SANITATION & FAMILY EDUCATION (SAFE) PILOT PROJECT

REPORT
ON
THE QUALITATIVE ASSESSMENTS

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ACKNOWLEDGEMENTS

ACRONYMS

ICDDR,B   International Center for Diarrheal Disease Research, Bangladesh
PRA   Participatory Rural Appraisal
SAFE   Sanitation and Family Education Project
WASH/AID   Water and Sanitation for Health Project (USAID-funded project
                   based in Arlington, Virginia, USA)
WASH/CARE   Water & Sanitation/Hygiene Project (a CARE Bangladesh project)

GLOSSARY

Hanging Latrine   Elevated latrine structure with an open area below
                       allowing feces to fall into a pond, ditch, or on the ground.
                       Hanging latrines are typically built around the edge of a
                       pond.

Pit Latrine   A dug latrine with a 2-meter deep pit, a diameter of one
                       and a half hands, a bamboo slab or squat area and a
                       separate cover plate.

"Sanitary" Latrine   Similar to a pit latrine, but superior construction, often of
                       brick and/or mortar, and with a larger pit.

Water Seal Latrine   Similar to a sanitary latrine, but with a goose neck water
                       seal slab/squat plate. Also called a "pour-flush" latrine.

Hygienic Latrine   A latrine that effectively isolates feces from the
                       environment, that is a "sanitary," water seal, or pit
                       latrine. Hanging latrines are not considered to be hygienic
                       latrines.

Tubewell   A small diameter protected (sealed) well with a handpump
                       attached

Key Community Person   Individuals identified by each community as being
                       important and influential persons, whom others listen to
                       and respect.

EXECUTIVE SUMMARY

CARE Bangladesh is implementing a pilot project entitled the Sanitation and Family Education (SAFE) project in selected thanas of Chittagong District. SAFE builds on an earlier project, the Water and Sanitation/Hygiene (WASH/CARE) project, which was a post-cyclone relief effort following the devastating April 1991 cyclone. The WASH/CARE project mainly focussed on the rehabilitation and installation of water and sanitation hardware.

SAFE's objectives are to develop effective and replicable hygiene education strategies to promote behavior change, to develop and assess different models for health and hygiene education outreach, and to design and implement a behavior-based monitoring system for the hygiene education program. To achieve this, two hygiene education outreach models are being implemented and assessed. The first examines outreach efforts through local tubewell caretakers and their spouses through village group meetings. The second explores ways to more widely disseminate messages in the community via school programs, child-to-child activities, and by reaching men and key persons identified by the community.

The approach used in SAFE is innovative in several respects. Instead of simply promoting the standard hygiene education messages and materials (which stress a large number of "perfect" behaviors), the SAFE messages and activities are developed from data collected in complementary quantitative and qualitative assessments. These information collection activities are integrated into a cycle of data collection, analysis, and formulation of questions that require further information. The qualitative assessments allow community members and field workers to examine problems and define solutions that fit into existing community norms and practices. This information is used to address the following objectives:

a) To define questions, terminology, and response categories for the baseline survey instrument;

b) To define the nature of the problems and to devise appropriate and effective interventions and messages;

c) To answer questions raised by the baseline survey;

d) To facilitate community participation in the process of defining the problems and finding solutions; and

e) To identify who the community considers to be influential individuals.

The qualitative methods used include Key Informant Interviews, Semi-Structured Interviews, Focus Group Discussions, Observations, and Participatory Rural Appraisal methods. An advantage of using different methods is to distinguish between *actual* behaviors and *ideal* behaviors.

A. Defining Questions, Terminology, and Response Categories for the Baseline Survey Instrument:

* Water Collection, Water Quality, and Water Storage:

Our assessments showed that women collected and used both tubewell and pond water (the pond water was used for cooking); and provided information on water storage practices. We also learnt about community perceptions on the advantages and disadvantages of tubewell and pond water. This information helped us to better structure and organize the baseline survey instrument. The focus groups helped to reveal the ideal behaviors, while the observations and interviews helped us to identify constraints and understand the extent to which ideals are actually practiced in the community.

* Disposal of Infants' Feces and Causes and Prevention of Diarrhea:

Observations in households with children under age two gave us information on how and where infant feces were disposed of. We conducted a number of interviews with mothers and focus group discussions with tubewell caretakers, teachers, and children on this subject. Also, through a combination of focus groups and semi-structured interviews with mothers and tubewell caretakers, we found out what they believed to be the cause of diarrhea. These methods enabled us to gather important information on common beliefs and practices, and helped us to accurately pre-code the questionnaire.

B. Defining the Problem and Devising Appropriate Interventions:

* Hand Washing:

Several CARE field extensionists and tubewell caretakers pre-tested some intervention messages on handwashing. Since ash and mud are both potential low-cost alternatives to soap, we asked them to clean their hands using either ash or mud (depending on their preference) for one week. They described the advantages and disadvantages of each agent, and the practical ways they had adapted and modified the advice for use. This gave us direct feedback on how the agents were perceived. For instance, we learnt that mud was associated with "worms and germs," while ash was seen as relatively "cleaner."

We observed that hands are often dried in an unhygienic way after washing which can increase the pathogenic contamination. Through a focus group discussion with mothers, we found that it would be feasible to promote the idea of keeping a special clean rag for hand drying. The message would include advice to frequently wash the rag.

* Disposal of Small Children's Feces:

We interviewed tubewell caretakers, mothers, field extensionists, school children and teachers to further explore how feces were disposed, latrine use by small children, and effective and acceptable alternative strategies. From this information, we defined messages on latrine use which were promoted in schools and the community.

* Using Field Workers as Key Informants:

The SAFE extensionists come from the communities in which they work. We recognized the value of their local knowledge, and encouraged them to analyze, and to relate their own observations and experiences to the process of intervention development. This gave them a sense of partnership in the investigation and implementation process. They were also aware of the rationale for the data gathering activities and played an active part in developing and testing hypotheses and interpreting the findings. Using them as key informants gave us valuable information, and also helped them relate to the messages in a more practical way.

C. Answering Questions Raised by the Baseline Survey:

* Why do those living furthest from the tubewell have less diarrhea?

We found a paradoxical relationship in the baseline survey between distance to the tubewell and rates of diarrhea in the household. The 56 households 20 minutes or more away from the tubewell experienced less diarrhea than those that were closer to the tubewell. Observations and a small survey explored why this was the case. Findings showed that in general, those who lived close to the tubewell were less careful and more careless about water storage. Also, they were more likely to prime the tubewell with pond water when it was running dry or not pumping well. These findings were important for message development.

* Why do some households have a pit latrine?

Our baseline survey showed that a small group of six households had built and used their own pit latrine. We asked ourselves why these few households had taken the unusual step of constructing a home made pit latrine. Through focus group

discussions and key informant interviews, we learnt about the perceived advantages and disadvantages of pit latrines, and how they compared to the more popular hanging latrine. Pit latrines were perceived to reduce unpleasant odors and contamination of the household environment. These findings were incorporated into the promotional messages.

D. Community Participation, Identifying Key Influential People in Each Community and Understanding the Beneficiaries' Perspective:

* Participatory Rural Appraisal (PRA) - Community Mapping:

This method encourages villagers to create a map of their village or neighborhood as a stimulant to further discussion on a variety of topics. PRA allows the investigators to quickly gather data, and the process involves sharing these data with the participants and allows community members to fully participate in intervention development.

We used the mapping technique to identify "key community persons" or those people identified by each community as being important and influential individuals, whom others listened to and respected. Each community identified its own influential advisers. These represented a wide range of people including, a tea shop owner, an elderly lady who sets broken bones, and a retired school master. The process raised the CARE workers' awareness and respect for villagers as knowledgeable and articulate people. It also gave the workers confidence to interact with beneficiaries in a more participatory and less didactic manner.

E. Conclusions:

The qualitative component was useful because the design was flexible. When necessary, a number of different methods were used. Rather than conducting dozens of focus groups using workers who were bored and did not understand the purpose, each session addressed specific and clearly identified questions.

Field workers were included as partners in the process. They knew that the findings directly influenced the key messages that they would disseminate. They were encouraged to make observations, ask questions, and reflect on the process. In fact, these casual observations often resulted in useful hypotheses. The data came from the community members, but the field workers helped refine its interpretation because of their relationship with the beneficiaries. Each member of the team clearly understood that their input was an important and necessary component of the project.

Also important was the involvement of senior staff in the qualitative data gathering process. This meant that field workers and beneficiaries gave it importance. They

realized that key decision makers were actively interested in the questions being asked, and the responses.

F.   Recommendations for the SAFE Project:

a.   Qualitative methods have an important part to play in the monitoring and evaluation of the SAFE project. Some can capture ideal behaviors, while others are better at identifying actual behaviors.

b.   A few weeks after message dissemination, observations of behavior around tubewells, ponds, and latrines, followed by focus group discussions should be conducted to see if people recall messages, and also evaluate how messages have been understood. This could also provide feedback from the audience on the quality of the outreach sessions.

c.   Qualitative approaches can show if beneficiaries perceive that changes are happening, and can tell us how people respond to the changes. Community mapping can be used to assess changes in a sub-sample of the communities. This kind of information would help to assess the community's perception of the effectiveness of the project's strategies.

d.   Focus groups with field extensionists and beneficiaries could help evaluate the process of message dissemination, and identify areas for improvement.

e.   The role of the "key community person" should be evaluated. For those felt to be particularly effective, small case studies could be prepared. Their role and activities should be described and documented to identify the problems and strengths of this approach.

f.   When problem areas are identified, a mini "workshop" might be conducted to focus on these problems and find solutions. This could involve key people such as tubewell caretakers, effective "key community persons," and mothers. After working in small groups moderated by field extensionist or their supervisors, a plenary session could bring together recommendations for solving the problems. This could also increase the momentum among workers and beneficiaries to find solutions.

G.   Recommendations for Other Health Projects:

a.   SAFE has shown that a wide range of qualitative techniques can be effectively implemented and analyzed by field workers who have no previous skills or training in these methods; and who often work under conditions with demanding time frames and limited external resources.

b.   If organizations lack the requisite in-house expertise, a limited amount of external technical assistance may be necessary. SAFE hired a social anthropologist as a consultant for about four weeks. This consultant provided technical guidance on the application and analysis of the qualitative methods.

c.   Organizations should have a strong commitment to designing interventions and making program improvements based on information from the community. A project philosophy that good information is necessary to the project is the driving force behind participatory data collection, and makes the whole process work.

1. INTRODUCTION

1.1. Background on the Project:

CARE Bangladesh is implementing a pilot project entitled the Sanitation and Family Education (SAFE) project in selected thanas of Chittagong District. SAFE builds on an earlier project, the Water and Sanitation/Hygiene project (WASH/CARE), which was largely a post-cyclone relief effort following the devastating April 1991 cyclone. The WASH/CARE project focussed primarily on water and sanitation hardware rehabilitation and installation, including repair of damaged tubewell platforms, provision of tubewells and latrine construction.

The WASH/CARE experience provided CARE Bangladesh with a valuable entry into communities where there has been little outside (NGO and Government) involvement, and where there is a great receptivity among community members due to CARE's quick post-cyclone response. The SAFE project is designed to build on the earlier WASH/CARE experience and is focused on the "software" aspects of water, sanitation and hygiene in the same areas where WASH/CARE previously installed hardware.

The SAFE project area covers about 9,100 households, with the expectation that activities will later be expanded to cover a larger population in the next phase. The objectives of the SAFE pilot are to develop effective and replicable hygiene education strategies to promote behavior change, to develop and assess different models for health and hygiene education outreach, and to design and implement a behavior-based monitoring system for the hygiene education program.

To achieve this, two hygiene education outreach models are being implemented and assessed. The first, more conventional model, examines outreach efforts through local tubewell caretakers and their spouses, who in turn provide hygiene education to village dwellers via group meetings. The second explores ways to more widely disseminate messages, to those community members not reached by tubewell caretakers. This is done via school programs, child-to-child activities, and by reaching men and key persons identified by the community, in addition to tubewell caretakers.

1.2. Background on Related Activities in CARE:

The SAFE project draws on the experiences of another CARE project in Guatemala. In this project, CARE Guatemala developed a behavior-based monitoring system for a water and sanitation project with technical assistance from the Water and Sanitation for Health Project (WASH/AID) and the Quality Assurance Project (see WASH Field Reports 364 and 385).

The objective of this activity was to develop and implement a behavior-based monitoring system with feedback of information into a process of problem analysis and solution development, for continuous quality improvement. Instead of simply monitoring process indicators and direct outputs, the focus was on assessing improved behaviors as an outcome of the project. Another key feature was the development of a management system to use the monitoring information to identify problems and systematically improve the project, instead of depending on post-hoc evaluations to determine the strengths and weaknesses of an activity.

1.3. What is Original about the SAFE Project:

The SAFE approach is innovative in several respects. The hygiene education messages and activities are developed based on data collected in complementary quantitative and qualitative research activities, rather than depending on stock education messages and materials. The hygiene education interventions build on current beliefs and practices, and are therefore more appropriate and tailored to the local situation. We believe that this approach will greatly increase the project's ability to influence behavior change at the community level.

In order to identify key problems in hygiene behavior and identify specific areas for interventions, a baseline survey was undertaken along with corresponding qualitative assessments. These helped to define important behaviors and cultural parameters. The qualitative and quantitative information collection activities are integrated into a cycle of data collection, analysis, and formulation of questions that require further information.

Basing hygiene education activities on current beliefs and practices implies an incremental approach to improving hygiene behavior. In any conceptual model of perfect hygiene behavior, there are a large number of behaviors. Thus, SAFE will focus on a few high priority behaviors for intervention, to raise awareness of diarrhoea transmission and prevention. This will include those behaviors most closely linked to diarrhoea transmission, and which can be changed in the short term. This approach is action-oriented, with a focus on behaviors that can be improved through better information and problem solving in the community. This will provide a basis for further improvements in behavior over the long term.

The qualitative assessments were very important in permitting community members and field workers to examine problems and define solutions that fit into existing community norms and practices. For example, the baseline survey showed a strong association between handwashing behavior and prevalence of household diarrhea. Other recent studies indicate the cleansing action of mud in handwashing trials.

Drawing on this, we asked ourselves if community members would really find mud to be an acceptable cleansing agent for handwashing. If yes, then under what

circumstances; and if not, why not? This helped us to determine where the messages should focus, and is further described in Section 3.2.a. of this report.

Based on the CARE Guatemala experience (mentioned in Section 1.2.) SAFE will develop and implement a behavior-based monitoring system to provide important feedback into continuous program improvement. The key indicators for this monitoring system were determined from the initial baseline survey and qualitative assessments that were done early in the project. Information from this system will be used to refine the interventions over the course of the project.

1.4. Purpose and Organization of this Report:

This report describes how information on current beliefs and practices in the project communities are used to focus and develop SAFE hygiene education interventions. This is not an exhaustive description of all the qualitative or quasi-anthropological methods used by the SAFE project. Rather, it describes some of the processes used to address the following objectives:

a) To define questions, terminology and response categories for the baseline survey instrument;

b) To define the nature of the problems and to devise appropriate and effective interventions and messages;

c) To answer questions raised by the baseline survey;

d) To facilitate community participation in the process of defining the problems and finding solutions; and

e) To identify who the community considers to be influential individuals.

The report is organized under the above headings, but often the process of investigation and the process of intervention and message development overlapped.

After briefly describing the methodology, this report describes some of the ways we defined and developed questions and response codes for our base line survey instrument. The next section outlines the methods used to interpret and explain questions raised by the base line survey findings. Then there is a description of a study on a small sub-sample of households that were identified in the baseline survey to be already using home made pit latrines, to see what lessons could be learned for the project (the SAFE project aims to promote the construction and use of this type of latrine).

The section following this outlines the methods used to develop messages for the SAFE program, and finally we describe a method that illustrates some of the advantages of a qualitative approach to data gathering in a project that promotes community input in the design of its interventions.

1.5. Audience of this Report:

This report describes how a range of qualitative methods can be applied by field staff to improve and better focus key hygiene education messages and interventions. More importantly, it describes a process of how qualitative assessments can complement quantitative data, in an integrated and ongoing cycle for feedback into project development.

Clearly, the primary audience of this report are the staff of CARE Bangladesh's Health Sector, particularly those in the SAFE project. But, this report should also be useful to a wider audience of program managers administering health education projects. It provides some useful examples of how anthropological techniques can be adapted and used to define and refine health extension messages and techniques.

2. METHODOLOGY

We used combinations of the following qualitative methods: Key Informant Interviews, Semi-Structured Interviews, Focus Group Discussions, Group Interviews, Observation (structured and unstructured), and Participatory Rural Appraisal (PRA) mapping. Each of these methods is briefly defined here:

The number of observations, interviews, focus groups or mapping sessions done in SAFE is determined by the range of responses or observations. Once we are satisfied that we had a representative range of responses or variables and that no new phenomena were being identified, we used another method to cross check.

The purpose of this process was not to quantify the distribution of behavior or phenomena. Rather, the purpose was to identify key measurable indicators for the baseline instrument, to answer questions raised by the baseline survey, and to develop intervention messages.

An advantage of using different methods is that we were able to distinguish *actual* behavior from *ideal* behavior, and this helped us to refine the questionnaire and develop key messages for the project. The qualitative and quantitative activities were not separate components of the baseline information gathering stage. From the very beginning, the qualitative and quantitative components were designed to complement each other.

Key informants are individuals who are knowledgeable about particular domains of culture and are able to communicate this. Thus the caretaker of a tubewell might be well-informed about water collection, while a mother might be well-informed about disposal of infant faeces. Individuals vary in the type and level of knowledge.

Semi-Structured Interviews entail the interviewer having a check-list of questions but lets respondents express themselves in their own terms, and records their responses in an open form rather than in a pre-coded format. The interviewer encourages respondents to expand on answers and explores them in depth. This allows the respondent to spontaneously raise issues and questions that might not have been predicted, but which are of direct relevance to the investigation.

Focus Group Discussions involve interviewing a group of 6-10 individuals who are not previously known to each other, but who share a common characteristic. A typical example would be a focus group discussion with female tubewell caretakers about water use. The group context allows for new issues to be raised, and the participants stimulate each other to discuss the topic. *Group Interviews* are similar to focus group discussions, except that the participants are known to each other. For example, field extensionists might constitute such a group.

Observation involves watching and recording particular behaviors in specific places, such as water collection at the tubewell for set periods of times at different intervals in a day. These can be structured or un-structured. In some cases a check list is prepared and spot checks are made of different sites. Instruments are designed to allow observers to record what they see.

All of the methods were administered and analyzed by SAFE field extensionists (FEs), under guidance from a social anthropologist. The methods were adapted to be user-friendly, and suitable for field application by extension workers who have little or no training in qualitative methods. Most field workers fit this profile. This is an example of how field staff and community members can be directly involved in shaping relevant project interventions and activities.

Participatory Rural Appraisal (PRA): Community Mapping is a method which involves asking groups of respondents from a specific locality to draw a map using locally available resources such as a mud floor, beans and seeds or whatever is appropriate and easy to manipulate. The construction of a map of a locality can be the focal point of much discussion about the place and its community. It is a method that may rapidly yield information about an area and its population.

3. USE OF THE QUANTITATIVE ASSESSMENTS

3.1. To Define Questions, Terminology and Response Categories for the Baseline Survey Instrument

Baseline information is collected to provide information to identify key problems in hygiene behavior and to identify areas for intervention. To develop the baseline survey, we used a combination of key informant interviews, observations and focus group discussions to help define and shape the questions, and to develop our baseline questionnaire. The following components were examined:

a. Water Collection:

Water collection activities were initially observed for a four-hour period at one tubewell site, which was also close to a pond. During the observation period, seventeen women collected tubewell water, and eight women were seen to collect water from the pond for cooking purposes.

b. Water Quality:

Focus group discussions with tubewell caretakers and beneficiaries were conducted in addition to key informant interviews. These provided us with information on what the community felt were some of the perceived advantages and disadvantages of tubewell water.

For example, community members frequently said that tubewell water spoilt the taste and appearance of food in cooking. This corroborated and explained our observation that pond water was collected for use in cooking. One elderly key informant and one participant in the focus group expressed the concern that tubewell water might exacerbate arthritic conditions. This key informant also observed that some elderly people may have difficulty collecting tubewell water, because they lack the strength to operate the handpump.

By contrast, the use of pond water versus tubewell water was seen as less prestigious and less socially acceptable. Key informants and focus group participants mentioned the belief that pond water was full of little organisms (poka). Although this word is sometimes used to refer to germs, it is not synonymous with germs. Some community members also associated pond water with scabies.

Although tubewell water was perceived to be "clean" it was also thought to have the disadvantages described above. Pond water was generally thought to be best for bathing, and the focus groups and key informant interviews revealed that gargling and ingestion of the pond water was a common practice during bathing. Children were said to frequently ingest quantities of pond water when they bathe and play in the pond.

From these focus groups and key informant interviews, we gained general information on the ways water quality was perceived, and the criteria used to categorize it. This showed the kinds of water used for different purposes, and helped to structure the baseline questionnaire to capture this kind of detail.

c.   Water Storage:

Nineteen households with children under age five from different villages were selected, visited for observation, and interviewed on water storage practices. We asked mothers about where and how they usually store their water, and this was carefully observed and recorded. Also the kinds of container and the terms used to describe them were noted.

In this small sample, we found that five households stored drinking water less than fifteen feet from the latrine. In six households, water storage pots were seen to be covered, and the kinds of lid and terms used to describe them were noted. None of the pots had long narrow necks but the most common water pot was the *Kolshi* which has a slightly narrow opening.

The information acquired from observation helped us to interpret and conceptualize the responses from focus group discussions which we conducted on this topic. The focus groups each involved between 8-12 participants. These groups identified three main types of water storage containers, which corresponded with those identified in the observations. Participants generally agreed that it was good to keep water storage pots covered and to put them in a clean place.

Focus group are particularly good at revealing ideal behaviors, whereas a combination of observations and interviews helped us to identify constraints and understand the extent to which ideals are actually practiced in this community.

d.   Disposal of Infants' Feces:

Six household observations were conducted in households with children under age two. The objective was to observe and investigate how and where infant feces were disposed of. In addition, key informant interviews on the same topic were carried out with tubewell caretakers and mothers; and focus group discussions conducted with tubewell caretakers (3 groups), teachers, and children.

The six detailed observations yielded particularly valuable information. SAFE field workers saw and carefully recorded that several episodes of infant defecation occurred while mothers were engaged in cooking the family meal. It was noted that while the women washed their infants and their soiled sari after the episode, they did not wash their own hands before returning to cooking.

By observation, focus group and key informant interviews, we found out where the babies and young children usually defecate. We also learnt that their feces are usually disposed away from the close vicinity of the household courtyard, and are picked up using rags or straw and thrown into a "corner," a ditch, river, pond hollow or garden.

This information helped us to pre-code our baseline instrument more accurately. These investigations revealed a general lack of concern with children's defecation habits. Mothers reported that children usually washed themselves in the pond or river after defecation. There was little concern expressed about the presence of feces around the pond.

e.   **Causes and Prevention of Diarrhoea:**

For the question on what mothers believed were the causes of diarrhoea, in addition to three focus group with tubewell caretakers, we conducted five semi-structured interviews with mothers about their own child's last diarrhoea episode, to find out what they thought had caused it. This provided us with the appropriate response categories for pre-coding the questionnaire.

Figure 1: Focus Group Discussion

The focus group participants identified a wide range of potential causes of diarrhea, some of which are consistent with our fecal-oral transmission model. These included consumption of "rotten" or bad food, drinking pond water, eating with unwashed hands or un-clipped nails and "poor digestion." When describing an actual diarrheal episode, mothers blamed their own breast milk, high fever and measles for this occurrence. We also learnt more about peoples' general awareness of diarrhoea from our PRA mapping exercise which is described later in this report.

3.2.   **Defining the Problem and Devising Appropriate Interventions:**

Some of the data described above was also used in combination with the baseline results for the message and intervention development. Behaviors which were shown by the baseline survey to be strongly associated with reduced diarrhoea were

promoted using the information from the qualitative studies. Some investigations, however, were specifically aimed at message development and these are outlined below:

a.   Hand Washing:

Intervention messages were pre-tested by some tubewell caretakers and several SAFE field extensionists. They were asked about the relative merits and use of agents such as mud, ash, or soap for handwashing. Since ash and mud are both potential low-cost alternatives to soap, we asked them to clean their hands using either ash or mud for a period of one week. The tubewell caretakers and field extensionists chose to test either mud or ash, depending on what they found convenient to use. Most of them elected to test ash, and a few of them tested mud.

We then asked them to report on the results, to describe the advantages and disadvantages of each agent, and the practical ways they had adapted and modified the advice for use. This provided direct feed back on the way the agents were perceived. It was apparent that in this community, mud had strong negative connotations for use before food handling. It was associated with "worms and germs," while ash by contrast was regarded as relatively "cleaner."

Figure 2: Hand washing corner

The baseline survey showed that handwashing before food handling and after contact with infant's feces was strongly associated with less diarrhoea. Both our observations and the baseline results suggested that washing hands before food handling and after contact with infant's feces were not universal practices. In practice, mothers may often be forced to interrupt food handling to deal with an infant's feces. For these reasons, it was decided to promote the use of ash or soap for handwashing near the kitchen and feeding areas, and to encourage mothers to use them before food handling and after contact with any feces.

Our observations suggested that people usually dry their hands after washing in an unhygienic manner (e.g., on a dirty sari, or with other soiled cloths). This is known

to be an important component of the handwashing sequence which increases pathogenic contamination. We then conducted one focus group with twelve mothers to explore the feasibility of promoting hygienic hand drying and to investigate the most appropriate and acceptable method. From this discussion it emerged that it would be practical to promote the idea of keeping a special clean rag for hand drying. This message was promoted along with advice to wash the rag frequently.

b.   Disposal of Small Children's Feces:

Small groups of field extension workers, tubewell caretakers and mothers were asked about how they dealt with the disposal of infant faeces, and what effective & acceptable strategies they could devise for dealing with the problem. Focus groups with school children and teachers were also conducted to ask about latrine use by small children.

There was a general agreement that small children are afraid of latrines, and require close supervision and help from their elders to use them properly. Respondents made the observation that latrine surroundings are often contaminated with feces and that for this reason, mothers are reluctant to encourage their children to use them.

This information helped to formulate messages on latrine use which were promoted in schools and the community. The messages based on this information were: teach young children how to use the latrine and

Figure 3: Demonstration of hygienic disposal of children feces using a spade

supervise them; if this in not possible, then teach them to defecate in a fixed place; keep the inner and outer surroundings of the latrine clean and free of feces; dispose of infant's feces using a tin implement such as a spade; and place feces in the latrine or bury in a hole; and keep the courtyard clean.

c. Using Field Workers as Key Informants:

Using the SAFE field workers and tubewell caretakers as key informants not only gave us valuable information, but also helped the workers to relate to the messages in a more practical way. The SAFE extensionists come from the communities in which they work. By using them as key informants, we acknowledged the value of their local knowledge. This also helped to narrow the gap between the project and the beneficiaries. The thirteen field extensionists were encouraged to be critical, to analyze, and to relate their own observations and experiences to the process of intervention development.

The FEs proved to be keen observers and provided many key insights on the basis of observations made in the course of their work. Perhaps this was because their supervisors (who were also involved in the study) consulted them at each stage of the SAFE process. Also, since the FEs had personally tested the hand washing messages, they were able share from their own experience and identify with the messages, rather than teaching a message sent from Dhaka.

It may be that this experience gave them a sense of partnership in the investigation and implementation process. Rather than simply being asked to gather data for an unknown purpose, the field workers were aware of the rationale for the data gathering activities and played an active part in developing and testing hypotheses, as well as interpreting the findings. One of the distinctive features of a more anthropological approach is that analysis is an ongoing process throughout the investigation rather than a final stage. It is also a process which closely involves those who gather the data.

3.3. Answering Questions Raised by the Baseline Survey:

As expected, there were several important questions raised by the baseline survey. This fits into the cycle of the SAFE process of complementary quantitative and qualitative assessments. Generally, baseline surveys will reveal the "what" questions; that is, providing a picture of the current situation in the community. On the other hand, the qualitative studies will answer the "why" questions, or elucidate why this is the case. This integrated process helps to determine key areas for intervention and message development. Some examples are described below:

a. Why do Those Living Furthest from the Tubewell have Less Diarrhoea?

A paradoxical relationship was found in the baseline survey between distance to the tubewell and rates of diarrhea in the household. The 56 surveyed households that were situated 20 minutes or more away from the tubewell experienced less diarrhea than those that were closer to the tubewell.

Having reviewed what we had already learnt from focus groups and key informants about tubewell water, its qualities and the ways it is stored, we decided to conduct observations to try and identify differences between the households situated further from the tubewells and those nearer to them. We asked the 13 SAFE field staff to visit the 56 households and to compare then using a check list which we had devised. We asked them to compare:

i) house type
ii) water storage, where the water pot was kept, type of pot and type of cover
iii) any differences in how the kitchens were arranged
iv) presence of animals
v) norms regarding wearing shoes or taking shoes off inside the room where the water pot was stored.
vi) whether the furthest houses were on higher land,
vii) the distance from the latrine
viii) if they were in less densely populated areas.

In addition to this check list, we asked the FEs to use their own powers of observation to see if they could identify other differences not on the check list. No immediate differences were identified using the check list, but more ideas were generated about the types of differences we might look for.

We then asked each FE to conduct observations of different tubewell sites, to note and record all the behaviors around the tubewells and identify users according to the distance of their household from the tubewell. This led to the key observation that those who live nearest the tubewell frequently used their unwashed cupped hands to drink water directly from the tubewell. It also led to the observation that people sometimes mix tubewell water with pond water because they perceive it as having a purifying effect on pond water.

On the basis of these new findings, we conducted a small survey to compare 60 households located farthest from the tubewell with 60 households situated near the tubewell. We used information from the observations to design a short survey form. From the survey, the main difference we could identify was that children of those living near the tubewell claimed to use their hands for drinking water far more often than those living further away. Those living further away were more likely to use a cup or glass for drinking water. Another difference was that those living further away were more likely to use a traditional kolshi or earthenware pot with a lid or cover, while those who lived close by more often used a jug for water storage. Also, it appeared that the households further away had one person assigned for water collection.

In general, those who lived close to the tubewell were less careful and more careless about water storage. Covering water storage pots was something that earlier focus groups had suggested was an important ideal behavior, but observation had revealed that it was not a universal practice. Those living near the tubewell were also more likely to have primed it with pond water when the tubewell was running dry and not pumping well.

These findings were important for message development because they identified two key current practices which might be protective against diarrhoea. One was covering water storage pots which was regarded as an ideal behavior, and the other was using a glass or cup for drinking. It also identified a potentially harmful behavior, which was drinking water from unwashed hands.

These findings imply that it is important to stress water storage, to cover water pots, and to promote the use of cups or glasses for drinking. It also identified a potentially dangerous misconception about the cleansing power of tubewell water which is sometimes mixed with pond water to purify it. It also highlighted the potential for contamination of tubewells by priming with pond water. These lead the SAFE messages to stress the importance of maintaining the purity of tubewell water and to avoid contaminating it with pond water.

b.   Why do Some Households have a Pit Latrine?:

Our baseline survey revealed that a small group of six households had constructed and used their own pit latrines. We asked ourselves why these few households had taken the unusual step of constructing a home made pit latrine. What lessons could we learn from them?

Five households' agreed to answer questions and show us their latrines. One unexpected response to the question of why they had built a latrine was that a pit latrine was better when space was limited, because an open or hanging latrine near the house would smell bad and encourage flies and insects. Community members and CARE field extensionists also observed that poultry would be less able to walk through and spread fecal contamination if pit latrines are

Figure 4: Discussion and demonstration of pit latrine design by men in the community

used. Where space is limited, and the house is not situated by a river or pond this had seemed to provide a solution. Some people got the idea to build a pit latrine from an outside organization such as CARE or a *Madrasha* (an Islamic school).

A common difficulty, which was cited as a disadvantage, was that sides of the pit were prone to break, cave in, or be destroyed by rats. This was a particular problem during the rainy season. Not everyone has room or space to build a pit and its construction involves time, effort, and money. Two households had not spent any money on constructing their latrines, the others had spent from between 200 to 1,000 taka (about US$ 5 - 25) on materials and construction of the platform and shelter. One latrine had a cement slab for a platform, while the others had bamboo platforms. A variety of materials such as leaves and branches were used to make the shelters. One individual had devised their own ingenious attempt to strengthen the pit walls by plastering them with cow dung.

Focus groups with tubewell caretakers gave us more information on the perceived advantages and disadvantages of pit latrines, and how they compared to the more popular hanging latrine. Space was one important consideration for those with very little land. Unlike hanging latrines, which often use the existing structure of a tree, pit latrine construction involves digging a hole and making a small platform over the hole. This may deter poorer people.

From the household and the focus group interviews, we learned some important lessons for message development on what people consider to be the positive benefits of pit latrines. From the public health perspective, hygienic latrines, unlike open or hanging latrines, avoid fecal contamination of the community a whole. Despite the obvious public health advantages, the challenge is to motivate individual households to take this step. For the individual householders who had installed such latrines, their advantage was perceived to be that they reduced unpleasant odors and kept the household area cleaner by avoiding the possibility that poultry or other animals could spread feces around the yard.

These points helped us to design more effective promotional messages. It also high-lighted the technical problems with this type of latrine, because the sides of the unsupported pit tend to cave-in. This emphasizes the need for more research to find cost-effective solutions to this very real problem.

3.4. Community Participation, Identifying Key Influential People in each Community and Understanding the Beneficiaries' Perspective:

a. Participatory Rural Appraisal - Community Mapping:

This method was recently demonstrated by Dr. Robert Chambers (an expert on this methodology) in a series of workshops in Dhaka. The mapping procedure involves groups of villagers in creating a map of their village or neighborhood as a stimulant

to further discussion on a variety of topics. The advantage of PRA mapping is that it not only allows the investigators to quickly gather data, but the process involves sharing these data with the participants. Ideally, this should allow community members to fully participate in the process of intervention development.

We used the mapping technique to identify "key community persons" or those people identified by each community as being important and influential individuals, whom others listened to and respected. These individuals would then be asked to help disseminate SAFE's messages. In our first pre-tests, we discovered that the method was extremely popular with

Figure 5: PRA mapping session

villagers and generated enormous amounts of related and unrelated data. This was time consuming and confused the FEs. We thus decided to modify and refine the method to focus on identification of key community persons, and information directly related to water and sanitation and the SAFE project.

We asked small groups of beneficiaries to draw maps of their communities, to locate the "key community persons," the tubewells, the different types of latrines, and the households in which there were members with diarrhoea. From this we also learnt about the nature of the communities in this area and about women's mobility and communication networks. We were also able to compare the ways in which men and women relate to their community. While men mapped their whole village fairly easily, women were able to give very detailed information about all the households in their *para* (neighborhood) and sometimes described adjacent neighborhoods. The size of the *para* varied, but it usually consisted of between 25 and 30 households.

Men and women not only identified influential people within their communities, but they also provided us with the correct terminology for various categories of indigenous health practitioners in the area. This very specific information about these communities underlined the fact that we cannot assume that Bangladeshi rural life is homogeneous. We had assumed that people might perceive certain kinds of religious leaders or traditional birth attendants (TBAs or dais) as influential. This was not so. Each community identified its own influential individuals. These represented

a wide range of people including, an elderly lady who sets broken bones, a tea shop owner, a retired school master, and a woman trained as a health volunteer by a local non-government organization.

Another category of resource people who were identified in the mapping process were those who volunteer to mend the tubewells when they break down. Despite the fact that very few tubewell caretakers had received any training in maintenance, they were able, in many cases, to turn to other community members who were able to help. It was clear from the maps that the distribution of tubewells in the village had not been even or fair.

We were surprised by how much women knew about the number of households in their community in which someone was suffering from diarrhoea. Clearly, diarrhoea was seen as a common problem. The mapping process not only provided information to the community members, but raised their awareness about diarrhoea prevalence, and the water and sanitation problems and resources in their neighborhood. An important outcome was that it also raised the CARE field workers' consciousness and respect for villagers as knowledgeable and articulate people. The process gave the workers confidence to interact with beneficiaries in a more participatory and less didactic manner.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1. Conclusions:

The qualitative component was useful to SAFE because the design was flexible. When necessary, a number of different methods were used. Rather than conducting dozens of focus groups using workers who were bored and did not understand the purpose, each session addressed specific and clearly defined questions.

Another reason it was useful was that all the field workers were partners in the entire process. We did not have a strict division of labor between those who collected the data, those who thought about the findings, and those who acted on them. The workers knew that findings from the data gathering process would directly influence the key messages that they would eventually disseminate. They were encouraged to make observations, ask questions, and reflect on the process.

In fact, it was on the basis of some of these casual observations that useful hypotheses evolved. The data came from the beneficiaries, but many of the insights which contributed to its interpretation came from the FEs as a result of their relationship with the beneficiaries. Questions were changed and developed in response to the findings, and the findings used to modify the baseline instrument or refine message development. Each member of the team clearly understood that what they did was an important and necessary component of the project.

Also important is the involvement of senior staff in the qualitative data gathering process. The qualitative part of the study was not seen as the "soft" part of the study that could be delegated to junior staff. This meant that field workers and beneficiaries attached importance to it. They realized that key decision makers were actively interested in the questions being asked, and the responses. In some cases, this involved field visits by the Project Coordinator, or senior project staff debriefing field workers; and sometimes it simply involved long telephone calls between Dhaka and Chittagong.

4.2. Recommendations for the SAFE Project:

a.   The results described above suggest that these kinds of methodologies may have an important part to play in the monitoring and evaluation of the SAFE project and in the final evaluation. The fact that some methods, such as focus group discussions, are better at capturing ideal behaviors while others, such as observation, are better at identifying actual behaviors could be used in the monitoring and evaluation phase.

b.   Observations of behavior around tubewells, ponds and latrines might be conducted some weeks after courtyard sessions or other message

dissemination. This could be followed by focus group discussions in the same location, not only to investigate whether people recall messages, but to try and evaluate how messages have been understood and to get some feedback from the audience on the quality of the sessions. Some follow up questions could be:

- How useful were the messages?
- How easy to implement?
- How acceptable were they?
- What changes have there been in behavior?
- What constraints were faced?

Areas that are found to be problematic in the observation sessions, such as use of pond water, should be probed to get behind the superficial "correct" response. It is important that these sessions not be conducted by the same FEs who worked in the area to promote the messages. But it is also important that the FEs give each other feedback on these results.

c.   The qualitative approaches described above are not good at measuring changes, but they may indicate whether changes are perceived to be happening by beneficiaries, and they may tell us how people respond to the changes. It might be interesting to repeat some of the mapping exercises with a sub-sample of the same communities and try to "map" changes and then compare the maps. Some areas for further investigation may include:

- Are people aware of more pit latrines being made and used?
- Are there changes in the use of water?
- Which households are now experiencing diarrhoea?
- Do people feel that the interventions they have taken have helped to reduce diarrhoea in their community?

This kind of information would not be used to assess diarrhoea prevalence, but the community's perception of the effectiveness of diarrhoea prevention strategies.

d.   Another area where qualitative methods might be helpful is in trying to evaluate the process of message dissemination. How participatory are the sessions? A useful exercise related to this might be to involve FEs in the process of drawing up a check list of criteria for evaluating this.

Focus Groups of beneficiaries from different FE catchment areas could also be involved in a similar exercise. This could be tried on a pilot basis, and participants could be asked to define:

- What makes a good FE?
- What makes a courtyard session good?

e.   The role of the "key community person" should be evaluated. FEs should be carefully debriefed on this and the "key community person" should be interviewed individually and in groups. If some are felt to have been particularly effective, small case studies could be prepared. Some basic information on "key community persons" needs to be listed. Their role and activities should be described and documented, we need to identify the problems and strengths of this approach.

f.   If problem areas are identified (such as children's defecation habits appearing not to be changing as much as we had hoped), we might consider conducting a mini "workshop" to focus on these problems and find solutions. This could involve key people such as effective "key community persons," tubewell caretakers and mothers. After working in small groups moderated and recorded on the focus group model by FEs or their supervisors, a plenary session could bring together recommendations for solving the problems. The advantage of this would be that as well as gathering data we might increase the momentum among workers and beneficiaries to find solutions.

4.3.   Recommendations for Other Health Projects:

a.   Qualitative methods are often dismissed as being most useful in academic settings. A common misconception is that a high amount of technical skills, resources, and time are needed before these methods can be successfully applied in a service delivery project. But, many of these methods can be adapted to the realities (and constraints) of implementation projects. As shown by SAFE's experience, these techniques can be effectively implemented and analyzed by field workers who have no previous skills or training in these methods; and who often work under conditions with demanding time frames and limited external resources.

b.   If organizations lack the requisite in-house technical expertise, a limited amount of external technical assistance may be necessary. In the case of the SAFE project, CARE hired a social anthropologist as a consultant for about four weeks over the period of a year and a half. This consultant provides technical guidance to SAFE staff on the application and analysis of the qualitative methods.

c.   In addition to technical assistance, organizations should demonstrate a strong commitment to designing interventions and making program improvements based on information gathered from the community. A project philosophy that good information is necessary to build a good project is the driving force behind participatory data collection, and, in fact, makes the whole process work.

SAFE QUALITATIVE ASSESSMENT REPORT

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