Data Collection

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Health workers' attitudes can create communication barriers

In Sudan's South White Nile Province the development of a communication strategy for the diarrhoeal disease programme was preceded by the collection of data from community members and health personnel. A majority of health workers had only a limited knowledge of the community's methods of dealing with diarrhoea. Most of these workers had very negative attitudes towards mothers and home interventions. This information was vital for planning a comprehensive educational scheme for both health workers and communities.

In the past few years increasing attention has been given to collecting information at community level prior to the planning of health education programmes. Data have often been collected on the knowledge and practices of mothers concerning various health-related problems. However, such data collection, while necessary, may not be sufficient. It is also important to obtain information from health workers.

In health education programmes the type and sources of preliminary data to be collected are largely determined by the programme planners' concept of the communication process between health workers and the community. This concept commonly amounts to a one-way transfer of health-related information or messages to the community, with the consequence that initial data collection tends to be limited to assessing community knowledge, attitudes and practices in order to formulate messages that address any deficiencies.

In Sudan's South White Nile Province the diarrhoeal disease programme's planning team adopted a different approach. Communication was seen as a two-way exchange between communities and health workers, and an understanding of the knowledge and attitudes of both parties was considered essential.

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Quantitative or qualitative data collection?

The aim of collecting quantitative data is to assess the frequency of certain phenomena. The survey questionnaire is the instrument most often used to obtain such data; it is usually administered to a large number of individuals. The aim of collecting qualitative data, on the other hand, is to gather in-depth information from a smaller number of individuals or groups on their beliefs, attitudes, experiences and so forth; the main techniques used for this purpose are those of interviewing and observation.

Preliminary data collection involved informal studies with both community members and health workers. In a qualitative study, individual and group interviews were conducted with mothers, grandmothers, fathers of young children, and traditional healers. The results of the qualitative study were used to develop the content of education activities for the community and training activities for health workers. The results were also used in setting up a quantitative baseline study of the knowledge, attitudes and practices of mothers.

Two main factors were identified as contributing to the quality of interaction between health workers and the people they served: the health workers' *technical knowledge and skills*, and their *attitudes to clients*. A survey, individually administered, yielded quantitative baseline data on health workers' knowlege of diagnostic and therapeutic procedures relating to diarrhoeal disease. A second study on health workers sought, through open-ended interviews, to assess their knowledge of and attitudes to the management of diarrhoeal disease in the community.

Collecting data from health workers

The objectives of the study on health workers' attitudes were to assess:

- knowledge of popular terms and concepts relating to diarrhoea;
- attitudes towards traditional healers (*basirs*) and their approaches to treating diarrhoea;
- attitudes towards mothers' home management of diarrhoea.

It was decided that it would be preferable to concentrate on collecting qualitative, rather than quantitative, information.

Qualitative data were collected from health workers by means of individual interviews, with the help of a guide containing 12 questions. Some of the questions required an initial affirmative or negative answer; all asked for details of opinions or attitudes.

Doctors, medical assistants and community health workers employed by the Ministry of Health were interviewed in Arabic on a convenience sampling basis in their health units, at the same time as members of the surrounding communities. This part of the study covered 20 doctors and medical

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assistants responsible for dealing with cases of diarrhoeal disease brought to the health units, and 15 community health workers working in both these units and the communities.

The same interviewers were used in the health worker study as in the qualitative community study. They included two medical assistants, a health education officer, a statistical technician and a senior nurse. All had previously collected quantitative data but none had prior experience in gathering qualitative data. They received four days of training on qualitative data collection to prepare them to conduct the community study, and an additional day's training specifically for the health worker study. Considerable attention was given to in-depth questioning techniques. Simulated interviews were conducted during which they practised taking detailed notes of responses. The 35 real interviews were conducted over a ten-day period. Senior personnel supervised the interviewers and checked the interview forms when they had been completed.

In quantitative data collection the response categories for each question are usually identified when the data collection instrument is developed, and analysis involves tallying the responses. In qualitative data collection no attempt is made to determine in advance the categories of response; this happens during analysis. The technique of *content analysis* was employed, in which the categories of response emerging from the raw qualitative data were identified. The analysis of such data can reveal trends, for example whether a particular category of response comes from a large or small proportion of respondents.

The data from the interviews with doctors and medical assistants were analysed together. The programme planners wished to assess the types of attitudes encountered by clients attending health units, rather than to understand differences in attitudes

Knowledge and attitudes of health staff and mothers in Sudan regarding diarrhoeal disease management

	Doctors and medical assistants	Community health workers	Mothers of 0-4-year-old children
Knowledge of popular terms for and types of diarrhoea	Very limited knowledge of popular terms and concepts of diarrhoea; identify four or fewer types	Some knowledge of popular terms and types of diarrhoea; identify six or seven types	Identify 12 or 13 terms and types of diarrhoea which are the basis for different treatment strategies
Attitudes towards traditional healers	Strongly discourage use of traditional healers; criticize mothers who consult them and use their remedies	Criticize mothers who consult traditional healers; believe mothers should seek care at health units	Traditional healers are respected for their expertise in diagnosing and treating 13 types of diarrhoea; in most cases, traditional healers are consulted before health units
Attitudes towards home management	Believe mothers usually intervene at home but that their efforts are generally ineffective; criticize traditional home practices that are often encouraged by older women	Very critical of traditional home treatments; in general, consider these ineffective and that they result in postponement of correct treatment in health units	Home strategies are defined for each of 13 types of diarrhoea; home management strategies are based on the advice of respected older women and traditional healers

between the two categories of health worker. The interviews with community health workers were analysed separately.

The community and health worker perspectives are compared in the table.

Popular terms and concepts

The doctors and medical assistants had a limited knowledge of popular terms and of types of diarrhoea. The majority were able to identify four or fewer types even though most had been working in the same zone for many years. None of the providers had a clear understanding of the relationship between popular terminology and the community's approach to diagnosis and treatment of each type of diarrhoea.

The community health workers were more knowledgeable about the popular terms and concepts of diarrhoea than were the doctors and medical assistants. Most of them were aware of six or seven types of diarrhoea. However, like the doctors and medical assistants, their understanding of the community's concepts of cause and treatment relative to the different types of diarrhoea was very limited. This may be explained by the fact that virtually all the community health workers were men. In Sudan, men have limited involvement in child health issues.

By contrast, mothers interviewed in the qualitative community study identified 12 or 13 different types of diarrhoea. The mothers explained that their diagnosis of a case of diarrhoea formed the basis for the treatment strategy they followed. The type of diarrhoea determined whether mothers used home remedies, consulted traditional healers, and/or used the official health service. Mothers' diagnoses also determined the type of treatment used at home.

Attitudes towards traditional healers

The doctors and medical assistants considered that traditional healers and their practices were inappropriate and that mothers should be strongly discouraged from consulting them. However, many interviewees admitted that most mothers had a deep-rooted faith in healers and their remedies, and explained this in terms of the mothers' ignorance, backwardness and lack of health education.

The interviewees stated that, in order to discourage the use of traditional healers, they tried to convince mothers of the ineffectiveness of the healers' practices, urged mothers to attend health units and sometimes even insisted that they abandon traditional practices.

All the community health workers interviewed were critical of the procedures used by traditional healers in diagnosing and treating diarrhoea, and most believed that the use by mothers of the traditional health sector was an obstacle to obtaining proper advice at health units. These health workers explained the use of traditional healers in terms of established custom, ignorance, and distrust of official personnel.

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These views perhaps reflect a desire to fit into the official health sector by adopting the attitudes of medical personnel and rejecting the values and practices of the community.

In contrast, virtually all the mothers interviewed considered the traditional healers to be experts in the diagnosis and treatment of diarrhoea. The healers, usually older men, were respected not only for the effectiveness of their treatments but also for the concern they demonstrated for the community's well-being. The mothers generally agreed that, for most of the 13 types of diarrhoea, the traditional healers' remedies were superior to those prescribed in health units.

In the absence of a viable communication relationship between health workers and mothers, based on mutual respect and confidence, important health messages are likely to be ignored.

Attitudes on mothers' home management

All the interviewed doctors and medical assistants said that mothers generally intervened at home when their children had diarrhoea. However, there was considerable criticism of the interventions; it was believed that they were ineffective and that they ought to be discouraged. Virtually all the interviewees stated that mothers neglected children with diarrhoea either because they thought the condition would clear up spontaneously or that it was a normal childhood illness; it was also said that the mothers were guilty of using unscientific traditional treatments. Most doctors and medical assistants criticized mothers for following the treatment advice of grandmothers and other older women in the community. Significantly, none of the providers said they took account of what mothers had already done at home when advising them on how to proceed.

The attitudes of community health workers to home treatments used by mothers were similar to those of doctors and medical assistants. The majority agreed that mothers neglected their children by using home treatments which were ineffective and resulted in the postponement of care in health centres. Although many of the community health workers mentioned home remedies such as herbal tea, only a few considered that these traditional products were useful. Most insisted that these remedies were inappropriate and that they should be discouraged.

Notwithstanding the criticism that mothers neglected children with diarrhoea and used inappropriate remedies, the interviews with mothers revealed that they had specific strategies for dealing with the different types of diarrhoea. In most cases the treatments had been learned from older women who were respected for their vast experience in family health. Among the most frequently used home measures were continued breast-feeding and the feeding of yoghurt, custard and rice, herbal tea, rice water, and fruit juice.

Clearly, health workers had a limited knowledge of community beliefs and practices relating to diarrhoeal disease management and were generally very critical of the strategies mothers used to deal with the condition. They insisted that mothers should take their children to health units for treatment as soon as diarrhoea began. However, community beliefs about diarrhoea formed the basis for the approach of ordinary people to diagnosis and treatment. Most mothers carefully followed advice

received from their mothers and, occasionally, from traditional healers.

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In the interest of good communication, health workers need to understand mothers' beliefs and practices and they should have respect for mothers and their efforts to promote their children's well-being. Unfortunately, many health workers did not have a good understanding of mothers' beliefs and practices and in general were quick to criticize mothers for what they had not done, while not appreciating the efforts they had made to restore their children's health. These negative attitudes discouraged mothers from consulting health workers and following their advice, and prevented the health workers from recognizing the positive interventions carried out at home.

The training of health workers under the diarrhoeal disease programme has focused almost exclusively on the technical aspects of diagnosis and treatment. The present results suggest that this training needs to be revised: much more attention should be given to health workers' skills in interpersonal communication and to their attitudes towards mothers. It may not be easy to improve the knowledge and attitudes of health workers, but steps have already been taken to reorientate their training; plans are being made to emphasize the attitudes and skills required to communicate effectively with mothers.

In many health education programmes the communication process is viewed as one-way information transfer from the health worker to the community. Many health workers have received clinical training in the management of diarrhoeal disease and they provide mothers with sound technical advice about what they should do during their children's bouts of diarrhoea. But mothers are often not responsive to the advice they receive from these workers. A simplistic model of information transfer cannot explain the dynamics of communication between human beings. Experience has shown that, in the absence of a viable communication relationship between health workers and mothers, based on mutual respect and confidence, important health messages are likely to be ignored. Effective communication appears to be seriously hindered because health workers have too little knowledge of and a negative attitude towards mothers' health-promoting strategies. Similar findings have been reported from Cameroon *(1)* and Senegal *(2)*.

There is an evident need to assess not only knowledge and practices in the community but also the knowledge and attitudes of health workers prior to developing health communication programmes, which should address both of the sets of actors involved. The present study illustrates how the relatively inexpensive informal collection of data over a short period by health personel can provide useful information for developing programme strategies. □

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