal, domestic and environmental hygiene.

- To help them understand how water and sanitation borne disease are spread and what preventive measures can be taken.
- To make villagers aware how their children are cured infected by diarrhoea.
- Promotion of latrines and their usage.

In theory, much has been written about women's role in water and sanitation, but women still have not been given real importance in these projects.

WASEP has employed female health and hygiene promoters (HHPs) who have relevant professional backgrounds and can speak local languages. They carry out hygiene education to women and children. A variety of methods to put the health education messages across the partner communities are included:

- Group discussions
- Posters and pamphlets
- Role-playing
- Demonstration
- Local radio

In addition, household visits for monitoring purposes provide unique opportunities both for Health and Hygiene Promoters (HHPs) and families for sharing experiences on a given hygiene behavior.

Just after identification of the project a female member from each village is also selected by the communities for the position of Water and Sanitation Implementer (WSI) to take care of the health and hygiene activities being undertaken in her village. As the change of behavior is not a one time job, it is a long process. Therefore, WSI remains as a link between community and WASEP after withdrawal of WASEP and responsible to continue facilitating communities with hygiene promotion. WSI is remunerated by the endowment fund already in place by the beneficiaries.

Involving school children

School Health Intervention Programme (SHIP) was initiated to focus on school children in the partner villages. Because, after home, schools are the most important place to learn. Children have an important role in their houses. Elder chil-

dren take care of their younger sisters and brothers and they eager to learn new things. Therefore, children can play an active role and can be a stimulus and a change agent for the improvement of hygiene behavior in the community.

Curriculum development

In Most of the Northern part of Pakistan, there are schools run by Aga Khan education services. Therefore, it was not difficult to incorporate the curriculum of health and hygiene education in school hours. Local government education directorate was also kind enough to include a period (zero periods) in the schools located in WASEP interventions. Follow up visits showed that most of the teachers were enthusiastic in continuing this programme in their schools.

“Hand washing with soap and water after contact with faecal material can reduce diarrhoeal diseases by 35% or more” and “using a lean pit latrine and disposing of children’s faeces in a pit latrine can reduce diarrhoea incidences by 36% or more: (Almedom et al (1997)

For bringing about changes in hygiene behavior, on the basis of the research of Water, Sanitation, Health and Hygiene Programme following were taken into account while developing curriculum and messages:

- Be relevant in local context
- Be locally acceptable
- Be action oriented

The curriculum developed for SHIP consists of eight topics.

- Clean hands (washing with soap or at least with ash or soil)
- Safe disposal of faeces
- Latrine usage
- Diarrhoea (causes and preventive measures)
- Worms
- Clean and safe water (at point of use/while drinking)
- Safe food
- Personal hygiene

Visual messages were developed on some of above topics. Latrine usage and washing hand, for example. All these topics were passed on to the target audience during household visits and in focus group discussions. Rubbing hands with soil (locally called Tayamum) in absence of water is a local practice (probably people have drawn the idea from Islamic beliefs) therefore, this was incorporated in the message, that if soap is not affordable, washing hands with ash can be helpful. Local females who read Quran (holy book) and religious leaders were included in disseminating the messages about the importance of cleanliness in the light of Islam. The Institute for Education Development (IED) of the Aga Khan University also provided guidance on the development of the curriculum.

Conclusion and recommendations

- Sanitation facilities should be culturally appropriate and acceptable to the users.

Mainly existing practices of the sanitation options were improved i.e. twin pit composting latrines, on the basis of the extensive research of the predecessor of the WASEP. Pour flush latrines were constructed by many organizations but they were rarely used by the beneficiaries for many reasons.

- Apart from quality, quantity of water also helps in achieving broad health impacts.

Although, WASEP provides potable water to its partner communities, however finding during research phase revealed that ample quantity of water available in the areas had contributed a lot to improve the health.

- Close access to water fosters the use of hygiene practices related to water.

During technical monitoring and evaluation of the WASEP interventions it was found that the households having tap stands in their courtyard had been using more water for washing cloths and cleaning themselves than those not having tap stand in the courtyard. It is worth mentioning that WASEP provides tap stand in the courtyards only when there is provision for the disposal of grey water.

- Water supply interventions should be integrated with sanitation facilities and health awareness activities to achieve health benefits.

In WASEP interventions, 100% sanitation coverage could not be achieved. Therefore, follow up visits by health and hygiene promoters showed that those households not having improved latrines were suffering from diarrhoea more often than those having improved latrine.

- Knowledge of local norms, beliefs and practices is vital to tailor health and hygiene education.

In Northern areas of Pakistan almost there is 100% Muslim population. Therefore, religious leaders were involved in propagating health and hygiene messages in the context of Islamic teachings. This resulted into a good response.

- Women, being responsible for health matters, Children, the most susceptible to the water associated diseases, must be involved in development process

This was the major difference between WASEP and other Govt and NGOs in WATSAN sector. WASEP was first of its kind in the Northern region of Pakistan to involve women in identifying location and design of tap stand and latrines and given representation in the water and sanitation committees.

In addition, children were given opportunity to learn about the health and hygiene engaging them in SHIP.

- A woman may be culturally more acceptable as health and hygiene educator.

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Contact address

Nek Alam
Manager Health and Hygiene Promotion
Water and Sanitation Extension Programme
Northern Areas
Pakistan
E-mail: naikalam2004@yahoo.com
