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SUSTAINABILITY OF WATER AND SANITATION SYSTEMS

Health education in water and sanitation projects

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EVER SINCE THE launching of the International Drinking Water Supply And Sanitation Decade, a number of developing Countries have benefited from External Support Agencies, Non-governmental Associations, multilateral organisations and even governments in the provision of water and sanitation facilities. A few indicators however have revealed that the mere provision of these facilities did not mean that beneficiaries of these programmes were enjoying improved health (World Bank, 1976).

The problems that emanated from review and evaluation of some of the health impact programmes can be summarised into three, mainly non-use and abuse of the facilities and therefore poor sustainability of the water and sanitation projects. In the Ashanti Region of Ghana, 46% of a population of 71,500 who lived in some 54 settlements under a Catholic Diocese Water Supply Project were still dependent on heavily polluted water from streams and rivers and therefore suffered from water and sanitation associated diseases like typhoid fever, diarrhoea, schistosomiasis and intestinal worms (Water Resources Research Institute, 1992). In the Upper East and Upper West Regions, where 80% of the population had access to good drinking water through the Canadian assisted well drilling programme, it was discovered in the 1983 yellow fever epidemic that the larvae of the vector mosquito (aedes egypti) was growing in the water pots of many compounds (USAID, 1984). Again in the Northern Region, where water provision has featured prominently in development programmes lately, it was discovered that between 1989 and 1993, almost 30% of deaths recorded were attributed to malaria, especially among women and children while Out Patients Department attendance records indicated that 52% of cases were for malaria which also accounted for 32% of admissions.

The examples above can be contrasted with the Togo Rural Water And Sanitation Project (1981-87) in which 1000 wells fitted with footpumps and a number of improved excreta disposal facilities were provided and in which community participation and health education took 25% of total project funds. There is also the Matara Water Supply and Health Education Project funded by the Overseas Development Administration in 1983 in Sri Lanka and the Hygiene And Sanitation Education Campaign in Yemen in 1983. In these projects, the health improvements started appearing after about three to five years (Pillsbury et. al., 1988). Again in a Water Supply, Sanitation And Hygiene Education Project in Mirzapur, Bangaldesh in which much attention was devoted to health and hygiene education alongside the provision of physical facilities, some of the outcomes included reduction of ascaris infection by 33% while diarrhoea also reduced by about 75% when an evaluation was carried out after the project; majority of households who previously used mud for hand-washing after defecation were found to be using ash instead, a sure indication of positive attitudinal and behavioural change (Aziz et.al, 1990).

Health and hygiene education

Health education refers generally to the knowledge and understanding of the transmission, symptoms and control of diseases, and other subjects like first aid, breastfeeding, child immunisation, pre-natal care, family planning, primary health care concerns etc. Hygiene education refers to the basic guidelines regarding personal, domestic and environmental cleanliness. In water and sanitation projects, health and hygiene education programmes will refer to issues such as knowledge about the origin, cycle, symptoms and control of water and sanitation associated diseases as well as how to use water in a health-promoting, disease-preventing way e.g. instruction in all aspects of water collection, storage, use and disposal; it can apply to other areas like the ideal ways to use water in general food preparation, for hand-washing, bathing etc. Experience in water and sanitation projects indicate that without a comprehensive health and hygiene education component, projects stand little chance of achieving the basic reason for which they are established, i.e. health promotion.

Methods used in health and hygiene education

Although a number of health education methods exist, the author has decided to divide them into three categories; these are audio, visual and participatory although these are not mutually exclusive in their use.

Audio methods

- talks with proverbs, anecdotes and jokes
- stories or fables
- case studies
- tape recordings
- radio

Visual methods

- posters
- flip charts and flannel graphs

- puppet shows
- photographs
- publications in newspapers and magazines
- films (television, video)

Participatory methods

- discussions
- demonstrations and displays
- role plays or simulation
- songs
- drama

Regardless of the methods used, it is important to take four basic issues into consideration. They include the following:

i. The message must be grafted onto the existing knowledge of the target communities;
ii. It must be delivered by officials with good communication skills and some technical knowledge about water and sanitation;
iii. All the methods must be accompanied with verbal communication in discussion since it has been realised that in rural communities news is spread principally by world of mouth;
iv. The officials must remember the main aim of health and hygiene education, which is to help communities to develop skills that will help them to identify and analyse their own health problems with a view to finding appropriate solutions to them.

Components of health and hygiene education programmes in water and sanitation projects

Community diagnosis is about the first most important component in the design of a heath and hygiene education programme. It involves moving into the community and establishing rapport with community leaders and key personnel for data collection on the social, political, economic, demographic, religious, health and other indices. It is appropriate to undertake this before the inception of the provision of physical facilities; this helps with the setting out of specific objectives, resource mobilisation and offers room for comparison of results or indices after the intervention of the project in evaluation.

Involvement of knowledgeable people in the community in developing health education materials is necessary to make culturally-relevant and acceptable materials and methods; it is also a sustainability input since it lays the groundwork for the possible continuation of the programme when outside agencies have left the scene. When the local people are involved at the initial stages of project-design, it improves community participation and increases the chances of success of the project. It becomes even better when the people are taken through monitoring of the performance of the project over time because locals are made to ascertain the impact or results of their own action or inaction.

The education programme must be targeted at women who are the primary people in the community who fetch, store, use and dispose water and who take care of childrens' bathing, the disposal of their excreta, domestic cooking, sweeping of compounds, refuse disposal etc.

Problems

Health and hygiene education workers in rural water and sanitation projects in Ghana have been confronted with two main problems, in addition to the historical fact that water, sanitation and health / hygiene had been presented as distinct, unco-ordinated phenomena with little or no relationship. This makes it difficult for rural folk to easily comprehend and appreciate the links.

One of these problems is that in an attempt to motivate local voluntary officials who assist in implementing project objectives, including health and hygiene education, incentives such as uniforms, bicycles etc. have been given. Among other things, this serves as status symbols and an impetus in the social stratification of their communities, including the women. The men in the communities have not taken kindly to the upward social mobility that their women counterparts have assumed and have therefore been unco-operative. The question has also been raised whether these local voluntary workers would continue to render the services outside the project environment when the incentives are no longer forthcoming, since the projects which are often funded from external sources have a lifespan.

Similar to the problem above has also been the second problem of resistance to the operation of the local voluntary health personnel from other established health workers in the communities. It has come from people such as traditional birth attendants (TBAs), herbalists and spiritual healers. Employees of formal structures such as the Environmental Health Division of the Ministry Of Health particularly Environmental Health Assistants see the work of these voluntary agents as challenging their dominance, monopoly, authority and financial control on the health sector.

Conclusion

It as become unequivocally clear that the inclusion of health and hygiene education programmes can no longer be considered as a mere appendage to water and sanitation projects. The three must be seen as complementing each other towards the overall objective of promoting the health of rural citizens. Health and hygiene education is a must if the facilities are to be used and used properly for the projects to be sustained and the health benefits to be realised. It must precede and go side by side with installation and construction of physical facilities in current programmes where the demand-driven principle is being emphasised. Probably what should rather be considered is the time needed for the realisation of the health impacts of the health and hygiene education programme. Owing to the fact that changing peoples' behavioural attitudes is a slow and gradual process which requires a long gestation period (Akuoko-Asibey & McPherson,

1994), financiers and engineers of water and sanitation projects which have a strong health and hygiene education component should exercises some patience in looking out for immediate positive health impacts.

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