QUALITATIVE RESEARCH FOR HEALTH PROGRAMMES

Patricia M. Hudelson

This document provides an overview of the concepts and methods used in qualitative research, and illustrates how these may be used for programme development. It is <u>not</u> however a "how-to" training manual for field researchers. Rather, it is an introductory guide for programme managers, project directors, researchers and others who need to make decisions concerning when and how to conduct research for programme development purposes. The document will also serve as a useful reference for field researchers as well as for use in training workshops.

DIVISION OF MENTAL HEALTH
WORLD HEALTH ORGANIZATION
GENEVA
1994

Acknowledgements

Further information concerning this material may be obtained from

Division of Mental Health
World Health Organization
1211 Geneva 27
Switzerland

© World Health Organization 1994

Table of Contents

List of Tables

List of Figures

CHAPTER 1: INTRODUCTION

Who is this guide for?

This guide is designed to provide a general overview of the concepts, methods and tools commonly used in qualitative research, and to illustrate how these may be used for programme development. It is an introductory guide for programme managers, project directors, researchers and others who need to make decisions concerning when and how to conduct research for programme development purposes, it can be used as a resource in training workshops for such people and will also serve as a useful reference for field researchers. It is <u>not</u> however, a "how-to" training manual for field researchers. It is hoped that this guide will help to both demystify and encourage the effective use of qualitative research for the development of appropriate and effective health programmes.

Chapter 1 gives an overview of qualitative research and its potential uses. Chapter 2 provides descriptions of the most common data collection methods used in qualitative research, with discussions of their strengths and weaknesses. Chapters 3 through 5 discuss issues of sampling, study design and report-writing in qualitative research. Chapter 6 gives examples of several qualitative research designs used by health programmes to address their specific needs and interests. Appendices list resources which can be consulted for more detailed, "how-to", training materials for field researchers.

What is qualitative research?

The qualitative research tradition has long been associated with academic disciplines such as cultural anthropology, sociology, psychology and sociolinguistics. Qualitative research is increasingly used in a number of applied professions, as well, including education, nursing and public health. Despite its widespread use, discussion continues as to what constitutes qualitative research, and how it differs from quantitative research.

Some would argue that the difference is primarily methodological; that is, that qualitative and quantitative research traditions each have a set of data collection tools that are used to investigate social phenomena. While there does exist a set of data collection methods which are typically used by qualitative researchers (described in Chapter 2), this definition is not entirely appropriate since it implies, incorrectly, that qualitative methods are incapable of yielding quantitative results. More fundamental to the definition of qualitative research are the following characteristics:

* *Qualitative research is characterized by an approach which seeks to describe and analyze the culture[1] and behaviour of humans and their groups from the point of view of those being studied.* Indeed, the most fundamental characteristic of qualitative research is "the express commitment to view events, action, norms, values, etc. from the perspective of the people who are being studied."[2]

* *Qualitative research places an emphasis on providing a comprehensive or "holistic" understanding* of the social settings in which research is conducted. Social life is viewed as involving interlocking series of events, which need to be fully described in order to reflect the reality of everyday life.

* *Qualitative research relies on a research strategy which is flexible and iterative.* This approach allows the discovery of unexpectedly important topics which may not have been visible had the researcher been limited to a pre-defined set of questions or data collection methods. In qualitative research, some initial choices are made concerning research questions and data collection methods, but these may be modified as new information is collected (see Figure 1). This contrasts with a rigidly followed experimental design where all procedures must be specified before the beginning of data collection and followed in an unalterable course (See Figure 2).

---

[1] See Glossary in Appendix 1 for a definition of culture.

[2] Bryman, A. (1992). *Quantity and Quality in Social Research.* London: Routledge, p. 61.

2

Figure 1: The iterative qualitative research process[3]
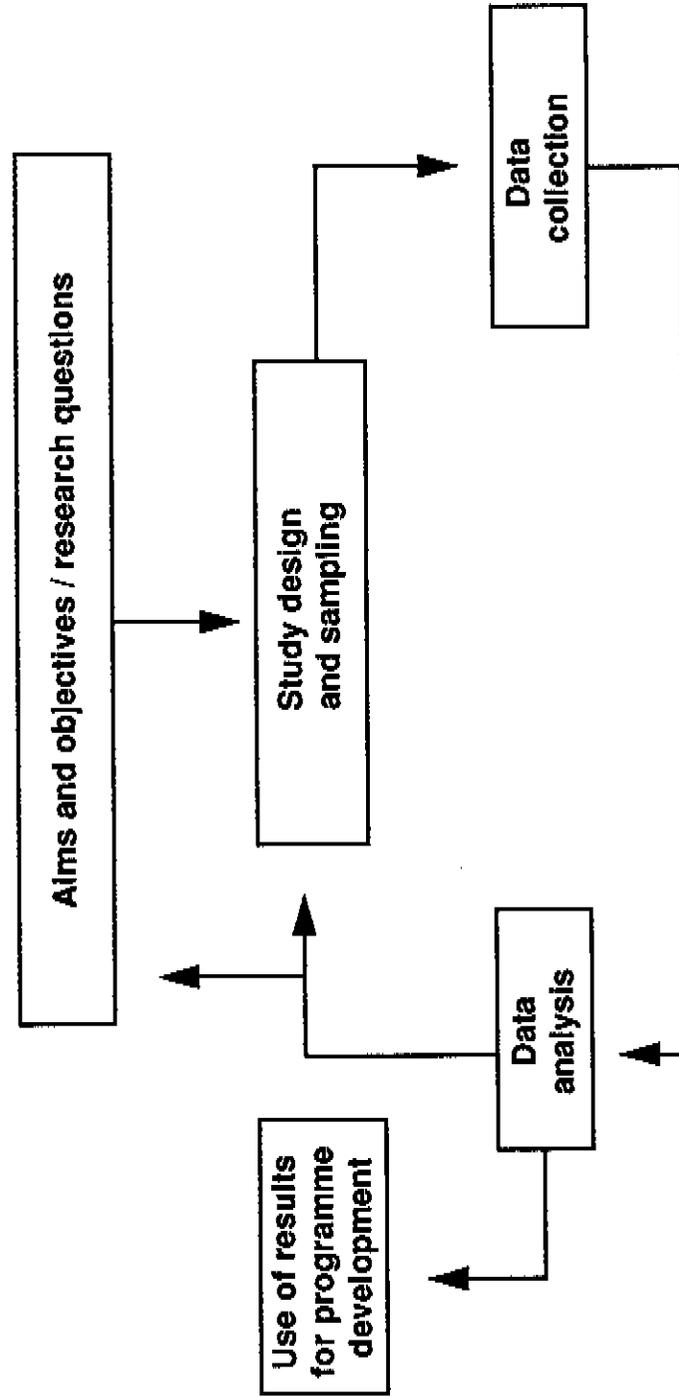
[3] Fig. 1 adapted from Crabtree, B.F. and Miller, W.L., eds. (1992). *Doing Qualitative Research.* Newbury Park, CA: Sage, p.xv.

Figure 2:   The logical structure of the quantitative research process[4]

```
┌─────────────────┐
│ Aims/objectives │
│Research questions│
└─────────────────┘
        │
        ▼
┌─────────────────┐
│Study design and │
│    sampling     │
└─────────────────┘
        │
        ▼
┌─────────────────┐
│ Data collection │
└─────────────────┘
        │
        ▼
┌─────────────────┐
│  Data analysis  │
└─────────────────┘
        │
        ▼
┌─────────────────┐
│ Use of results  │
│      for        │
│programme        │
│development      │
└─────────────────┘
```
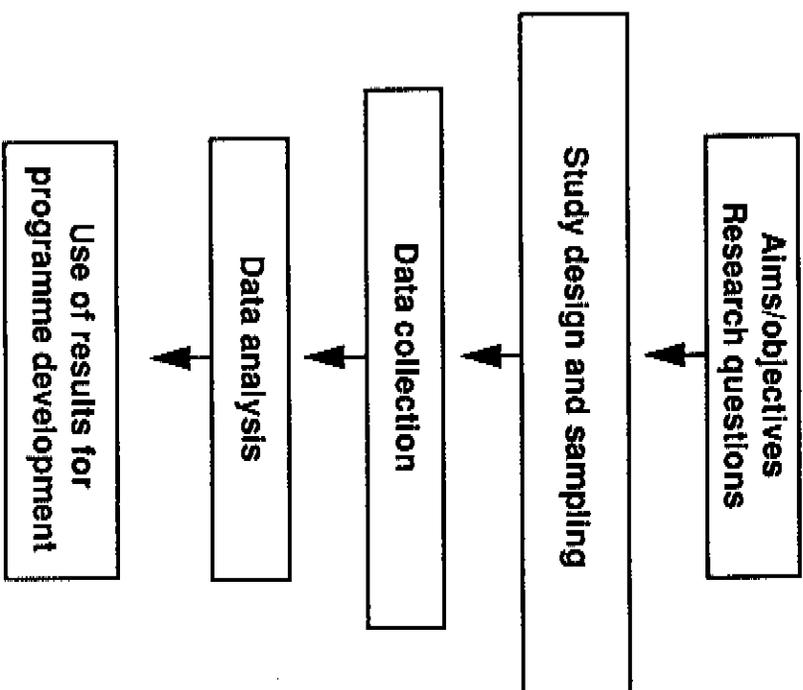
[4] Fig. 2 adapted from Bryman,A. (1992). *Quantity and Quality in Social Research*. Newbury Park, CA: Sage, p.20.

Qualitative vs. survey research

A quantitative, survey research approach is one in which a pre-determined series of questions are asked in the exact same way to every respondent. This approach has long dominated social investigations for national planning and programme evaluation in developing countries. Surveys which attempt to measure social opinions and behaviours are often referred to as Knowledge, Attitude and Practices (KAP) surveys. Survey research is attractive because it allows statistical inference from relatively small samples to large populations; relationships between variables can be assessed and measured; surveys are fairly easy to design and quick to implement; and results from standardized surveys can be compared across time periods or regions.

However, KAP surveys have been associated with a number of problems, and should be used cautiously. Particularly important are what are referred to as **non-sampling errors.** Some of the most common of these include the misreporting of answers because: respondents have problems remembering certain information; because they misunderstand the question; or because the topic is too sensitive. Sometimes respondents may knowingly lie because they fear a negative consequence of a truthful reply, or because they want to give the answer they presume the interviewer wishes to hear.

Perhaps the most serious problems with KAP surveys are those associated with the **cultural re-interpretation** of survey questions by respondents, and problems of **contextual bias** associated with the survey.

Cultural re-interpretation happens when questions are not meaningful to respondents in the way intended by the researcher. A question may evoke special meanings and associations in respondents which are totally unintended and unknown by the researcher. In such cases, respondents' answers are really answers to a <u>different</u> question (see example on page 6).

Contextual bias refers to factors associated with the interview itself. Survey research tends to rely on only one context in which to collect information (a formal interview with a stranger). This approach assumes that people's behaviour and attitudes are the same from one context to the next. However, it has been shown that respondents' answers may vary depending on contextual factors such as the sex of the interviewer, the presence of other individuals during the interview, or the sensitivity of the interview topic.

In contrast, qualitative researchers have the opportunity to spend more time in a community, thereby developing rapport and identifying potential sources of contextual bias. The flexibility of qualitative research allows the researcher to reduce contextual bias by using interviewing techniques and creating an interview environment in which respondents feel most comfortable.

5

Example of a survey that failed[5]

In a study which compared information collected using KAP questionnaire with that collected through unstructured interviewing, researchers found serious problems of data validity associated with the KAP questionnaire. For example, when asked the standard fertility survey question "Have you heard of abortion?", about 95% answered "no." However, through cross-checks using unstructured interviewing, researchers discovered that in fact 100% of those interviewed had, in fact, "heard of" abortion. However, respondents had understood the survey question to ask whether they had knowledge of the techniques of abortion or knowledge of who had had an abortion. Thus, respondents had responded to a very different question from the one intended. Unstructured interviews also revealed that many women were embarrassed to reveal their knowledge of family planning to strangers, especially males, and in front of relatives or neighbours.

The agencies who conducted the KAP survey recommended continued spending on the dissemination of knowledge about family planning. Results from unstructured interviewing, however, suggest that these funds would be wasted, and would be better spent on providing accessible services or creating other conditions favourable to the adoption of family planning.

---

[5] Stone, L. and Campbell, J.G. (1984). "The use and misuse of surveys in international development: an experiment from Nepal," *Human Organization*, vol. 43, no. 1, pp. 27-37.

What is certain is that different data collection methods produce different kinds of information. Therefore, before choosing whether to use a quantitative or qualitative research approach, it is important to decide what information is most needed and most useful in a given situation, and then use those methods that are best suited to producing that information. **Qualitative and quantitative approaches to research are complementary, and where appropriate should be combined in such a way as to maximize the strengths and minimize the limitations of each.** For example:

- qualitative research can facilitate quantitative research by identifying topics which are appropriate for survey methods;

- quantitative research can be used to facilitate qualitative research by generalizing findings to a large sample, or by identifying groups that warrant in-depth, qualitative study;

- qualitative research can help to interpret relationships between variables discovered in quantitative research.

There are no strict rules for making decisions about what research approach and methods to use. For each study, data collection options and strategies will depend on what kinds of information are needed, who the information is for and how the information is to be used. Table 1 presents some of the situations in which qualitative and quantitative research are most appropriate.

Table 1: When qualitative and quantitative (survey) approaches are most appropriate

WHEN QUALITATIVE APPROACH IS MOST APPROPRIATE	WHEN SURVEY APPROACH IS MOST APPROPRIATE
when the subject matter is unfamiliar	when the subject matter is clearly defined and familiar
for exploratory research, when relevant concepts and variables are unknown or their definitions are unclear	when measurement problems are minor or have been resolved
for explanatory depth; when you want to relate particular aspects of behaviour to the wider context	when there is no need to relate findings to the broader social or cultural setting, or this setting is already sufficiently understood
when meaning rather than frequencies are sought	when detailed numerical description for a representative sample is required
when flexibility of approach is needed to allow for discovery of the unexpected, and in-depth investigation of particular topics	when repeatability of measurements is important
for studying selected issues, cases or events in depth and detail	when generalizability of results and comparison across populations is desired

What can qualitative research do for health programmes?

Qualitative research has been used in a wide range of health programmes, including those dealing with tropical diseases, primary health care, nutrition, family planning, women's reproductive health, AIDS, clinical medicine and drug/alcohol abuse. Qualitative research is especially useful for:

- exploring a health problem or issue about which little is known.

- identifying local perceptions of health and development priorities.

- identifying relevant intervention strategies and target populations.

- investigating the feasibility, acceptability and appropriateness of potential new health programmes.

- developing appropriate information, education and communication (IEC) activities and materials.

- identifying problems in on-going interventions, and suggesting appropriate solutions to those problems.

- complementing quantitative data collected in routine monitoring and evaluation studies, by helping to interpret quantitative results.

- designing more valid survey instruments by identifying topics for which survey research is most appropriate, and by identifying relevant questions and their appropriate wording.

Who should conduct qualitative research?

Programme managers may need to identify appropriate local researchers to conduct studies, or may need to identify consultants to train or work with local researchers. How does one know whether or not a researcher has the proper skills for the job?

As mentioned earlier, qualitative research methods are used in a wide range of professions. However, a researcher's academic qualifications are much less important than his or her past experience actually <u>using</u> qualitative data collection methods in the field. In some countries, the best field workers are those that have little or no academic training--since some academic training programmes tend to emphasize "armchair theorizing" rather than fieldwork. Sometimes, appropriate researchers can be found through non-governmental development agencies, who train and use local fieldworkers for their projects.

If relatively inexperienced field researchers must be hired, it will be especially important to set aside time to provide them with hands-on training. This will usually involve sending an experienced consultant to the field for a few days to several weeks.

Ideally, researchers who intend to conduct qualitative field research should also have experience or training in a field relevant to the topic to be studied (ie. a specific health problem). However, in most countries it is difficult to find individuals with experience in both a health field and qualitative research. One way around this is to work with multi-disciplinary teams comprised of, for example, a qualitative researcher and a disease-control specialist. Together, the programme manager, disease specialist and researchers can define research questions and review results. The creation of a multi-disciplinary team helps to identify-and keep the study focused on-relevant issues.

If research is to be conducted fairly rapidly, it is also advised that researchers be familiar with the language and culture of the area where the study is to be conducted. While the ideal would be to have researchers who are fluent in the local language, this is not always possible. In such cases, competent translators must be identified to work with researchers.

Finally, researchers who intend to conduct qualitative field studies should be willing to live in the study site for the duration of the study. Residence in the field helps to develop good rapport with community members (thus facilitating other data collection activities), and allows researchers to take advantage of time outside of formal data collection activities to gain a more general understanding of the social context in which people live.

CHAPTER 2: THE TOOLBOX

The purpose of this chapter is to provide an overview of the most common data collection methods used in qualitative research, as well as their particular strengths and weaknesses. These include unstructured, semi-structured and structured interviewing techniques; group interviewing techniques; observational methods; ethnographic decision-tree modelling; and social network analysis.

Knowing something about the tools that researchers have available to them will help you to work with researchers in choosing and combining methods in the most appropriate way for your particular information needs. (Appendix IV contains a summary table of the data collection methods discussed in this chapter).

We have intentionally provided only a brief description of how the different techniques are used and the kinds of information they produce. Very little information is provided concerning data analysis techniques. For detailed, "how-to" instructions, readers are advised to consult the materials listed in Appendix III.

Unstructured interviews

Unstructured interviewing is the most widely used method of data collection in cultural anthropology. In this approach to interviewing, the researcher has some idea in mind of the topics to be covered, and may use some sort of **topic list** as a reminder, but there is minimal control over the order in which topics are covered, and over the respondents' answers. In unstructured interviewing, neither the specific questions to be asked nor the range or type of possible answers are pre-defined.

Unstructured interviewing is informal and conversational, and the aim is to get the informants to "open up," and to let them express themselves in their own terms. The key to successful unstructured interviews is learning how to **probe effectively**--that is, to stimulate an informant to produce more information without injecting too much of the researcher's words, ideas or concepts into the conversation.

Strengths of unstructured interviews:

The main strength of an informal conversational approach to interviewing is that it allows the interviewer to be responsive to individual differences and situational characteristics. Unstructured interviews are especially useful in situations where the researcher has lots of time to interview informants on many separate occasions. This style of interviewing builds well on observations, and can help to discover relevant

11

questions and their appropriate wording for semi-structured interviews and questionnaires. Unstructured interviewing is also useful for building initial rapport with informants, before conducting more formal interviews, and for talking with people or in situations where more formal interviews may not be tolerated (for example, in studies of street culture). Unstructured interviews are also useful for studying sensitive topics such as sexuality or certain political topics.

Weaknesses of unstructured interviews:

Because there is no set format for conducting conversational interviews, each interview tends to be unique. This makes it difficult to systematize and analyze the data. It may take several conversations before obtaining a similar set of information from each informant.

Semi-structured interviews

Semi-structured interviews are based on the use of an **interview guide**. This is a written list of questions or topics that need to be covered during the interview. However, the exact order and wording of the questions may vary from respondent to respondent. The interviewer may still follow leads and new topics that arise in the course of the interview, but the interview guide is a set of clear instructions concerning the main questions to be asked or topics to be probed. Types of semi-structured interviews using interview guides include the following:

Depth/focused interviews

Depth interviews, in contrast with more exploratory interviews, intensively investigate a particular topic. The purpose of a depth, or focused interview is to gain as complete and detailed an understanding as possible of the topic at hand. Depth interviews involve semi-structured interview guides, and assume enough prior exploration of the topic to know what the relevant questions are that relate to the topic to be investigated.

Case studies

The purpose of case studies is to collect comprehensive, systematic, and in-depth information about particular cases of interest. A case can be a person, an event, an illness episode, a programme, an organization, a time period, or a community. The case study attempts to describe the unit in depth and detail, in context, and holistically. Case studies are especially useful when the researcher needs to understand particular people, problems or situations in great depth, and when information-rich cases can be found which provide great insight into the phenomenon in question.

Life histories

Life histories (personal biographies) are usually collected over a series of many, lengthy interviews (usually both unstructured and semi-structured). Life histories are often collected and presented in order to relate the abstractions of ethnographic description to the lives of individuals. Life histories are prone to problems of representativeness, because the people who are willing to recount their life histories to researchers are often atypical of their communities. Nonetheless, life histories can be useful for examining general values, points of cultural interests, and perceptions of social relationships. It is probably best to use life histories as explanatory and illustrative materials in connection with other kinds of data that have been collected in a more representative manner.

Strengths of semi-structured interviews:

The use of an interview guide means that the researcher has decided how best to use the time available for the interview. This is especially appropriate in projects dealing with people who are used to efficient use of their time and may not be willing to spend time in open-ended, everyday conversation with the researcher. Interview guides help to show that you are clear about what you want from the interview, but are still flexible enough to allow both the researcher and informant free to follow new leads. Also, because the same core list of questions are asked of each respondent, the data from these interviews are easier to systematize.

Weaknesses of semi-structured interviews:

Developing an interview guide requires sufficient time to explore the topic of interest beforehand in order to know what the relevant question or topics are that should be covered.

Structured or systematic interviewing techniques[6]

Structured interviewing involves exposing every informant in a sample to the same stimuli (ie. asking each informant the exact same question). Survey researchers are most familiar with the structured questionnaire; this chapter will deal with non-questionnaire, structured interview techniques used in the field of cognitive anthropology.

The data collection methods discussed in this section produce *numerical, quantifiable* data. Nonetheless, these methods are included in the toolbox of qualitative researchers because their purpose is to help *describe and analyze the culture and behaviour of respondents' from the respondents' point of view.* Furthermore, their effective use depends on prior understanding of the study population's views and perspectives.

The data collection methods presented in this section aim to discover the "cultural rules" that people carry around in their heads; that is, what people think and know about the world around them, and how they organize that information. Specifically, these methods aim to isolate and define **cultural domains.**[7] Cultural domains are simply topics or categories which are meaningful for a particular culture. The concept of a domain is a very general one and may include almost any coherently defined subject matter. Some common examples of domains might include: "types of fruit", "ways to cure a headache", or "kinds of cars". Domains consist of a name ("types of fruit") and a list of included items (bananas, apples, oranges, etc.).

Domains and their included items vary from culture to culture. For example, "misfortunes caused by breaking sexual taboos" may be a relevant domain among certain cultural groups in Kenya, but not among white, anglosaxon North Americans. Spradley gives an example from the Tausug culture in the Philippines to illustrate how domains may be shared across cultures, but items included in the domain may not.[8] In Tausug culture, the domain "friends" (*kabagayan*) includes 8 types of friends: ritual friend, close friend, casual friend, opponent, personal enemy, follower, ally, and neutral. Although the domain "friend" exists in many other cultures, the types of friends recognized by other cultures may differ. For example, North Americans would probably recognize close friend and casual friend as types of friends, but not opponent or personal enemy. Identifying cultural domains help to understand the ways that people organize and make sense out of the world around them.

---

[6] For detailed instructions on how to collect and analyze data using these systematic data collection techniques, see Weller, S.C. and Romney K.A. (1988). *Systematic data collection.* Newbury Park, CA: Sage.

[7] See Glossary in Appendix I for a definition of cultural domain.

[8] Spradley, J.P. *Participant Observation. (1980).* New York: Holt, Rinehart and Winston, p. 88.

14

Free listing

The purpose of conducting free lists is to help isolate and define relevant domains. Free listing questions simply ask respondents to list as many items as they can think of in a particular domain. For example, in interviews with mothers about their children's recent illnesses, several mothers have mentioned fever. You would like to know whether mothers recognize and have names for different kinds of fevers. In order to determine whether "kinds of fevers" is a meaningful domain for these mothers, you might ask:

> *"Several mothers have told me that their children had fever. Are there different kinds of fevers?"*

If mothers are able to list several different kinds of fever (for example, "high fever," "fever that comes and goes," "fever only in the trunk of the body," etc.), then "kinds of fever" can be considered a meaningful domain for these mothers. However, if they cannot list any items, or seemed confused by the question, it may be that the domain is not meaningful for respondents.

Other ways of asking free listing questions include the following:

> *"Please tell me all the illnesses that children commonly get around here."*

> *"What are all the different kinds of drugs that people in your school use?"*

> *"You have mentioned that rice is good for children with diarrhoea. Are there other foods that are good for children with diarrhoea?"*

> *"You have mentioned visiting the traditional healer and giving massage as ways of curing empacho. What other ways of curing empacho can you think of?*

There are several things that can be observed from the lists of items that are collected using this technique. Some items are more familiar, important or "salient" than others, and these usually occur higher up or earlier in an informant's list. These items are also usually mentioned by a larger proportion of informants. More sophisticated analyses allow the lists generated by individuals or groups to be compared with one another, either in terms of internal variation or variation from one to another. Free listing information can also be looked at in relationship to key social variables, such as gender, socioeconomic or educational differences of informants.

Strengths of free listing:

Free listing is a useful first step in all research involving the definition of new domains. It is the best way to ensure that the concepts and the domain are culturally relevant. Informants can usually do the task easily.

15

Weaknesses of free listing:

Researchers need to be familiar with the culture and language of respondents in order to identify appropriate domain names to start the listing process.

Pile sorts

Pile sorting is a technique aimed at studying the relations among items within a domain (which have been identified through free listing or some other method). It is useful for discovering informants' perceptions of the similarities and differences among items, and to look at intracultural variation in how informants define domains.

In a pile sort, informants are asked to sort cards with names of items written on them (or actual items, such as foods or medicines), into piles or groups according to whatever criteria makes sense to them. For example,

"In front of you, you have 15 cards with the names of illnesses that people around here have mentioned to me. I would like you to group them so that those that are similar in some way are in the same pile. You may make as many piles as you like."

Usually, informants are asked to make as many or as few piles or groups as he or she wishes. There is also a more directed approach in which informants are asked to make a specified number of piles (although the criteria used to sort the items is usually left up to the informant).

Once the informant has completed sorting the cards, he or she is asked to explain the different piles. For example,

"What do all the items in this pile have in common?" or "What makes this pile different from the others?"

The technique of **successive pile sorts** is used to construct taxonomies or tree-like structures which illustrate the relations among items. Usually the technique is conducted by first asking the informant to sort the items according to any criterion that makes sense to them. Next, the informant is asked to repeat the exercise with each of these piles. The informant continues until he or she cannot subdivide piles any further. As each subdivision is performed, the informant is asked to explain the different piles created. Subdivisions are then recorded in the form of a tree or **taxonomy**. Figure 3 shows an example of a taxonomy based on results of a successive pile sort of the domain "kinds of pets."

16

Figure 3:   Example of a taxonomy based on a successive pile sort

"Kinds of pets"

goldfish
turtle
hamster
mouse
parakeet

horse
cat
dog

hamster
mouse

goldfish
turtle
parakeet

dog
cat

horse

goldfish
turtle

parakeet

In the example illlustrated in Figure 3, the informant explained the first subdivision as "pets that are small and live in cages or fishbowls" vs. "pets that are big and can go outside". The informant then subdivided the "small animals" into "furry animals" and "others". These were further subdivided into "animals that live in water" and "birds." The "large animal" group was subdivided into "animals that live in the house" and "animals that live in a barn."

Strengths of pile sorts:

They can be done using large numbers of items, and are easy to administer.

Weaknesses of pile sorts:

Unless items are pictures or actual stimuli, they cannot be used with non-literate informants. Simple hand analysis (ie. non-computerized) of pile sort data is possible. Computerized analysis is can be faster, but requires knowledge of an appropriate software programme.

Rating scales

Rating scales are a very popular technique for questionnaire data collection in the social sciences. Scales can be created for any number of concepts or attributes, and items can be rated on a single conceptual scale or each may be rated on a series of scales representing a variety of concepts or attributes. Scales can be presented numerically or graphically:

"circle the number that corresponds to the level of severity you would associate with illness saxra"

0   1   2   3   4   5   6   7   (from least to most severe)

"mark an 'x' on the line below indicating where you would rate the illness saxra in terms of severity"

————————————————————————
mild   severe

Another approach, which can be used with non-literate respondents, is to use cards or some other visual stimuli (actual foods or medicines, for example), and ask informants to place the objects in piles according to some pre-defined rating criteria. For example, if you are interested in rating a number illnesses according to their perceived severity, you might

decide to use a 3-level rating system (very serious, moderately serious, not very serious at all), and ask informants:

"I'm going to say the name of an illness, and I would like you to tell me whether the illness is very serious, moderately serious, or not very serious at all."

As the informant rates each illness, the researcher places the corresponding card or object in the appropriate pile. Such visual stimuli make the task more fun for the respondent, and allow the respondent to consider the relationships among items and to change their rating if necessary.

Strengths of rating scales:

Rating scales are easy to administer.

Weaknesses of rating scales:

Rating scales can be extremely sensitive to response bias (the propensity of an individual to always use one end of the scale or a narrow range in the middle of the scale). This can make it difficult to compare data between respondents.

Rank order methods (complete and partial)

Rank order methods require informants to rank items (ie. from most to least) in terms of a specific characteristic, for example, illnesses in terms of severity. Below are the two most common methods for rank ordering items.[9]

Complete rank ordering methods usually require that informants be literate, and involve presenting respondents with a list of items, which they are asked to order from "most" to "least" on some attribute by putting numbers next to each item. Another method is to present each informant with visual stimuli or a stack of cards on which item names are written, and ask them to order the items or cards from "most" to "least" ("best" to "worst", or whatever the attribute of interest is).

---

[9] For further details and variations on these methods (including quicksort, mergesort and balanced-incomplete block design), please refer to Weller, S.C. and Romney K.A. (1988). *Systematic data collection.* Newbury Park, CA: Sage.

Partial rank ordering pairs each item with each of the other items (for a total of n(n-1)/2 pairs). These pairs of items are presented to respondents, who are asked to indicate which is "more" or "less" ("best" or "worst", "most preferred" or "least preferred", etc.). This technique is also called a **paired comparison**. A total rank ordering is obtained by summing the number of times each item was chosen.

Strengths of rank order methods:

The complete rank ordering technique produces a great deal of information, and is productive for the time spent by the informant. The method is ideal for studying individual differences.

Paired comparisons are probably the easiest and most reliable method to use with illiterates when there are a small number of items to be ordered.

Weaknesses of rank order methods:

The complete rank ordering technique can be tedious for non-literate respondents. For paired comparisons, pre-testing is crucial for identifying the maximum number of pairs that informants will tolerate. Some researchers have found that even as few as 15 pairs (6 items) can become tedious.

Group interviewing techniques

Group interviewing techniques allow the researcher to make inferences about groups. That is, **the unit of analysis is the group, not the individual.** This is a commonly ignored, but important, characteristic of group interviews. For example, if you conduct group interviews with community health workers, you will be able to make inferences about community health workers as a group, but not about the individual health workers who participated in the group interviews.

The choice to conduct interviews with individuals or groups will depend on who you want to make inferences about--individuals or groups--and whether or not the topic is sensitive and potentially inappropriate for group discussion.

Focus groups[10]

The focus group is a special type of group in terms of its purpose, size, composition and procedures. A focus group is usually composed of 6 to 8 individuals who do not know each other prior to the group discussion, and who have been selected because they share certain characteristics which are relevant for the topic to be discussed. The discussion is carefully planned, and is designed to obtain information on participants' beliefs and perceptions on a defined area of interest.

Focus groups differ from informal group discussions in a number of aspects. First, specific, pre-determined criteria are used for recruiting focus group participants. Second, the topics to be discussed are decided beforehand, and the moderator uses a pre-determined list of open-ended questions which are arranged in a natural and logical sequence. The moderator may even memorize the questions beforehand. Finally, focus groups rely on discussion among participants about the topics presented, and group members may influence each other by responding to ideas and comments that arise during the discussion, but there is no pressure on the moderator to have the group reach consensus.

Focus groups have been used successfully to: assess needs, develop interventions, test new ideas or programmes, improve existing programmes and generate a range of ideas on a particular subject as background information for constructing more structured questionnaires. However, they are not easy to conduct. They require thorough planning and training of group moderators. Below are a some key considerations when planning focus groups:

·   Focus groups require trained moderators. Three types of people are needed to conduct focused group discussions: (1) recruiters, to locate and invite participants; (2) moderators to conduct the group discussions; and (3) notetakers who list topics discussed, reactions

---

[10] See Appendix III for a list of "how-to" guides for conducting focus groups.

of the group participants, and ensure that the entire discussion is tape-recorded. They will also assist with the transcription of taped discussions.

If possible, focus group discussions should be conducted by people who already have experience with the technique, and who are familiar with the target population and culture. If skilled professionals are not available, several practice sessions should be conducted in which moderators are trained to:
- introduce the topics to be discussed
- gain the confidence and trust of the participants
- ensure the participation of everyone in the group
- facilitate discussion among group members
- control the timing and rhythm of the discussion
- be sensitive to nonverbal communication

Notetakers must be trained to:

- observe and record the group dynamics and other subtle reactions and interactions that might be of interest for the analysis
- assist the moderator by recording background information on the participants
- develop a system for identifying all the participants and attributing their remarks

· <u>Focus groups should usually be composed of homogeneous members of the target population.</u> It is usually a good idea to form groups of respondents who are similar in terms of social class, age, level of knowledge, cultural/ethnic characteristics and sex (in addition to any other variables you may identify). This will help to create an environment where participants are comfortable with each other and feel free to express their opinions.

· <u>At least two groups should be conducted for each "type" of respondent to be interviewed.</u> For example, in a study of infant feeding practices, you might want to interview groups of young vs. older women, women of higher vs.lower socioeconomic status, fathers, traditional birth attendants, and health workers. It is important to first consider the importance of various participant characteristics to the subject under study, and form groups accordingly. Only those characteristics that you feel are really important should be chosen, in order to keep the total number of focus groups to a minimum. A minimum of two groups should be conducted for each "type" of respondent, but you should continue to form new groups as long as new information is being obtained. This is sometimes referred to as sampling until the point of redundancy (see Chapter 3 for a discussion of sampling strategies in qualitative research).

· <u>The optimal size group would consist of 6 to 8 respondents.</u> Groups of no more than 6 to 8 individuals help to ensure that all individuals participate, and that each participant has enough time to speak. It also helps to reduce relationships of dominance/submission within groups and reduces the tendency for side conversations between respondents. Smaller groups also tend to be more cohesive and interactive.

22

· <u>Data should be analyzed by group.</u> Summaries should first be written for each group discussion. Next, summaries should be written for each "type" of group (ie. a summary of all discussions conducted with young mothers). Finally, results from different "types" of groups can be compared (ie. results from groups of young vs. older mothers).

Strengths of focus groups:

They can produce a lot of information quickly, often more quickly and at less cost than individual interviews.

They are good for identifying and exploring beliefs, attitudes and behaviours in a population.

They can indicate the range of beliefs, ideas or opinions in a community.

They are useful for identifying relevant and appropriate questions for individual interviews (semi-structured and structured).

People usually feel comfortable in a focus group discussion, because it is a form of communication found naturally in most communities.

Weaknesses of focus groups:

The researcher has less control over the flow of discussion in the group interview as compared to the individual interview.

Focus groups cannot tell you about the frequency or distribution of beliefs and behaviours in a population.

Results are harder to analyze than individual interviews. Participants' comments must be interpreted within the particular social environment created by the focus group (a discussion among strangers in a neutral place), and care must be taken to avoid lifting comments out of context or out of sequence.

Because the amount of response time required for any given question is increased by having discussion among the participants, the number of questions that can be addressed is smaller than in individual interviews.

Facilitating and conducting a focus group interview requires considerable skill. It is important to know how to manage the interview so that it is not dominated by one or two people, and so that all participants are able to share their views.

Taking thorough notes during focus group discussions is very difficult, and transcribing from tape recordings is both difficult and costly.

23

Other group interview techniques

Non-focus group interviews

Not all group interviews are focus groups. The term focus group refers to a special type of group interview in which the researcher controls the purpose, size, composition and procedures of the group. Other, less formal group interviews can also be useful. For example, interviews can be conducted with pre-existing, natural groups such as family members living together in a compound, or members of a mothers' clubs. Or, discussions might be held with men gathered together at a tea shop, or with women who have gathered to wash clothes or wait in line at the health centre. In such interviews, the researcher has less control over the size, composition and procedures of the group, but the context of the discussion tends to be more natural.

Non-focus group discussions may involve only unstructured or semi-structured interviewing techniques. However, a number of participatory data collection techniques also exist, in which group members are asked to work together to complete a task. Participatory methods have been especially useful in action-oriented projects which work with community members in identifying health priorities and selecting appropriate intervention strategies. Below are descriptions of some of the more common of these participatory techniques.[11]

Mapping and modelling

In this technique, a group of individuals from the study population are asked to draw or build maps and models of their community, using locally available materials (including, sticks, stones, grass, wood, cigarette packs, leaves, sand, etc.). Maps or models can be constructed by different interest groups (men, women, young, old, poor, wealthy) working together in order to represent their particular viewpoints and interests. Both the process of building the map and the final product facilitate the identification and exploration of topics of interest. There are many different types of maps and models that can be created:

- resource maps which represent health service catchment areas, villages, forests, fields, farms and gardens;

- maps which illustrate different residential areas of a village;

- social maps which illustrate wealth rankings and household assets;

---

[11] For more on participatory techniques see the section on group interviewing techniques in Appendix III.

- health maps in which the health and welfare status of family members is marked on or by each house using various types of markers. (For example, it might indicate where malnourished children or TB patients are located);

- topical maps, which might show, for example, where water sources are located, the soil quality of various fields, or where irrigated fields are located.

Seasonal calendars

Seasonal constraints and opportunities (ie. seasonal patterns of illness) can be explored by asking group members to construct "calendars" (again using locally available materials) which show the different months or seasons. Then, the calendars can be filled out by asking group members to put markers on the seasons or months that are associated with various characteristics. Seasonal maps can be constructed to illustrate and compare the following:

- times of the year when particular health problems are common or uncommon
- relative quantities and patterns of rainfall
- relative presence or absence of pests (mosquitos, flies, etc.)
- labour activity patterns (agricultural and non-agricultural)
- farming activities (ie. planting, harvesting of various crops)
- school terms
- relative levels of income and expenditures

Time lines

In this technique, group members are asked to recall local events and develop a community history which includes approximate dates. Time lines are especially useful for facilitating discussion about changes that have occurred over time (changes in health, crop output, environmental conditions, etc.).

Strengths of non-focus group interviews

These group interviews are easier to organize because they take advantage of natural, pre-existing groups., and therefore discussions may also be more natural. The participatory tasks can be fun and interesting for participants.

Weaknesses of non-focus group interviews

Non-focus group interviews are less systematic than focus groups in terms of participant selection, so inter-group comparisons are more difficult. As with focus groups, these interviews require skilled group moderators. Because of the awareness-raising and problem-identification nature of participatory methods, researchers should be careful not to create expectations that cannot be fulfilled. Usually these methods are best used in conjunctions with a planned intervention.

25

Observation

Interviews provide information about peoples' beliefs, attitudes, values and <u>reported behaviour</u>. Observations provide information about <u>actual behaviour</u>. Direct observation of behaviour is useful because some behaviours involve habitual routines which people are hardly aware of. In such cases, observations can reveal more information than other data collection methods. Direct observation also allows the researcher to put behaviour in context, and thereby understand it better.

Because a person cannot observe everything that is happening at a given moment in time, all observations are by nature limited. Furthermore, what we (unconsciously or consciously) choose to observe and what not to observe is influenced by our culture, upbringing and personal experience. In research, observations can only be used as a reliable and unbiased source of information to the degree to which they are focused and systematic. That is, the researcher should be explicit about what he or she wants to know, learn and understand, and how observations are to be collected and recorded.

Observations can be made either of people's **actual behaviours**, or observations can be made of **signs or indicators of behaviour**. Sometimes behaviours would be impossible to observe directly, and researchers must settle for observing indicators of that behaviour. For example, in one study, researchers wanted to estimate the rate of condom use among motel clients. Actual use of condoms could not be observed, and the researchers felt that asking people about whether or not they used condoms would not produce valid data. So, the researchers estimated condom use by distributing condoms to all motel clients, and then inspecting motel rooms and garbage cans, and retrieving and inspecting condoms after each client left the motel.[12]

Observations can either be **unobtrusive and non-reactive**, or **obvious and reactive**. Unobtrusive observation, whereby people are observed without their knowing it, can involve serious ethical dilemmas. Here we will only discuss obvious and reactive observation techniques. Figure 4 illustrates the range of variation in observational methods. The particular approach used will depend on the kinds of behaviours you are interested in observing, and what your particular information needs are.

---

[12] Gorter, A., Miranda, E., Smith, G.D., Ortells, P. and Low, N. "How many people actually use condoms? An investigation of motel clients in Managua." *Soc. Sci. Med.* 1993 June; 36 (12), pp. 1645-7.

Figure 4: Range of variation in how observations may be conducted[13]

Full participant observer	**Role of the observer**	Onlooker, observation as outsider
Overt, everyone knows	**Degree to which those observed know they are being observed**	Covert, no one knows
Full explanation of real purpose to everyone	**Degree to which those observed know why they are being observed**	False explanations given to everyone
Single observation, limited duration	**Duration of observations**	Long-term, multiple observations
Narrow focus, single behaviour observed	**Focus of the observations**	Broad focus, holistic view sought
Open, descriptive accounts, qualitative data	**Type of data produced**	Quantitative data, based on pre-determined observation list

[13] Adapted from Patton, M.Q. (1990), *Qualitative evaluation and research methods* (2nd edition). Newbury Park, CA: Sage, p. 217.

Participant observation

Strictly speaking, participant observation refers to an approach whereby the investigator becomes, to a greater or lesser extent, an active, functioning member of the culture under study--for example, a family, health team or community. The investigator participates in any activities appropriate for a person of the status which is assumed, observes what others do, and in general attempts to see through the eyes of a member of the culture rather than through those of an outsider. Participant observation in itself does not constitute a specific data collection technique; rather, it is a general approach to data collection, usually involving unstructured interviews (everyday conversation) and unstructured observations. Many anthropologists use the term to simply mean living in or "hanging around" the community or culture under study.

In participant observation, the people being observed are aware of the researcher's presence in the community, and usually know that the purpose of the researcher's presence is to learn about their way of life. However, the degree to which people are aware of the researcher's specific interests and purpose can vary. The focus of participant observation is usually quite broad, and seeks a holistic view of the people and behaviours being observed. Participant observation produces textual, descriptive accounts.

Strengths of participant observation:

Participant observation facilitates all other data collection in the field by helping to reduce reactivity (the degree to which people change their behaviour when they know they are being studied). People become more and more comfortable with the researcher's presence.

It helps the researcher to learn how to formulate appropriate and relevant questions in the native language.

It gives the researcher an intuitive understanding of what's happening in a culture; helps the researcher to understand the meaning of data being collected; maximizes the researcher's ability to make valid statements about the culture being studied.

It is useful when a context is new or not well known, and when the topic of interest is especially complex. It is particularly useful at the beginning of research, when a problem is not well understood.

It is useful when the situation of interest is obscured or hidden from the public, or when people appear to have significantly different views than do outsiders.

It is especially appropriate for understanding processes, events, norms and values, and the context of a social situation.

Weaknesses of participant observation:

Depending on the population and topic to be studied, participant observation can be quite time-consuming, taking anywhere from a few weeks to many months.

To conduct participant observation, a researcher must speak the local language well, be skilled at observing the little details of life, have good memory (in order to write down later what was observed), and be skilled at writing detailed and copious notes about what was observed or discussed.

Sometimes researchers become so familiar with the culture that it becomes more and more difficult to notice things that should be considered different or important.

Unstructured observation

In unstructured or open observations, the observer takes the position of an on-looker, rather than a participant observer. Those being observed know they are being observed, but the "what" to be observed is only very broadly defined (for example, infant feeding, or drug-injecting practices). Unstructured observations are broadly focused, and their aim is to observe behaviour in its holistic context. Data are collected in the form of detailed, descriptive accounts.

Unstructured observations are often conducted when the researcher is trying to discover unknown aspects of a problem. They allow for the discovery of "surprises" which can then be followed up in later stages of the research, using interviews or more structured observation techniques. Unstructured observations are particularly helpful for understanding behaviours in their physical and social context.

Structured observation[14]

In structured observations, the observer is an on-looker, he or she observes as an outsider. Those observed know they are being observed, but usually do not know the exact behaviours that are being observed and recorded. The focus tends to be on a small number of very specific behaviours. Only those behaviours appearing on a pre-defined observation list are recorded. Structured observations produce quantitative data with little contextual description.

---

[14] The material for this section has been adapted from Boot, M.T. and Cairncross, S. (1993). *Actions Speak: the study of hygiene behaviour in water and sanitation projects.* The Hague: International Water and Sanitation Centre.

In order to conduct structured observations, the behaviours and actors of interest must be clearly specified; the importance of the timing of observations must be determined (time of day, season, etc.); and focal behaviours must be defined and broken down so that recording is reliable. This approach ensures that the observations will be optimally reproducible, comparable and quantifiable.

The box below lists the key decisions that need to be made when deciding how to do structured observations. Answers to these questions will depend on the aim of the study, and also on information collected during unstructured observations and interviews.

Some decisions involved in using structured observations[15]

· Should observations be of persons or locations (ie. households, schools, etc.)?

· What should the duration of observations be?

· What is the best time of day to conduct the observations?

· How often should the observations be repeated?

· In which season(s) should observations take place?

Structured observations are only useful when a careful selection has been made of the points about which more is to be learned. Only behaviours which are on the list will be noticed and recorded; therefore potentially important behaviours not on the list may go unrecorded, and behaviours that are on the list, but that do not provide the desired information, will be a waste of effort and time. Unless the behaviours of interest are well understood, it is not possible to develop a good observation recording sheet. Therefore, **structured observations should never be used before first conducting unstructured observations and interviews to explore what really needs to be known, and in what detail.**

There are three main types of structured observations, including **continuous monitoring**, **spot checks**, and **rating checks**. Table 2 shows these different types.

---

[15] Based on Boot, M.T. and Cairncross, S. (1993). *Actions Speak: the study of hygiene behaviour in water and sanitation projects.* The Hague: International Water and Sanitation Centre, p.62.

Continuous monitoring involves observing and recording the behaviours of interest for an extended period of time, for example several hours or even a full day. Continuous monitoring can be done in two ways: **extended observation**, in which the behaviours of interest are noted down in a structured format as and when they occur. This technique is best for observing a series of behaviours, or behaviours which occur infrequently. Extended observation requires a high level of commitment and concentration of the observer to avoid missing any important behaviours of interest over the entire observation period. Infant feeding practices are often observed in this way, for example. **Time-point observations** are carried out at fixed points in time, for example the first five seconds of every minute, over an extended period of time (several hours). Time-point observations are useful when the researcher wants to know the frequency of particular behaviours, and they reduce the risk of lapses in concentration that are common in continuous monitoring. However, time-point observations are not useful for observing behaviours that occur infrequently. This technique has been used to measure women's activity patterns, for example.

Spot checks are observations whereby the observer records the presence or absence of a behaviour or physical characteristic of interest at the first moment of observation (for example, whether or not drinking water is covered). Spot checks are usually carried out as soon as the observer arrives, in order to catch the "real situation" before there is time for the observer's presence to affect people's behaviour.

Spot checks are not useful for observing behaviours of limited frequency and duration, and therefore are used more often to **observe signs of behaviour** or physical clues of behaviour. One example is to make a round after lunchtime to see how many households have left dishes unwashed after the meal (as an indicator of dishwashing behaviour).

Another way to observe signs of behaviour is to **ask people to demonstrate the behaviour** of interest, and then observe and record whether it is done correctly. For example, you might ask people to demonstrate how they would prepare oral rehydration solution.

Rating checks require the observer to **make judgements** on individuals and environments. For example, "woman washes hands" is a pure observation of a behaviour, while "woman's hands are clean" involves a judgement by the observer. It is very difficult to train observers to make standard judgements, so it is recommended to use ratings only if unavoidable. Also, ratings should be made as explicit as possible.

31

Table 2:   Types of structured observations[16]

OBSERVATIONS OF BEHAVIOUR	·Continuous monitoring
	
	    -extended observation
	    -time point monitoring
	
	·Spot checks
	
	    -observation of events, activities

OBSERVATIONS OF SIGNS OF BEHAVIOUR	·Rating checks
	
	    -environmental ratings
	    -individual ratings

Strengths of structured observations:

They provide precise, numerical results which are amenable to statistical analysis and can be repeated to monitor behavioural change over time (for example, over the course of an intervention).

Weaknesses of structured observations:

The problem to be studied needs to be clearly defined.
Training of observers is intensive and time-consuming.
Pre-determined structure of the observations limits discovery of other potentially relevant behaviours.
Data coding, entry and analysis can be very time-consuming.

---

[16] Based on Boot, M.T. and Cairncross, S. (1993). *Actions Speak: the study of hygiene behaviour in water and sanitation projects.* The Hague: International Water and Sanitation Centre, p. 57.

Ethnographic decision modelling[17]

Ethnographic decision modelling is a method for explaining and predicting actual choices of individuals in a group. For example, you may want to know how adolescents decide what drugs to use, and why they decide to switch from soft to hard drugs. Or, you may want to know how mothers decide what treatments to use for their children's illnesses.

Ethnographic decision modelling uses ethnographic data collection methods (mainly semi-structured interviews and observations) to elicit the criteria people use to make decisions. This method is based on the assumption that decision-makers themselves are the most knowledgeable about how they make decisions. Therefore, ethnographic interviewing techniques are used to elicit the *emic*,[18] or insider's, decision criteria. These are then combined in the form of decision trees, tables, flowcharts, sets of "if-then rules" or "expert systems," programmed into the computer, and tested using actual choice data collected from a independent sample of the study population.

Gladwin (1989) outlines a series of eight steps for developing decision models. These steps are summarized below, and are illustrated using an example from a study of medical decison-making in Mexico.[19]

1. First, choose the decision you want to study.

> Young was interested in studying how people from Pichátaro, Mexico, deal with illness, and in particular how they decide what treatments to use.

2. Identify the set of possible alternatives for the decision.

> In Pichátaro, both indigenous and modern medical practitioners and treatments are available. Based on interviews and observations, Young identified the following as the set of possible alternatives that Pichátaro residents consider available to them with regards to the decision at hand (how to deal with illness): self-treatment (using either folk remedies or modern medical remedies), *curanderos*, witches, regular private physicians, specialist physicians, government physicians, *practicantes*.

---

[17] This chapter is based on Gladwin , C.H. (1989). *Ethnographic decision tree modelling*. Newbury Park, CA: Sage.

[18] See Glossary in Appendix I for a definition of emic and etic.

[19] Young, J.C. (1981). *MedicalChoice in a Mexican Village*. New Jersey: Rutgers University Press.

3. Conduct interviews with informants to learn as much as possible about the characteristics of the various alternatives and people's perceptions of them.

> Young and his wife conducted interviews with key informants, collected census data, and mapped the community. These activities were aimed at learning as much as possible about the characteristics of the different medical resources available to them (cost, distance, services provided, etc.) and about people's perceptions of the various medical alternatives available to them.

4. If possible, do some participant observation, and in particular try to observe contrasting choice behaviour.

> Young and his wife lived in Pichátaro for about 12 months, during which time they were active participant-observers in daily life. They were able to observe first hand how families dealt with sickness and other aspects of life in Pichátaro, and to question people about their behaviour.

5. Decide on the sample of decision-makers that you will use to build the model. The sample should be as representative as possible of the population of people who make the decision you are studying, and should include as much variation as possible in terms of the choices made. There are no rules about sample sizes, but Gladwin has found that in a relatively homogenous culture, such as in one village, 20 to 30 informants seems to be enough to build a decision model.

> Young conducted interviews with a core group of 15 informants, 8 men and 7 women representing a range of ages, occupations and economic status. He used two interview methods to collect information for building a decision model: First, paired comparisons of different treatment alternatives in which informants were asked: *"If you or another person in your household were ill, when, or for what reasons, would you consult _____ instead of _____?"* All possible contrasting pairs of possible alternatives were presented twice to informants (the second time the order of alternatives was reversed). The second method included collecting case histories of past illnesses and the treatment actions taken. An average of around twenty-five cases was obtained for each household.

6. Build individual decision models for each informant.

> Young does not provide examples of individual decision models. However, he does describe the criteria that people mentioned most frequently as principal considerations (gravity of the illness; knowledge and experience possessed about the type of illness and its appropriate treatment; *fe* or confidence one has in the effectiveness of folk treatments as compared to modern treatments; and expenses associated with a given alternative and the availability of resources to meet those

expenses). He also identified some other important considerations, such as whether or not a prior treatment has been tried and unsuccessful.

He then used this information to develop a set of hypothetical illness cases (which varied systematically according severity, resource availability, and knowledge of an appropriate remedy). These were presented to informants, who were asked what they would do, and then if this didn't work, what else they would do. This question was repeated until informants replied that nothing more could be done. This provided 8 decision models (from the 8 hypothetical cases) for each informant.

7. Next, use the individual decision models to build a composite decision model for the group.

Answers to hypothetical situations were combined and analyzed statistically in order to identify the degree of consensus among respondents about a particular pattern of treatment-seeking for each case. This allowed for the identification of several sets of situations in which informants agreed on the likely sequence of treatment choices. These situations (or "rules") were then presented in the form of decision tables. Below is an example two decision rules identified (this table illustrates only the decision model for choice of first treatment, but a similar table was also developed for subsequent choices, as well).

	Rule 1	*Rule 2*
If the illness is...	non-serious	grave
and a home remedy....	is known	(is not relevant)
and the respondent favors..	folk treatments	medical treatments
and money and transport...	(are not relevant)	are available
THEN, CHOICE OF FIRST TREATMENT WILL BE:	*curandero*	Physican

8. Finally, test the model on an independent, representative sample of the population group that makes the decision being studied. Depending on the error rate of your model, you may want to devise an alternative model, for example by rephrasing existing criteria, adding new criteria, or changing the order or criteria in the model.

Young collected a separate set of 323 illness case histories from a representative sample of 62 households. These were then tested against the model which had been developed (presented as a s set of 9 rules for choice of first treatment, and 11 rules for subsequent choices). The model was found to account for 94.7% of

first treatment choices, and 84% of subsequent choices. The results provide strong evidence that the considerations and assumptions embodied in the the model represent important aspects of how people actually make choices about medical care. There appear to be significant regularities in the way people from Pichátaro use different treatment alternatives, and these choices can be predicted to a considerable degree.

Strengths of ethnographic decision modelling:

Decision modelling provides a systematic method for explaining and predicting behaviour.

Weaknesses of ethnographic decision modelling:

Ethnographic decision modelling shares the strengths and weaknesses associated with the qualitative data collection methods it draws on. In addition, some have argued that there is so much individual variation in decision rules that group decision models are inadequate and unrealistic. However, Gladwin counters that policy makers have to make policy for groups of people, not individuals. In addition, the fact that group decision models predict (and predict well) the decisions made by individuals in the group shows that these generalizations work pretty well. They work because individuals in the same culture do share knowledge systems and at least some of their decision criteria.

Social network analysis[20]

Social network analysis is a set of methods used to analyze social structures and patterns of social interaction. The purpose of social network analysis is to investigate the form and content of social relations. **Form** refers to properties of the connections between pairs of actors (for example, the intensity or strength of the link between two actors), whereas **content** refers to the type of relationship between the two actors (gift-giving, transmission of information, kinship, power relations, etc.).

In health, social network analysis might be used to understand how new information or innovations are diffused through communities; or it might be used to explore the way differences in the way people interact with others affect their health beliefs and behaviours. For example, in one study researchers looked at the social interactions and social network positions of adolescents, and the way in which these affected their smoking behaviour. This information helped to identify types of students who were at higher risk of smoking, and suggested ways of reaching these students with health education.[21]

In general, there are three aspects of social networks which can be analyzed:

1) Aspects of individuals in a network. These include the extent to which a particular individual is connected to everyone else in a network; identification of the most central persons in a network; the degree to which an individual acts as a "gatekeeper" between other individuals in the network; and the degree to which an individual knows others who are well-connected or "in the know."

2) Aspects of sub-systems in a network. For example the existence of mutually exclusive groups within an overall social network ("factions"); or individuals or sub-sets of individuals who are vulnerable to being disconnected from the overall social network by the weakness of their links with others in the network.

3) Aspects of the entire network. These include whether or not a path exists from one individual to another in network; the distance between individuals in a social network; and the type and direction of information flow from one individual to another in a social network.

There are several important methodological considerations when conducting social network analysis:

---

[20] For further details, see books listed under Social Network Analysis in Appendix III.

[21] Ennett, Susan T. and Bauman, Karl E. "Peer group structure and adolescent cigarette smoking: a social network analysis." *Journal of Health and Social Behavior* 1993, Vol. 34 (September), pp. 226-236.

- the definition of the relations to be investigated: social relations are social constructs, produced on the basis of the definitions of the situation made by group members. So, for example, a relation of "close friendship" can mean different things to different people, according to their conceptions of what it means to be "close." Careful operationalization of the relations to be studied is important.

- the definition of boundaries: researchers often assume that social relations of individuals will be confined to a particular group or locale (for example, within a village ethnic group). However, in reality social relations often cross over these boundaries. To the extent that connections which reach outside the group or locale are ignored, the social network being studied will be an imperfect representation of the full network. Boundary setting will always be somewhat artificial, since it is impossible to include all of the connections that exist between all living human beings. Therefore, researchers usually choose to define boundaries either based on respondents' own perceptions of the actors in a given network, or based on some theory-based boundary definitions.

- Sampling strategies will depend on the type of information sought. Random sampling from a population may be appropriate for describing social network attributes of individuals in a population. However, a representative sample of *individuals or groups* does not give a useful sample of *relations*. Therefore, other sampling approaches (snowball sampling, for example) are necessary to investigate aspects of the entire social network or of sub-systems in network.[22]

---

[22] For a discussion of sampling problems and strategies in social network analysis, refer to books listed under Social Network Analysis in Appendix III.

CHAPTER 3: SAMPLING ISSUES IN QUALITATIVE RESEARCH[23]

Usually researchers do not have the time or resources to interview or observe each and every person in the population being studied, so they must make do with a sample of the population. There are two major types of samples—**probability samples**, which are designed to be *statistically representative* of the population from which the sample is drawn. Types of probability samples include simple random samples, stratified random samples and cluster samples.[24]

Probability samples increase the validity of study findings, and should be used whenever possible. However, it is often difficult, costly and sometimes impossible to do strict probability sampling in the field. A number of **non-probability sampling strategies** exist which aim to be *theoretically representative* of the study population, by maximizing the scope or range of variation in the subject of study. The researcher chooses study sites or informants to represent the range of variation on those characteristics that seem to be meaningful for the topic under study (for example, geographical location, ethnic groups, SES, age, education, profession, etc.). In this situation, a small number of specially chosen sites or informants can yield valid and generalizable information.

Selection of research sites

Because qualitative research tends to focus on a small number of communities or areas—and within these, on small numbers of informants—the selection of research sites is crucial to the overall usefulness of the information produced. The process is one of progressive elimination, starting with the largest, theoretically relevant sample population, and ending at the actual site or sites where research is to be conducted.

· The first step is to identify the largest area which is relevant for the research questions and objectives.

For example, in Bolivia the Acute Respiratory Infections (ARI) Programme wanted to o gain a better understanding of families' beliefs and behaviours related to acute respiratory infections. The purpose of the research was to help improve health services delivery, and design appropriate health education materials. Thus, only areas of the country where the ARI programme was already (or soon-to-be) operational would be potential research sites.

---

[23] Much of the material for this chapter comes from Kuzel, A.J. "Sampling in qualitative inquiry" *in* Crabtree, B.F. and Miller, W.L., eds. (1992). *Doing Qualitative Research.* Newbury Park, CA: Sage, pp.31-44.

[24] For more on probability samples, see for example, Bernard, H.R. (1988). *Research Methods in Cultural Anthropology.* Newbury Park, CA: Sage.

It made sense to conduct studies only in areas where ARI is a priority health problem, and where the ARI programme would be able to make use of the information collected.

· The next step is to consider the heterogeneity of the potential study population, and choose areas or communities which represent the range of variation on the most important characteristics.

In Bolivia, the population varies most significantly in terms of ethnic/language groups, and the urban/rural nature of communities. Therefore, the ARI programme felt it would be important to conduct (minimally) two studies in rural communities--one in each of the two major ethnic groups--and one study in a multi-ethnic urban area. These three studies would represent the largest population blocks for which ARI is an important health problem.

· Finally, the identification and selection of actual communities which fulfil these criteria depends on site visits, discussions with community leaders, and sometimes some informal interviewing or baseline data collection. Final selection will be determined not only by the communities' characteristics, but also by their willingness to participate in the study.

In Bolivia, the local leaders of the first community visited refused to participate in the study because they had had a negative experience with a survey conducted in the past. The researchers visited several other communities before locating one that both fulfilled the selected criteria and were willing to participate.

Selection of respondents

Table 3 summarizes a number of different strategies that may be used for selecting sample "units" (ie. individuals or households). The sampling strategy selected will depend on the purpose of the study and the particular data collection techniques to be used. The following are some common features of non-probabilistic sampling approaches:[25]

· Sample design is flexible, and will usually evolve as the study progresses. The researcher will have some general ideas at the beginning of the study as to what kinds of people to interview and where to start, but is never locked into a pre-conceived, rigid sampling strategy.

· Sample units (ie. individuals or households) are often selected serially. Often what one learns from one type of informant will help to identify other types of useful informants.

· Sampling includes a search for negative cases in order to give greater breadth and strength to findings.

---

[25] Kuzel, A.J. "Sampling in qualitative inquiry" *in* Crabtree, B.F. and Miller, W.L., eds. (1992). *Doing Qualitative Research.* Newbury Park, CA: Sage, p. 41.

Table 3: Types of sampling strategies[26]

TYPE OF SAMPLING	PURPOSE
· RANDOM PROBABILITY SAMPLING	Representativeness: sample size is a function of desired confidence level
Simple random sample	Permits generalization from sample to the population it represents.
Stratified random and cluster samples	Increases confidence in making generalizations to particular subgroups or areas.
· NON-PROBABILISTIC, PURPOSEFUL SAMPLING	Selects information-rich cases for in-depth study. Size and specific cases depend on study purpose.
Extreme or deviant cases	Learn from highly unusual manifestations of the phenomenon of interest.
Intensity sampling	To provide rich information from a few select cases that manifest the phenomenon intensely (but are not extreme cases).
Maximum variation sampling (purposefully selecting a wide range of variation on dimensions of interest)	To document unique or diverse variations, can help to identify common patterns that cut across variations.
Homogeneous sampling	To focus on similar types of respondents simplifies analysis, facilitates group interviewing.
Typical case sampling	To illustrate or highlights what is typical, normal, average.
Stratified purposeful sampling (selecting informants from subgroups of interest)	To illustrate characteristics of particular subgroups of interest; facilitates comparisons.
Critical case sampling (selecting cases--sites, events, individuals--which make a point quite dramatically, or are particularly important for some reason)	To maximize information when resources may limit number of study sites or overall sample size.
Snowball or chain sampling (you locate one or two key individuals, and then ask them to name other likely informants)	To facilitate the identification of cases of interest.

(Table 3 continued on next page)

---

[26] Table based on Patton, M.Q. (1990). *Qualitative evaluation and research methods* (2nd ed). Newbury Park, CA: Sage, pp.182-183.

(Table 3, continued)

TYPE OF SAMPLING	PURPOSE
Criterion sampling (picking all cases that meet some criterion of interest)	To investigate in depth a particular "type" of case, identify all sources of variation.
Theory-based sampling (finding manifestations of a theoretical construct of interest)	To help elaborate and examine the theoretical construct of interest.
Confirming and disconfirming cases	To elaborate and deepen initial analysis by seeking exceptions, testing variation.
Opportunistic sampling (taking advantage of new leads)	To take advantage of the unexpected.
Random purposeful sampling (small but randomly selected sample)	To add credibility when a complete purposeful sample is too large to be feasible. Aims to reduce suspicion about why certain cases were selected for study, but such a sample does not permit statistical generalizations.
Sampling politically important cases	To attract attention to the study (or avoid attracting unwanted attention by purposefully eliminating from the sample politically sensitive cases).
Mixing sampling strategies within a study	To increase validity of findings by "triangulation". Also, to meet multiple interests and needs.
Convenience sampling (selecting whoever is easiest, closest, etc.)	To save time, money and effort, but information collected has very low credibility.

Selection of key informants

Key informants are defined as individuals who possess special knowledge and who are willing to share their knowledge with the researcher. They have access to the culture under study in a way that the researcher does not. The key informant is someone with whom the researcher develops a special relationship of information exchange. Most qualitative studies start with unstructured interviews with key informants in order to explore the topic of interest, identify relevant questions and learn appropriate vocabulary for discussing the topic with other informants. Key informants are also useful for pre-testing more structured data collection techniques to be used with other respondents.

Figure 5 illustrates the selection process for finding key informants. The first set of criteria are "theory driven" or "data driven" depending on whether the researcher uses prior theoretical knowledge or emerging information to define important characteristics of informants. This first set of criteria results in a pool of potential key informants.

So, for example, prior to beginning a study of traditional healing practices you may feel that age, sex and place of residence are important influences on healing practices. Therefore, you would want key informants who represent the range of variation of these selected characteristics. Your potential pool of informants might include:

young men and older men who work in rural areas

young men and older men who work in urban areas

young women and older women who work in rural areas

young women and older women who work in urban areas

From this pool, the researcher uses the second set of criteria to seek out those in each category who are willing and able to work with the researcher. These criteria include the following personal characteristics (Spradley, 1979):

(1) Thorough enculturation. That is, the informant should be an active participant in the group, organization or culture under study. They should know their culture so well that they no longer think about it.

(2) Current involvement. Informants should be currently involved in the culture under study. This is because when people stop participating in the particular culture, they stop using some part of their cultural knowledge. It becomes less accessible, and more difficult to remember. Informants who leave a cultural scene forget the details and can only remember generalities of the activities that went on. They also stop using the specific language of that cultural scene. Finally, sometimes leaving a cultural scene involves a major change in perspective
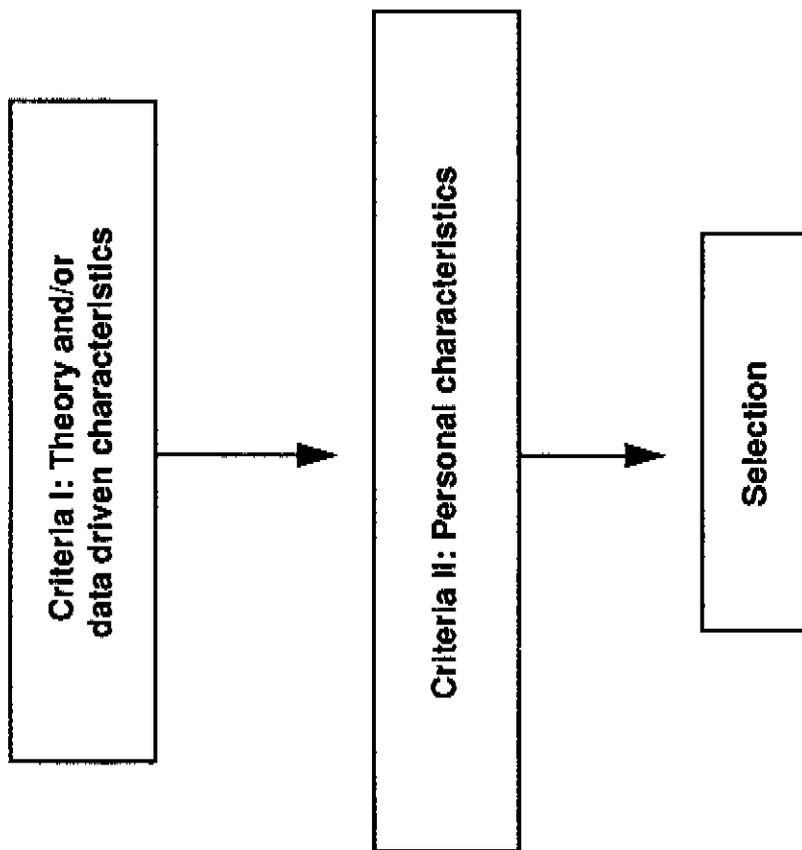
(for example, a recovering alcoholic or drug addict may have a very different perspective on their past behaviour, than when they were actively involved in that behaviour).

(3) Adequate time. Informants should have not only the willingness to talk to researchers many times, but they must also have the time to do so. Thorough exploration of a cultural scene with key informants takes several, sometimes many interviews.

(4) Non-analytic. The best informants are those that use their own language and concepts to describe events and actions, with almost no analysis of their meaning or significance. Some informants can help to analyze their own culture, but only if they do so from the insider's point of view. Informants who try to analyze their culture using outsiders' perspectives or concepts should be avoided.

Once you begin to interview your key informants, you may discover other characteristics, besides age and place of residence which are important for healing practices. For example, you might learn from your informants that there are two kinds of healers, those that were chosen by older healers to be their apprentices, and those who became healers as a result of some sort of "sign", such as being struck by lightening or having a certain dream. You would then use this emergent criterion to select new key informants, in order to explore how their healing practices may differ. The process of identifying and interviewing key informants is an iterative process, since new criteria may appear during the course of the study. As in other types of sampling procedures, there is no ideal number of key informants. Rather, the researcher should continue to interview new informants until it seems that no new information is being discovered.

Figure 5:   Criteria for selecting key informants[27]

```
┌─────────────────────────┐
│                         │
│  Criteria I: Theory and/or
│  data driven characteristics
│                         │
└─────────────────────────┘
              │
              ▼
┌─────────────────────────┐
│                         │
│  Criteria II: Personal characteristics
│                         │
└─────────────────────────┘
              │
              ▼
┌─────────────────────────┐
│       Selection         │
└─────────────────────────┘
```

---

[27] Based on Johnson, J.C. (1990). *Selecting Ethnographic Informants*. Newbury Park, CA: Sage.

Issues of sample size

There are no hard and fast rules for (non-probabilistic) sample sizes in qualitative research. Sample size depends on the purpose of the research, the specific research questions to be addressed, what will be useful, what will have credibility, and what can be done with available time and resources. For example, for some fixed amount of time and resources, a researcher could choose to study a limited number of topics among a larger number of people (seeking breadth) or a wider range of topics among a smaller number of people (seeking depth).

In non-probabilistic sampling, the selection of respondents usually continues to the point of redundancy. That is, once it seems that no new information is being discovered (and all potential sources of variation have been adequately explored), sampling may stop. The researcher decides in a broad sense what kinds of respondents to interview (based on predefined and emerging criteria), and then continues to interview these "types" of respondents until no new information is discovered. Although there are no formulas for conducting sample size, this does not mean that sampling is unsystematic. All decisions concerning sampling strategies and sample sizes should be clearly justified.

CHAPTER 4: STUDY DESIGN ISSUES

This chapter discusses some key considerations involved in designing qualitative studies. In qualitative research, there is no single or "best" research design for a given topic or research question. Rather, there are a range of options to choose from. The selection of study design, data collection methods and sampling strategies will depend not only on the purpose of the study and the research questions posed, but also on what seems to work best (based on thorough field-testing) and on resource availability. Table 4 summarizes some of these key considerations.

Researchers should specify their study design decisions and justify their selection of data collection methods and sampling strategies. Qualitative researchers need the flexibility to adjust data collection strategies during the study if necessary, but all decisions should be clearly explained and justified.

Table 4: Key research design considerations

ISSUES	*OPTIONS/CONSIDERATIONS*
What is the primary purpose of the study?	Basic research, research for intervention development, monitoring, evaluation
What is the focus of the study?	Depth vs. Breadth: Are you more interested in achieving an in-depth understanding about a particular topic? Or do you want to know the distribution or magnitude of particular beliefs and practices in a population?
How quickly are results needed?	Immediately, for development of programme activities? Or no fixed deadline?
What are the characteristics of the study population?	Language, literacy, degree of cultural/socioeconomic heterogeneity, settlement patterns (ie. scattered houses, compounds, villages)
What resources will be available to conduct the study?	Experienced vs. inexperienced researchers? How many researchers can be hired? What will be availability of equipment, vehicles?

47

Defining the purpose of the research

The first decision that needs be made concerns the purpose of the study. Why do you want to conduct a study? How will the study results be utilized? Do you want to conduct a study simply to gain a better understanding of a particular topic of interest or population group? Or do you intend to use the information collected to develop or improve an intervention? The answers to these questions will have particular relevance for the study's time-frame and sampling strategies. Table 5 summarizes various research purposes and their characteristics.

Table 5: Types of research and their characteristics[28]

TYPE OF RESEARCH	PURPOSE	FOCUS	RESULTS
Basic research	To produce knowledge, as an end in itself	On questions considered important by researcher's discipline	Contribution to theory development
Applied research	To understand the nature and sources of societal problems	On questions considered to have practical importance in society	Contribution to theories that can help to formulate problem-solving interventions
Formative research	To facilitate development of an intervention (programme, policy, product, etc.)	On identifying factors which are relevant for choice of intervention	Recommendations for development of effective interventions
Monitoring	To help improve an on-going intervention	Focus is on the particular strengths and weaknesses of the intervention	Recommendations for improving the intervention
Summative evaluation	To determine effectiveness of a completed intervention	Focus is on the stated goals of the intervention	Generalizations about effective types of interventions and the conditions under which these are effective

[28] Table based on Patton, M.Q. (1990). *Qualitative evaluation and research methods* (2nd ed). Newbury Park, CA: Sage, pp. 160-161.

When should a rapid assessment approach be used?

Recently there has been increasing interest in the use of rapid or focused qualitative research for programme development. A number of names are used to describe this approach, including RAP ("rapid assessment procedures"), RRA ("rapid rural appraisal") or FES (focused ethnographic studies").

These rapid assessments draw from the same "toolbox" of data collection techniques. What makes rapid qualitative studies different from more long-term studies is their degree of focus on a particular topic, and their explicit programmatic purpose.[29] When information is needed quickly for the development or evaluation of a programme, long-term research may mean loss of time, impetus and opportunity. Rapid qualitative research aims to answer specific programme-relevant questions quickly, but does not pretend to provide a full cultural description.[30] Therefore, **rapid or focused qualitative research is most appropriate when the purpose of research is intervention development, monitoring or evaluation.** Table 6 summarizes the strengths of rapid vs. longer-term, broader-focused studies.

---

[29] See Appendix III for a list manuals for conducting rapid qualitative research.

[30] For examples of methods used in rapid assessments see Scrimshaw, N.S. and Gleason, G.R., eds. (1992) . *RAP: Qualitative Methodologies for Planning and Evaluation of Health Related Programmes*. Boston: International Nutrition Foundation for Developing Countries.

Table 6: Rapid vs. longer-term qualitative research

TYPE OF STUDY	TYPE OF RESEARCH QUESTION	PURPOSE OF STUDY	PERSONNEL REQUIRED	RESOURCES (MONEY AND TIME)
Rapid assessment /focused ethnography	Best when research questions and objectives are narrowly focused.	Best when purpose of study is to guide development of a planned intervention, identify problems, and when information is needed quickly.	Requires small number of researchers who are already familiar with the language and culture of study population.	Requires relatively few field staff, and cost is relatively low. Studies of this type can usually be conducted in 2 to 3 months (or less).
Longer, broader-focused study	Best when research questions and objectives are broad, more exploratory, and when little is known about the study topic.	Good when purpose of study is to describe a particular area, population, or culture in depth, and when there is no immediate need for results.	Can be conducted by a single researcher or a team of researchers. Researchers have more time to familiarize themselves with language and culture of study population.	Studies of this type have traditionally taken as long as a year or more, and therefore are more costly than rapid assessments.

Defining research questions

Perhaps the most important step in designing a study is to select the specific research questions to be answered. **Don't make the mistake of choosing data collection methods before you have decided what it is you want to know.** Different data collection methods produce different kinds of information, and for some research questions qualitative methods may not be appropriate at all. Therefore, research questions and information needs should be defined first. Once this has been done, the choice of appropriate data collection methods and sampling strategies becomes fairly straightforward. The following are suggestions for facilitating the definition of research questions:

- Some non-researchers have trouble distinguishing between the research question (ie. the questions the study is designed to answer) and the questions which are actually posed to informants during interviews. Research questions are worded as generalizations about the study population: "Where do families seek care when their children are ill?" "What are local beliefs concerning the causes of convulsions in children?" These are not the same questions that would be posed to informants during interviews. The list of research questions is not an interview guide (Table 8 on page 59 illustrates how one research question may actually be answered through a variety of data collection methods).

- Research questions should be defined by a multi-disciplinary team consisting of the researchers, potential users of study results (ie. project directors), disease specialists, communication experts, etc. Such a team ensures that all relevant needs and interests will be addressed by the study.

- Usually, the process of defining research questions takes several iterations. The process is most productive if there is plenty of time for team members to develop, discuss and revise the list of questions several times, since discussion among team members often leads to new insights and ideas.

- It is important to keep in mind <u>why</u> you want to know the answer to a particular question. There are many questions whose answers would be interesting to know, but may not be necessary or even particularly relevant for the overall study objectives.

51

Choosing appropriate data collection methods

General considerations

Once the list of research questions to be addressed by the study has been specified, it is time to select the most appropriate data collection methods for answering these questions. For most research questions, there will be a variety of data collection methods that can be used. Selection of which ones to use in your study will depend on the following general considerations:

· Will you have access to researchers who already know how to use the different data collection methods? If not, will you be able to hire an experienced consultant to train the researchers?

· What is the literacy rate and education level of your study population? Some data collection methods are more suitable for non-literate respondents than others (see Appendix IV).

· During fieldtesting of data collection methods, which methods seem to work the best? Which interviewing techniques are informants most comfortable with, and which seem to produce the most information?

Methods for different types of research questions

There are a number of different "types" of questions that your study may address. For example, you may want to describe actual behaviours ("What do people families do when their children have fever?" "How are medicines in pill form administered to infants?"), or identify people's beliefs and attitudes ("What do families believe are the causes of fever?" "Do they consider fever to be life-threatening?"). Or, you may want to know why people do or do not use a particular health service ("Why don't families go to the clinic when their children have convulsions?"). Table 7 lists some of the different types of research questions that might be asked, and gives examples of the variety of data collection methods which may be used to answer them.

Table 7: Types of research questions and their corresponding data collection methods[31]

TYPE OF RESEARCH QUESTIONS	DATA COLLECTION METHODS
Questions about events or patterns of actual behaviour	Direct observation (participant, structured or unstructured observations); or observation of signs of behaviour Group or individual interviews: - about normative behaviour ("What would you do if your child was sick?") - about past behaviour ("What did you do the last time your child was sick?"); - about current reported behaviour ("What are you doing for your child's current illness?")
Questions relating to people's beliefs and attitudes	Unstructured or semi-structured interviews Free listing, pile sorts, paired comparisons Focus groups
Questions relating to the distribution of beliefs or behaviours in a population	Structured observations, Structured interview techniques (with representative sample)
Questions relating to the reasons for certain observed patterns of behaviour	Individual interviews (unstructured, semi-structured, structured) Focus groups
Questions about knowledge of a particular skill	Semi-structured interviews (How do you usually...?) Demonstration (Please show me how you....)

---

[31] See Appendix II for a summary of the specific strengths and weaknesses associated with each of the data collection methods.

Addressing issues of validity and generalizability

Validity refers to the extent to which a particular method of measurement (ie. interviews or observations) actually represents that which it claims to measure. As discussed in Chapter 1, qualitative research is characterized by its commitment to discovering the subject's point of view on the topics of interest. However, problems of validity are especially complex when dealing with issues of human behaviour (see example on page 6), and some have questioned the feasibility of providing accurate accounts from the perspective of those being studied.

One approach to increasing the validity of qualitative data is to triangulate[32] data collection methods. That is, research questions are addressed through a variety of interviewing techniques and respondents (see Table 8 on page 59), rather than through a single method as is the case with surveys. Confidence in the validity of findings is increased when there is agreement among the different methods and types of respondents about a particular issue. Identification of issues for which agreement does not exist allows for clarification through further investigation.

The most common types of triangulation include:

- Data triangulation, in which different data sources are used. For example, you might use multiple types of informants (key informants, mothers at clinic, mothers at home who do not use the clinic, younger vs. older women, health providers, etc.).

- Methodological triangulation, in which multiple data collection methods are used to study a single problem or research question (for example using both individual and group interviews; or interviews plus observations, etc.).

Another commonly cited problem with qualitative research is the lack of generalizability of findings. Qualitative studies are often conducted in single settings, whose representativeness of some larger population may be unclear. The following are steps that can be taken to increase the representativeness of individuals or groups selected:

- conduct studies in a number of different sites, which represent the range of variation on key characteristics of interest in the larger population (for example, different ecological niches, ethnic groups, etc.);

- randomly select participants from a larger survey or from a census-type enumeration; and

- ensure that all major sectors of the study population are represented.

---

[32] See glossary of terms in Appendix I for a discussion of triangulation.

Questions to ask when designing or reviewing a study

- Is the purpose and intended output of the study clearly stated?

- Have the research questions to be addressed been specified?

- Does the study draw on a variety of data collection methods to respond to research questions?

- Are the sampling strategies to be used clearly described and justified? Are they appropriate for the study purpose and research questions?

- Are the data collection methods appropriate for the level of training of the researchers who will conduct the study? (or will proper training of researchers be provided?)

- Are the data analysis methods described, and are they adequate for answering the research questions?

- Are a realistic timetable and budget included?

- Is the study ethical, and have local and national clearances been obtained?

CHAPTER 5: DATA ANALYSIS AND REPORT-WRITING IN QUALITATIVE RESEARCH

The purpose of this chapter is to discuss some of the key aspects of analysing data and presenting results from qualitative research.

Drawing on all relevant data sources

As discussed in Chapter 4, qualitative study designs should triangulate different data collection methods and respondents around each of the research questions. The same triangulation process needs to occur when answering the research questions. Before drawing conclusions, all relevant sources of data should be considered. Differences or contradictions between data sources (for example, between key informant interviews and household observations) should be examined, and explanations sought. Sometimes further investigation may be necessary to clarify discrepancies.

Before beginning analysis (and preferably as part of the research design phase), researchers may find it helpful to create a grid or table which lists the research questions to be addressed and indicates which data collection techniques provide relevant information. This table can then be referred to during analysis (See Table 8).

Analysing textual data[33]

Many of the data collection techniques presented in Chapter 2 produce primarily textual data; that is, written accounts of conversations, interviews and observations (in particular, unstructured and semi-structured interviews, unstructured observations, and focus groups). These textual accounts provide rich descriptions and explanations of behaviours and events.

However, care must be taken when analysing and presenting results from these textual data. In particular, researchers run the risk of making generalizations based on only a few interviews (ie. interviews in which the researcher felt most comfortable, had the most talkative informants, or for which she had the "best" quotes, etc.). *Just as with more structured data collection techniques, textual data should be systematically analyzed.*

One approach to analysing textual data is to systematically code the written notes. A

---

[33] For a list of "how-to" resources on coding and analysing textual data, see section on Data Analysis and Presentation in Appendix III.

code is an abbreviation applied to a segment of text in order to classify what is written. The codes usually derive from the research questions, or from key concepts and themes that have emerged during the research. Codes are used to help organize and retrieve information relating to a particular question or topic. Once all interview notes are coded, the researcher can ask and systematically answer questions about the interviews conducted.

An example of how coded field notes can help

Imagine that in a study of childhood illness in Bolivia, the researcher wants to know all the different symptoms that key informants associated with a particular illness, *saxra*. The researcher has a "hunch" that informants always associated the symptom "purple lips" with *saxra*, but to check this "hunch", the researcher can go back to her interview notes and read over all those sections she had coded as "mentioning *saxra*". After re-reading these sections, the researcher realizes for example, that only 3 out of 8 informants had actually mentioned "purple lips" as a symptom of *saxra*--that is, the researcher's "hunch" was wrong. Further checking shows that these 3 informants were the last ones to be interviewed, and therefore the ones the researcher remembered best. Coded fieldnotes allows the researcher to systematically analyze fieldnotes, thereby discovering and correcting her own biases.

A number of computer programmes exist to facilitate the coding and analysis of textual data (see Appendix III). However, **lack of a computer does not preclude systematic analysis of textual data.** Coding can also be done by hand, using coloured pens or highlighters to mark sections of text written on paper. Different colours are used for different topics or themes, and allow for quick referral to specific topics. (ie. marking with blue pen all those sections that mention *saxra*). What is most important is that the researcher understand the basic concepts and procedures for analysing textual data. Computers are only a tool to help you complete the task. They do not do the analysis for you.

Coding of textual data allows the researcher to quickly retrieve those segments of text that are relevant for answering particular research questions. It also ensures that the researcher draws on all relevant data collected (especially when the quantity of textual data is very large) and allows the researcher to systematically check hypotheses or "hunches."

Table 8: Example of a data summary sheet

RESEARCH QUESTIONS	FREE LISTING OF ILLNESSES AND SYMPTOMS WITH KEY INFORMANTS	SEVERITY RANKING OF ILLNESSES AND SYMPTOMS WITH KEY INFORMANTS	NARRATIVES OF PAST ILLNESS EPISODES WITH MOTHERS OF YOUNG CHILDREN	INTERVIEWS WITH MOTHERS OF CURRENTLY ILL CHILDREN	INTERVIEWS WITH HEALTH PROVIDERS
What are the names of locally recognized illnesses that involve fever?	X		X	X	
Which illnesses and symptoms do mothers consider most serious?		X	X	X	
Which illnesses do mothers seek care for, and why?			X	X	X
For which illnesses do mothers give anti-malarial medicines?			X	X	X

Some general considerations when preparing a final report

Common pitfalls in preparing final reports from qualitative research include:

- failing to adequately describe and justify the study design, sampling and data collection procedures used;

- presenting results in the form of narrative text only (no display of data); and

- failing to translate results into clear, concrete recommendations for action.

In order to avoid these problems, it is useful for programme managers or other potential users of the information to work alongside researchers in reviewing results and discussing their relevance for health programmes. Below are some suggestions for preparing a clear and useful final report.

Describe the overall study objectives. For example, was the study intended to **explore** a particular topic about which little is known? Was the purpose of the study to **describe** a particular community's beliefs and practices related to a specific topic? Or was the study intended to **explain** the reasons for particular behaviours already identified? The report should clearly explain why the study was conducted, and how the data will be used.

Include a presentation of the specific research questions to be addressed by the study. Key research questions to be answered by the study should be defined prior to designing and conducting the study. However, often in qualitative research, as data are collected, new issues are identified which also need to be explored. The final report should discuss both the initial research questions, and any new questions which arose during the course of the study.

Describe the study design, including data collection methods, sampling strategies and sample sizes. In particular, this section should discuss why particular design and sampling approaches were chosen, and how they relate to the overall study objectives and research questions. The report should describe not only the process of selecting informants and the criteria used to guide their selection, but should also present a summary of their overall characteristics (for example, their sex, age, education, occupation, place of residence, number of children, etc.).

Provide detailed answers to the research questions. In presenting results, information from different informants and data collection methods should be *triangulated* around the research questions. In attempting to answer the research questions, researchers should draw on and synthesize results from all relevant data sources.

Present raw data so that the reader can make his or her own conclusions. The final report should clearly demonstrate how and on what basis the researcher drew conclusions from the data, and readers should be provided with raw data in order to be able to draw their own conclusions from the report. Researchers should avoid using vague statements such as "'many' or 'most' informants said...", unless these are clearly substantiated by the data presented.

Use tables, flow-charts or other means to visually display data. Visual displays of qualitative data (for example, tables, flow-charts or taxonomic trees) are useful for communicating results to the reader. However, it is important to be explicit about the data that were used to construct these displays, including the data collection techniques used to produce the data, and the types and numbers of informants or households from whom the data were collected.

Use verbatim quotes wherever possible to illustrate general conclusions. Direct quotes from informants (including narratives, life histories, etc.) help the reader to understand the study observations and conclusions in their appropriate context. This is especially useful for readers who are unfamiliar with the social, cultural or linguistic characteristics of the area where the study was conducted. Quotes make the data "come alive."

Suggested format for a final report

The following is a suggested format for preparing final reports for programme managers and project directors. Sometimes it is helpful to give researchers such an outline before they get started, since they may not be accustomed to writing for non-academic readers. Such an outline allows researchers to know exactly what is expected of them, and ensures that project directors will be provided with a useful report.

I.   Executive summary

The executive summary should be no more than one or 2 pages, and should briefly describe the study objectives, give an overview of the study design and research site, and summarize the main findings.

II.   Introduction and statement of purpose

This section should clearly lay out the overall objectives of the research, as well as the specific research questions to be addressed.

III.   Description of the research site

This section should include the criteria used for site selection, as well as background information on the study population (socioeconomic and ethnic/linguistic characteristics, community and household characteristics, etc.).

IV.   Study methodology

This section should describe in detail the overall study design as well as the sampling strategies (including sample sizes) and data collection methods utilized. Justification for the particular research design and methods chosen should be given, and any problems encountered should be discussed.

V.   Results

Results should include detailed answers to the research questions set out in the Introduction. Results from all relevant data collection activities should be drawn on to answer each research question (ie. data methods should be triangulated when answering research questions).

VI.   Detailed discussion of conclusions, and concrete recommendations for action

In this section, the report should refer back to the research objectives outlined in the Introduction. What relevance do study results have for programme activities (service delivery, communication activities, etc.)? What recommendations can the researcher make concerning concrete actions to take, based on study results?

VII.   Appendices of lengthy materials (interview guides, tables, etc.).

CHAPTER 6: SOME EXAMPLES OF QUALITATIVE RESEARCH DESIGNS

This chapter provides examples of study designs used by several programmes to address their particular information needs. For each example, the study purpose, research questions, overall study design, and data collection methods are presented.

Example 1: Developing an ethnographic study protocol for use by national diarrhoeal disease control programmes

Background

The WHO Control of Diarrhoeal Diseases Programme (WHO/CDD) provides support and assistance to national CDD programmes. WHO/CDD focuses on the prevention of diarrhoea incidence and on increasing families' access to what WHO refers to as correct *case management*. Case management of the child with diarrhoea involves care both in the health facility and at home .[34] Home-based management of diarrhoea (which includes giving increased fluids, feeding an adequate diet and seeking care when danger signs appear) has typically been neglected by national health programmes, and household surveys show that home management practices are inadequate in many parts of the world. As a result of these findings, WHO has recently developed three programme tools aimed at improving home case management:

1) a set of guidelines to help national programmes to set policy on the promotion of appropriate fluids and foods for home therapy;[35]

2) a training module for health workers on how to advise mothers on the management of diarrhoea at home;[36] and

3) a guide for developing effective radio programmes aimed at promoting appropriate home care of children with diarrhoea.[37]

---

[34] WHO/CDD. *Diarrhoea management training course: participant manual.* Geneva: WHO, 1992.

[35] WHO/CDD. *Selection of foods and foods for home therapy: guidelines for national CDD programmes.* Geneva: WHO, 1993.

[36] WHO/CDD. *Advising mothers on management of diarrhoea in the home: guidelines for health workers.* Geneva: WHO, 1993.

[37] WHO/CDR. *"The Radio Guide."* Draft document, 1993.

Study objectives

The WHO CDD Programme recognized the importance of social, cultural and material factors for the home management of diarrhoea, and felt that, for any of these "generic" tools to be effective in a given setting, information about people's beliefs and practices would be needed in order to adapt and use the tools appropriately.

The need for local information about beliefs and practices prompted WHO to develop a standard research protocol that would be available to national CDD programmes, and that would provide them with a systematic method for eliciting this information. The aim was to provide a research tool that would compliment the standard household survey instrument used to assess mothers' knowledge and practices related to home management of diarrhoea. While the household survey can identify aspects of home management which need improvement, or areas of the country where home management is a particularly important problem, it cannot provide contextual information for understanding why these problems exist nor suggest appropriate ways of addressing these problems. Therefore, the household survey would be used to identify problems with home management of diarrhoea, and the new research tool would be designed to focus on identifying appropriate intervention strategies for improving home management.

Research questions

The first step in developing the research protocol was to define a detailed list of what WHO termed the **Programme Managers' Questions** (See list on page 66). These questions reflect the main information needs of most CDD programmes, and in particular for the three key programme tools mentioned above. The list of questions was developed based on discussions with national CDD programme managers, WHO staff and social scientists, and **represent the minimum information that CDD programmes should have in order to develop effective communication activities.** Because this is considered the minimum information needed, programmes are encouraged to review and adapt the list of questions as necessary for their particular programme needs and interests.

Description of the protocol

Once the generic list of programme managers' questions was defined, the next step was to select the most appropriate methods for answering these questions. WHO wanted a study design that could be completed in 2 to 3 months by local researchers, so that results could be quickly fed back into programme activities. The WHO Acute Respiratory Infections (ARI) programme had already developed a *Focused Ethnographic Study* (FES) protocol for ARI programmes[38],[39], which has proven to be quite successful in collecting programme-relevant

---

[38] WHO/ARI. *The Focused Ethnographic Study of ARI.* Unpublished document, Geneva: WHO, 1993.

64

information in a wide variety of settings.[40]   Because many of the study objectives and research questions were similar, WHO/CDD decided to use the same overall study design and approach.

The FES is a community-based study, designed to be conducted in about 2 months by one social scientist and 2 to 3 research assistants.   Researchers should have some previous field experience using qualitative data collection techniques, and be familiar with the language and culture of the area where the study is to be conducted.   The study provides a detailed description of local beliefs and practices related diarrhoea, and aims to identify the household and community-level factors that affect home care of children with diarrhoea.

The study is designed to be conducted in 2 phases (see Table 9).   The purpose of the first phase of data collection is to fully explore the research questions and discover potential variability in local beliefs and practices.   During this phase, interviews are conducted with key informants, opportunistic samples of mothers of children who have had diarrhoea in the recent past and mothers of children who have diarrhoea at the time of the interview, and health providers.   Unstructured household observations of children with diarrhoea are also conducted during phase one.

This information is then used to develop more structured data collection techniques that are first pre-tested with key informants and then administered to a representative sample of mothers of young children (phase two).   These structured data-collection techniques allow the researcher to systematically explore the degree to which there is consensus in the community around the key aspects of Phase 1 findings, and to ensure that all potential sources of variability have been identified.   (See Table 10 for an example of how the data collection methods are triangulated around the research questions).

The manual contains detailed guidelines on how to plan and conduct the study, as well as how to analyze the data and prepare a final report.   It is designed to be used in conjunction with a one-week training workshop, which is provided by WHO.

---

[39] Gove, S. and Pelto, G. "The use of ethnographic studies for the development of national ARI programmes." *Medical Anthropology*, in press.

[40] Hudelson, P., Huanca, T., Charaly, D. and Cirpa, V. "Ethnographic Studies of ARI in Bolivia and their use by the national ARI programme." *Social Science and Medicine*, in press.

The WHO/CDD Programme Managers' Questions

I. Community use of home fluids and foods:

1) What fluids are commonly given to children with diarrhoea, and why?

Which of these fluids contain salt?

Which of these fluids are most easily/cheaply prepared?

Which of these fluids contain ingredients available throughout the year?

What are the major constraints to giving home fluids in increased amounts to children with diarrhoea?

2) Do mothers change children's diets during diarrhoea? How? (Increase/decrease intake, give dilute foods, shift to different foods, etc.). Why?

Of the foods that children normally consume, which of these do caretakers consider unacceptable for use during diarrhoea, and why?

Of the foods children normally consume, which contain salt?

(Where there is a known or suspected problem) What are the major constraints to continuing the child's normal diet during diarrhoea?

II. Questions about Oral Rehydration Salts (ORS):

1) How do caretakers presently perceive ORS? (eg. What is it supposed to do? Do they think it is effective? Do they see it as readily available?)

2) What are the constraints to giving recommended amounts of ORS to children with diarrhoea?

3) Do caretakers know how to make ORS?

OPTIONAL SECTION (questions about Sugar Salt Solution (SSS), if it has been promoted):

4) How do caretakers presently perceive SSS? (What is it supposed to do? Do they think it is effective? Do they think the ingredients are readily available?)

5) What are the constraints to giving recommended amounts of SSS to children with diarrhoea?

6) Do caretakers know how to make SSS?

III. **About other home management practices (drug use, potentially harmful practices):**

1) What sorts of treatments are commonly given in the home?

2) Do caretakers commonly obtain antibiotics, antidiarrhoeals or other drugs without a doctor's prescription? Which ones? Where (from whom) do caretakers obtain drugs?

3) Which treatments do caretakers prefer (and for which illnesses), and why? In particular, if drugs are preferred to ORS, why?

4) Are there any common home management practices that are harmful and should be actively discouraged by the CDD programme, or whose safety requires further evaluation by the CDD programme?

IV. **Questions about recognition of signs and symptoms, and about careseeking:**

1) What signs and symptoms do caretakers consider serious and seek care for when their children have diarrhoea?

2) Do caretakers recognize the danger signs used by the CDD programme? Do these signs and symptoms prompt careseeking?

3) What is the sequence and timing of careseeking? To what are careseeking patterns based on perceptions of the illness or symptoms? What other factors affect patterns of careseeking?

4) What are the most important constraints to prompt careseeking from a provider of standard case management when danger signs appear? Which of these are potentially modifiable by the CDD programme?

V.   Questions about sources of information and advice

1)   Who decides when and where the child should be taken for care? Who actually takes the child for care?

2)   Where/to whom do caretakers go for advice on child care?

VI.   Recommendations to the national CDD programme

1) Which home fluids should the CDD programme promote for use during diarrhoea?

2) To whom should home care advice messages be directed?

3) In addition to delivering messages through health care workers, what other potential communication channels exist in the community?

4) How might families be motivated to give home fluids in increased quantities during diarrhoea?

5) What (if any) potentially harmful fluids or treatment practices should be actively discouraged by the CDD programme? How might these practices be successfully discouraged?

6) What (if any) inappropriate feeding practices during diarrhoea should be actively discouraged by the CDD programme? How might these practices be successfully discouraged?

7) Is the current recommendation to feed children 6 times a day appropriate and feasible? If not, what may be other ways of encouraging mothers to continue feeding during diarrhoea?

8) What illness or symptom terms do you recommend that health workers use to advise mothers about when to seek care for children who have diarrhoea?

Table 9: CDD focused ethnographic study design

PHASE 1

· Key informant interviews
Unstructured interviewing and free listing about childhood illnesses (focus is on exploring explanatory models[41] of diarrhoea).

Unstructured interviewing and free listing about feeding and fluid use, especially during illness (focus is on identifying what and how much is given/not given, and why)

· Household observations
unstructured observations (ideally with a stratified purposeful sample of households), focusing on what, when and how children are fed during diarrhoea (foods and fluids).

· Semi-structured interviews with mothers of children with diarrhoea (in the past and currently) to elicit narratives of illness episodes. Usually a convenience sample of households.

· Semi-structured interviews with a representative sample of different types of health workers.

PHASE 2

· Interviews with a representative (and ideally, random) sample of mothers of young children.

Semi-structured interviews about past episodes of diarrhoea; paired comparisons of health providers; directed pile sorts of fluids and food (to identify, for example, foods and fluids appropriate/inappropriate for children with diarrhoea); an inventory of medications in the home; matching task of symptoms with illnesses; severity ranking of symptoms and illnesses.

---

[41] See Glossary in Appendix I for a definition of explanatory models.

Table 10: An example of data triangulation

	FREE LISTING AND PILE SORTS WITH KEY INFORMANTS	NARRATIVES OF PAST AND CURRENT ILLNESS EPISODES	OBSERVATION	DIRECTED PILE SORTS
I (1). What fluids are commonly given to children with diarrhoea?	Key informants are asked to list all foods and drinks commonly given to children, then are asked a number of questions about the items on the list.	Mothers are asked to list all treatments, foods and fluids given to their children during diarrhoea, and to explain in detail their reasons for their actions.	Researchers observe and note any treatments, foods and fluids actually offered to the child (and any questions that arise are pursued with key informants).	In phase 2, a representative sample of mothers is asked sort fluids into piles according to the relevant criteria.

Example 2: Using ethnographic research to develop a survey for investigating immunization use in Haiti[42]

Background

This study was conducted as part of a community health programme located in the Central Highlands of Haiti. The programme provides basic maternal-child health services on an outreach basis via a community health team which visits each village every six weeks.

Rapid ethnographic assessment was conducted to identify maternal factors that influence the use of preventive health services in rural Haiti. Results from the ethnographic study were used to develop a set of appropriate survey questions for use in a case-control study comparing users and non-users of childhood immunization services.

Study objectives

The specific aims of the ethnographic study were to explore the following:

- maternal knowledge of the different types of immunizations, the numbers of doses and schedule of immunizations recommended in the first year of life;

- mothers' perceptions of barriers to use of immunization services;

- attitudes regarding the benefits and drawbacks of attending outreach services;

- opinions about how services could be improved;

- health care providers' views and opinions about why some mothers did not use immunization services.

Study design

This study used focus group discussions, non-focus group discussions ("natural groups") , semi-structured interviews with health providers, and observations of activities carried out by the community health teams.

To select focus group participants, researchers first ranked all 23 programme sectors according to immunization coverage, which ranged from 18-98%. After excluding the three highest and the three lowest coverage sites at the extremes of the continuum (in order to avoid sites that might be very atypical in some other respects), the fourth highest (85% coverage) and fourth lowest (31% coverage) were selected.

Next, the researchers consulted family health records that are regularly updated by the programme's administrative staff, and for each of the two sites randomly selected 10 women whose children had received all 3 doses of DPT and OPV and a measles vaccine, and 10 children who had received one or fewer doses of DPT and OPV, and no measles vaccine.

For these focus group discussions, a detailed topical guide was used which contained questions about perceptions of the programme's services, perceived barriers to utilization of services, and suggestions for incentives to increase attendance.

Non-focus group discussions were held with 4 "natural" groups of mothers, as well. These are groups of individuals who have not been assembled for the purpose of the study at hand, but rather exist for some other reason. In this study, discussions were held with two Mothers' Clubs (N=5,9); one group of roadside food sellers and their neighbours (N=4), and a group of mothers waiting in the yard of the health post (N=8). These groups were selected from four different sectors not represented in the focus group discussions. The groups were selected based on their accessibility to the researcher. The same discussion guide used with focus groups was used with the natural groups.

Semi-structured interviews (using the focus group discussion guide as a protocol for open-ended questioning) were conducted with 14 staff members of the community health programme. These included the director, 2 physicians, one nurse who administers vaccines at two posts, two record keepers who also attend posts, four training and supervisory employees, and four community volunteers.

Finally, observations were conducted at three health posts, including one in an where focus group participants were recruited. At the latter site, 3 of the focus group participants were followed through the post process from intake through child weighing, consultation with the physician, administration of vaccines and education by the community volunteer. This technique allowed the researchers to cross-check some of the comments made during interviews about deterrents to utilization.

Data analysis

Audio tapes and written notes were first reviewed by the researchers in order to develop a comprehensive list of all possible barriers to utilization mentioned in interviews. 16 factors were identified. Next, researchers went through each recorded statement, interview response or observation and coded them according to whether they were supportive (+) or unsupportive (-) of a particular utilization barrier. The final clustering of pluses and minuses were then added up, and the 16 factors were rank ordered according to their importance as barriers to immunization use.

Use of ethnographic findings to develop survey questions

Based on the results of the content analysis of interviews, the researcher developed a set of questionnaire items to be included in the case-control study survey instrument The items included those factors which were mentioned as being most important as barriers to service utilization, and could be assessed using a survey. The researcher found that certain factors, such as maternal "negligence" and embarrassment over the child's nutritional status were of such a sensitive and subjective nature that survey questions could not be developed to adequately assess them.

The survey instrument was then used to compare immunization service users and non-users on both a number of pre-defined demographic, fertility, nutritional and other health-related variables, and on the variables identified through ethnographic research as being specifically relevant for mothers in the study area.

Example 3: Using focus groups to develop a cross-cultural, quality-of-life assessment instrument[43]

Background

The WHO Division of Mental Health is currently coordinating a project whose aim is to produce a survey instrument which can be used in a variety of cultural settings to assess the effects of illness and its treatment on peoples' quality of life.

In order to develop this survey instrument, the first step was to hold discussions among experts from different countries to identify key issues felt to be important to quality of life. The issues identified include:

I.   Physical health (e.g. pain, sleep, mobility)

II.   Psychological functions (e.g. contentment, self-concept, memory, and mood)

III.   Level of independence (e.g. ability to carry out activities of daily living, dependence on substances or treatments, working capacity)

IV.   Social relationships (e.g. social contact, family support, ability to look after family, religion)

V.   Environment (e.g. freedom, physical safety and security, quality of the home environment, and financial status).

Study objectives

Once these issues were identified, the relevance and importance of these issues for people in the different collaborating countries needed to be explored.   In particular, researchers needed to identify what issues are most important to people themselves (as opposed to what the "experts" consider to be important), and make adjustments in the list as necessary. Once the list of key issues was agreed upon, researchers needed to determine the best way to word the questions on the survey instrument.

In order to address these two objectives, researchers felt that it would be important to conduct qualitative research in the various collaborating centres (which included Thailand, England, India, Zimbabwe, Australia, Panama, France, Russian Federation, USA, Netherlands, and Croatia).

---

[43] WHO Division of Mental Health (1993). *WHOQOL: Focus Group Work.* MNH/PSF/93.4, Geneva.

Study design

The researchers chose the focus group methodology because they provide a comfortable setting for participants, and their semi-structured yet flexible nature can yield rich data from a variety of settings using fairly standardized protocols. Thus it was possible to use (and compare results from) essentially the same methodology across sites.

Three different populations were sampled for the focus groups (ie. a "data triangulation" approach): patients, "well" persons, and health personnel. The rationale for inclusion of both patients and "well" persons was to explore how quality of life issues vary for persons with different health statuses ranging from severe illness or impairment to good health. The rationale for inclusion of health personnel is that this group is likely to have extensive experience of questioning patients' about their health and quality of life, and they are likely to be involved in future use of the survey instrument.

No strict number of focus groups was determined for each site. Rather, it was decided that a <u>minimum</u> of two groups from each of the three population groups (patients, well persons, and health personnel) should be conducted in each of the sites. Enough focus groups should be conducted so that the data from these groups could confidently be said to represent the study population. Thus, if data from the initial two groups was dissimilar, more focus groups were conducted until a consistent pattern was observable in the data ("sampling until the point of redundancy"). In a few sites, the population was complex and additional groups were conducted to cover these separate sub-populations (for example in India, separate groups were held for middle class residents and slum dwellers; in the U.S. groups of young vs. old persons were held, and in Panama rural vs. urban groups were conducted). Groups ranged in size from 4 to 10 participants.

For each of the 33 quality of life issues (defined by the "experts"), a standard definition was given by WHO to the field sites. In each field site, these issues were then translated in the language of the study population. A process of forward and backward translation, complemented by a review process by monolingual and bilingual groups, was used to ensure meaningful translation of concepts. The translated definitions were then either made available to focus group participants before or during the course of the discussion. The following questions formed the basis for discussion about each of the issues:

How does _____ affect your quality of life?
How does _____ affect your patients' quality of life?
How would you ask someone about _____?

After each of the issues had been discussed and question formats proposed, participants were asked "Are there any further issues which are important to quality of life?". If further issues were raised, discussion aimed at establishing if there was general agreement among the other participants about the importance of the issue for quality of life.

75

Where all 33 issues could not be covered in 3 hours, the same group was reconvened, or a new group was formed to cover the remaining issues.

In each site, focus group discussions were tape recorded and transcribed, and then panels consisting of the principal investigator, a focus group moderator and a lay person were convened to review results and develop draft survey questions, based on a set of predefined criteria.

Based on this work, a pilot instrument was put together using questions from all field sites. This pilot instrument was then tested on a large, representative sample of the population in each field site. Data from the pilot tests were carefully analyzed to identify those survey items which appear to best capture quality of life. A final version of the instrument was agreed upon, and this version will undergo further testing with more diverse populations to test the validity, reliability and responsiveness of the instrument.

A similar methodological approach will also be used to create additional versions of the survey instrument for special sub-populations who have particular issues that affect the quality of their lives, such as the elderly, refugees, or cancer patients.

APPENDIX I: A GLOSSARY OF CONCEPTS COMMONLY USED IN QUALITATIVE RESEARCH

Cognitive map

The terms "cognitive map" or "mental map" simply refer to the way in which people see and interpret their physical and social environments. Culture can be thought of as a cognitive map which people refer to in order to make sense of the world and guide behaviour.

Community

This is a word that takes on several different meanings, depending on the context in which it is used. Generally, it means any more or less distinct geographic **locality**, such as a rural town or village; in urban areas it may be a single neighbourhood. In a more abstract sense, people may speak of an entire city or nation as a "community." In some cases the word "community" is used to refer to a geographically designated "catchment area" of a particular health facility. The term can also refer a to **non-localized collectivity** of persons with a common interest, usually with some kind of organization or system of communication, such as "the health service community" or "the business community." Finally, the term has also been used to refer to a group of individuals who make up a "target" or **client population** for a particular health programme.

The term does not imply anything about "solidarity", "cohesion," or degree of organization. Some communities are ridden with factionalism and strife; some have almost no organization or social cohesion.

Culture

"Culture" has been defined in hundreds of different ways. For those conducting qualitative research, a useful definition of culture would be "the acquired knowledge that people use to interpret experience and guide social behaviour". This definition puts emphasis on the <u>meaning</u> that people give to behaviour, customs, objects or emotions. Culture as a system of meaning serves as a guide for acting and interpreting one's experiences, although it does not force one to follow a particular course. Other, non-cultural factors (for example, economic conditions) also act as important influences on people's behaviour.

Cultural domain

Cultural domains are topics or categories which have meaning for a particular culture. Domains consist of items or objects which are considered equivalent in some way. One might say, for example, that "bananas are a type of fruit." In this case, "fruit" is the domain, and "bananas" is one of the items included in this domain. Other items in this domain might include oranges, grapes, strawberries and mangoes.

77

Domains and their included items vary from culture to culture. Spradley gives an example from the Tausug culture in the Philippines to illustrate this point.[44] In Tausug culture, the domain "friends" (*kabagayan*) includes 8 types of friends: ritual friend, close friend, casual friend, opponent, personal enemy, follower, ally, and neutral. Although the domain "friend" exists in many other cultures, they don't necessarily include all the same types used by the Tausug. Identifying cultural domains help to understand the ways that people organize and make sense out of the world around them.

Emic/etic perspectives

The most commonly used and accepted meaning of "the emic perspective" is the "insider's point of view." That is, the conceptual categories, language of expression, and cultural belief system of the study population. This is contrasted with the etic or outsider's (ie. the researcher's) view or interpretation of events. Table 12 summarizes some of the differences in these two approaches to studying behaviour.

Table 11: Emic vs. etic approaches to understanding behaviour[45]

EMIC	ETIC
Primary method is in-depth interviewing, in the native language	Primary method is observation of behaviour
The aim is to understand the way study subjects define and label things	The aim is to describe and explain patterns of behaviour, as defined by the observer
People's idea systems are seen as the most important explanations of behaviour	Impersonal, non-ideational factors, especially material conditions, are seen as the most important explanations of behaviour
Cross-cultural generalizations must wait for the conversion of culturally specific patterns and meanings into more abstracted, intercultural categories.	Cross-cultural generalizations can be made directly, by applying the same methods of observation, with the same outside-derived concepts, to different cultures.

---

[44] Spradley, J.P. *Participant Observation. (1980).* New York: Holt, Rinehart and Winston, p. 88.

[45] Table based on Pelto, P.J. and Pelto, G.H. (1978). *Anthropological Research: The Structure of Inquiry* (2nd ed). New York: Cambridge University Press, p. 62.

Explanatory models

The term "explanatory model" was first coined by A. Kleinman, in his oft cited book *Patients and Healers in the Context of Culture.* [46] The explanatory model (EM) is proposed as a framework within which to compare the systems of medical knowledge and praxis of the different sectors of health care systems (institutional, folk, popular). EMs are described as the "notions about an episode of sickness and its treatment that are employed by all those engaged in the clinical process" (p.105). Specifically, EMs seek to answer five major questions for any given illness episode. These are:

"(1) the etiology; (2) time and mode of onset of symptoms; (3) pathophysiology; (4) course of sickness (including both degree of severity and type of sick role--acute, chronic, impaired, etc.); and (5) treatment. EMs differ in the extent to which they attempt to answer some or all of these concerns" (p.105).

Furthermore, "explanatory models determine what is considered relevant clinical evidence and how that evidence is organized and interpreted to rationalize specific treatment approaches" (p.110).

For Kleinman, EMs are to be distinguished from general beliefs about sickness and health care, which exist independent of and prior to given episodes of sickness. "EMs are formed and employed to cope with a specific health problem, and consequently they need to be analyzed in that concrete setting" (p.106). Popular EMs (in contrast to those of health professionals) are characterized by "vagueness, multiplicity of meanings, frequent changes, and lack of sharp boundaries between ideas and experiences..." (p.107).

In medical anthropology, the term "explanatory model" is widely used, and is now often used to refer more broadly to the particular belief system that a person or group of people have concerning a set of illnesses and/or symptoms they recognize. That is, the term is used to refer not only to a set of beliefs about a particular illness episode at a given point in time, but also to more general beliefs about illness types and their characteristics.

Ethnography

Ethnography is the work of describing a culture. The essential core of this activity is to understand another way of life from the point of view of those being studied. The term "ethnography" is used to describe the work of studying a culture, as well as the end product (ie. the written report). Ethnography constitutes a strategy, rather than a method, and as such can and should involve multiple approaches, including both qualitative and quantitative data collection methods.

---

[46] Kleinman, A. *Patients and Healers in the Context of Culture* (1980). Berkeley: University of California Press.

Formative research

The term "formative research" is usually used to refer to studies (usually qualitative, or qualitative/quantitative mixed) which are conducted prior to developing and implementing interventions. Formative research may aim to: define the target population; identify the key beliefs, behaviours or environmental conditions to be addressed by the intervention; identify appropriate intervention strategies; identify potential barriers to change; and identify factors which could facilitate change.

Gatekeepers

These are persons who control information, physical access, and other power relationships in a community or client population. Gatekeepers may be formally recognized, but usually their power is due to informal relationships. Gaining entrance into a community, organization or other setting where research is to be conducted usually requires obtaining access and permission from these individuals.

Illness vs. disease

Medical anthropologists usually use the term illness" to refer to physical and psychological discomforts and ailments as seen from the perspective of the person or cultural group suffering these conditions. Thus "illness" is used to refer to the emic perspectives and terminology. This is contrasted with the etic or outsider's perspective or terminology, for which we use the label "disease." So, for example, in parts of Bolivia families would "diagnose" an infant suffering from fever and fast breathing as having *saxra*. However, biomedical doctors would diagnose the infant as having pneumonia. In this case, *saxra* would be the illness, and pneumonia would be the disease.

Intra-cultural diversity

Intracultural diversity refers to differences that exist among people who are considered to be members of the same culture. It is important for researchers to identify and describe intra-group differences, and consider their relevance for the overall, "big picture" of the study population.

Key informants

A key informant is someone who is especially knowledgeable about a topic of interest, and who is willing to talk to the researcher about it. Key informants are individuals with whom the researcher develops a special relationship of information exchange. They assist the researcher in learning about the informants' culture, and are usually interviewed many times during the research. The difference between a general informant or respondent and a key informant is that respondents give information about themselves, whereas key informants are

"experts" on some topic of interest, beyond their own personal beliefs and behaviours. Anyone is a potential key informant, including men and women, formal and informal leaders, professionals and 'ordinary' people.

Triangulation

Triangulation refers to the combination of different kinds of data or data collection methods within a single study. (The term comes from navigational science and refers to the technique of determining location by taking bearings from two directions).

The logic of triangulation is based on the premise that each method reveals different aspects of empirical reality. Triangulation helps to avoid errors linked to a particular method by using multiple methods in which different types of data provide cross-data validity checks.

The most common types of triangulation include **data triangulation**, in which different data sources are used (multiple cases or multiple types of informants, for example), and **methodological triangulation**, in which multiple data collection methods are used to study a single problem or programme (other types of triangulation include **investigator triangulation**, in which different investigators are used to study the same problem and **theory triangulation**, in which the use of different perspectives are used to interpret a single set of data.[47]

---

[47] Denzin, N.K. (1978). *The Research Act: A Theoretical Introduction to Sociological Methods.* New York: McGraw Hill.

APPENDIX II: SUMMARY TABLE OF DATA COLLECTION METHODS

DATA COLLECTION TECHNIQUE	CHARACTERISTICS	STRENGTHS	WEAKNESSES
unstructured interviews (conversational style)	Questions emerge from the immediate context and are asked in the natural course of things; there is no predetermination of question topics or wording.	Increases relevance of questions; questions can be matched to individuals and circumstances. Good for exploration of new topics.	Different information collected from different people with different questions. Less systematic and comprehensive. Data organization and analysis can be difficult.
semi-structured interview (interview guide approach)	Topics to be covered are specified in advance, but interviewer decides sequence and wording of questions during interview.	More systematic and comprehensive, but interviews still fairly conversational and situational.	Important topics may be inadvertently omitted. Interviewer flexibility in sequence and wording of questions can result in different responses from different perspectives, thus reducing comparability.
standardized open-ended interview	Exact wording and sequence of questions determined in advance. Worded so that responses are completely open-ended.	Increased comparability of responses; data complete for each respondent; Facilitates data organization and analysis. Best once a fairly good understanding of topic has been obtained.	Little flexibility in relating interview to particular individuals and circumstances; standardized wording of questions may constrain and limit naturalness and relevance of questions and answers.

DATA COLLECTION TECHNIQUE	CHARACTERISTICS	STRENGTHS	WEAKNESSES
free listing	Asks informants to name all items in an informant-defined domain	Useful first step in all research involving definition of new domains. Helps to ensure that concepts are culturally relevant.	Possible difficulties involved with finding appropriate generic terms to start the listing process. Sometimes lists produced are too sparse.
pile sorts	Informants are asked to sort cards or items according to their differences and similarities.	Helps to discover the relations among items within a domain. Can be conducted using large numbers of items, and are easy to administer.	Unless items are pictures or actual stimuli, pile sorts cannot be done with non-literate respondents. Also, not appropriate for all domains, since not all have an underlying taxonomic structure.
triads	Informants are asked to choose, for each set of 3 items, the one item that is most different.	As with pile sorts, they help to discover relations among items within a domain. Easy to administer, can be used with non-literates.	Not practical for comparisons among large numbers of items.
rating scales	Respondents are asked to rate items one-by-one according to a pre-designed scale, which can be graphical or numerical.	Scales can be created for any number of concepts or attributes. They are easy to administer.	Requires literate informants or visual stimuli. Sensitive to response bias.

DATA COLLECTION TECHNIQUE	CHARACTERISTICS	STRENGTHS	WEAKNESSES
rank order methods	Informants are asked to rank 2 or more items in terms of a specific characteristic.	Very productive for the short time it takes to conduct. Good for studying individual differences. Paired comparisons are especially easy to administer, and can be used with on-literates.	If many items, can be especially tedious for non-literates.
focus groups	A semi-structured, group interviewing technique which relies on discussion among participants.	Can produce a lot of information quickly. Good for identifying and exploring beliefs, attitudes and behaviours, and for identifying relevant questions for individual interviews. Is a form of communication that most people are comfortable with.	Provides no information about frequency or distribution of beliefs or behaviours. Are difficult to conduct; require skilled moderators. Participants may influence each others' responses so care must be taken in analysing results.
other group interviewing techniques (non-focus group)	A more informal, group interview technique, which tends to use pre-existing, natural groups. Sometimes group members are asked to work together to complete a task, such as building a map of the community. Purpose is to get community actively involved in identifying and exploring topics of interest.	Good for rapport building, identifying and exploring community problems and priorities, raising awareness of local problems, involving local people in identification of potential solutions. Is fun and interesting for participants.	Less systematic than focus groups, so inter-group comparisons are more difficult. Requires preparation, but perhaps less-skilled group moderators than for focus groups. Raising awareness can lead to raised expectations--researchers should be careful not to create unfulfilled expectations.

DATA COLLECTION TECHNIQUE	CHARACTERISTICS	STRENGTHS	WEAKNESSES
social network analysis	A set of methods for discovering and describing social structures and patterns of social interaction. Based on individual interviewing techniques and participant observation.	Can identify important social groups; provide information about the value, meaning and boundaries of network relationships; describes network-related attributes of individuals in a population; describes the contacts and ties that relate individuals or groups to one another.	Some methods may require intensive, long-term relationship building with informants. Other methods are lengthy and boring to administer. Data analysis is fairly sophisticated.
participant observation	Not really a data collection technique, but rather an approach whereby the researcher become an active member of the culture under study. Involves mainly unstructured observation and unstructured interviewing.	Facilitates all other data collection activities by building rapport and reducing reactivity. Helps to formulate relevant questions. Good for understanding processes, events and relationships in their social context.	Can be time-consuming, requires that the researcher speak the local language very well, and be a skilled observer and notetaker.

DATA COLLECTION TECHNIQUE	CHARACTERISTICS	STRENGTHS	WEAKNESSES
unstructured observation	Observer is outsider , non-participant. What is to be observed is only generally defined. Broadly focused, aim is to observe behaviour in holistic context.	Good for discovering unknown aspects of a problem. Allow for discovery of "surprises." Good for understanding behaviours in their physical and social context.	Do not provide precise, repeatable measures of behaviour, and thus cannot be used to monitor changes in behaviour.
structured observation	Researcher is outsider, non-participant. Observes and records observations in pre-determined manner.	Provides precise, numerical data which are amenable to statistical analysis and can be repeated to monitor change in behaviour over time.	The problem to be studied needs to be well-defined. Training of observers is intensive and time-consuming. Pre-determined structure of observations limits discovery of other potentially relevant behaviours.
Ethnographic decision-tree modelling	Uses interviews and participant observation to elicit people's own decision criteria. These are then combined in the form of a decision tree or flowchart. The model is then tested with separate sample of decision-makers.	Ethnographic decision-tree modelling shares the strengths and weaknesses of the qualitative data collection methods it draws on. Is a systematic means for understanding how people make decisions; good for gaining an understanding of observed behaviours, and for predicting behaviour.	Modelling process can be difficult if researcher has no prior experience. Requires knowledge of computers for testing models.

APPENDIX III: BIBLIOGRAPHY OF RESOURCES FOR QUALITATIVE RESEARCH

This Appendix, is not an exhaustive list, but contains some of the better books available which deal with the topics covered in this guide.

General overview of qualitative research

Bernard, H.R. (1988). *Research Methods in Cultural Anthropology*. Newbury Park, CA: Sage.

> This is a step-by-step, "how-to" guide for doing cultural anthropology. It presents the major issues involved in designing research and collecting and analysing data in a systematic, scientific manner. It covers topics such as sampling, data collection techniques, and qualitative and quantitative analyses. It is especially geared towards anthropology students about to embark on fieldwork.

Bryman, A. (1992). *Quantity and Quality in Social Research*. London: Routledge.

> This book provides an interesting, if rather academic discussion of the debate about quantitative and qualitative research, including an overview of the nature of each, as generally perceived by the participants in the debate, and the possibility of integrating quantitative and qualitative research.

Crabtree, B.F. and Miller, W.L., eds. (1992). *Doing Qualitative Research*. Newbury Park, CA: Sage.

> Each chapter in this volume provides an overview of one aspect of qualitative research (various data collection strategies, sampling techniques, data analysis strategies). Chapter 1 provides a good introduction to the methods and approaches typically used in qualitative research, and chapter 2 provides a clear overview of sampling issues in qualitative research. Examples throughout the book are drawn from the authors' experience in primary care medicine.

Fetterman, D.M. (1989). *Ethnography Step-by-Step*. Newbury Park, CA: Sage.

> This book provides a good, general overview of some of the concepts, data collection methods and analysis techniques used in ethnography. This is not a "how-to" book, but rather discusses more generally some of the most common steps taken when conducting ethnography.

Kirk, J., and Miller, M. (1986). *Reliability and validity in qualitative research.* Newbury Park, CA: Sage.

> This book discusses the problems of validity and reliability in qualitative research, and provides an historical overview of attempts to address these problems. A 4-phase model of the ethnographic process is proposed to help researchers address these problems in their work.

Marshall, C. and Rossman, G.B. (1989). *Designing Qualitative Research.* Newbury Park, CA: Sage.

> This book is written for graduate students, programme managers and others, to help them through the process of framing research questions and designing a qualitative research study to answer those questions. It contains many examples, presented in the form of "vignettes."

Patton, M.Q. (1987). *How to use qualitative methods in evaluation.* Newbury Park, CA: Sage.

> This book is part of a 9-book series called the Program Evaluation Kit. The Kit is designed to provide practical, step-by-step guidelines for evaluators in non-technical language. This volume contains an overview of qualitative research; a discussion of when qualitative research is likely to be most appropriate in evaluation; guidelines for designing qualitative evaluations; detailed discussions of how to conduct observations and depth interviews; and guidelines for analysing and interpreting qualitative data.

Patton, M.Q. (1990). *Qualitative evaluation and research methods* (2nd ed.). Newbury Park, CA: Sage.

> This is a lengthy, dense book which provides detailed discussions of the conceptual issues involved in the use of qualitative methods; qualitative research design and data collection strategies; and analysis, interpretation, and reporting. The book is full of illustrative tales and anecdotes, which some readers may find tedious, but there are many useful summary tables and figures.

Pelto, P.J. and Pelto, G.H. (1978). *Anthropological research: The structure of inquiry* (2nd ed.). New York: Cambridge University Press.

> This book discusses the logical steps and requirements whereby ethnographers turn interviews and observations into sociocultural generalizations. It covers such topics as science and anthropology, operationalism in anthropological research, units of observation, quantitative analyses, and building anthropological theory. It is a book which is frequently used in anthropology courses. It is not a "how-to" book of field techniques.

90

Scrimshaw, N.S. and Gleason, G.R., eds. (1992). *RAP: Qualitative Methodologies for Planning and Evaluation of Health Related Programmes*. Boston: International Nutrition Foundation for Developing Countries.

> This volume contains papers presented at an international conference held in 1990 to explore the use of qualitative research methods for programme development. The papers reflect the wide range of applications for qualitative assessment methods. These include planning, improving and evaluating nutrition and health-related intervention programmes.

Individual interviews

Crabtree, B.F. and Miller, W.L. "A qualitative approach to primary care research: the long interview." *Family Medicine*, vol. 23, No. 2, pp. 145-151.

> This paper presents a step-by-step process for conducting a "long interview", which is defined as "a depth interviewing technique designed to generate narratives that focus on fairly specific research questions." Examples from a primary care investigation of pain are used to illustrate the process. The strengths and limitations of this method, and its relationship to other qualitative methods, are discussed.

Spradley, J.P. (1979). *The ethnographic interview*. New York: Holt, Rinehart and Winston.

> This is an excellent, "how-to" book for conducting ethnographic interviews. A 12-step "Developmental Research Sequence" is described, which includes selecting informants, interviewing informants using several different types of question formats, taking fieldnotes, analysing fieldnotes, and writing up results in the form of an ethnography. This book discusses 3 major types of interview questions: descriptive, structural, and contrast. These question types can be used in the context of both semi-structured and structured interviews. Spradley shows how these question types should be combined to discover cultural domains, construct folk taxonomies and discover the cultural meaning systems.

Bernard, H.R. (1988). *Research Methods in Cultural Anthropology*. Newbury Park, CA: Sage.

> Chapter 9 describes questioning styles used in unstructured and semi-structured interviews. Chapter 10 contains an overview (with examples) of structured interviewing techniques, including free-listing, sentence-frames, triad comparisons, pile sorts and rankings and ratings.

Patton, M.Q. (1990). *Qualitative evaluation and research methods* (2nd ed.). Newbury Park, CA: Sage.

> Chapter 7 contains a good discussion of interviewing approaches, including conversation style (unstructured) interviews; semi-structured interviews using an interview guide, standardized open-ended interviews and closed, fixed response interviews (structured). There are also examples of good and bad question formats, and some guidelines for recording interview data.

Weller, S.C. and Romney K.A. (1988). *Systematic data collection*. Newbury Park, CA: Sage.

> This is an excellent, "how-to" book for using structured interviewing techniques such as free-listing, pile sorts, triad comparisons, paired comparisons, rating scales, rank order methods, sentence frame formats, and others. It also contains a discussion of the reliability of these techniques.

Group interviewing techniques

Dawson, S., Manderson, L. and Tallo, V.L. (1993). *A Manual for the Use of Focus Groups.* Boston: International Nutrition Foundation for Developing Countries.

> This is a good "how-to" manual for conducting focus group discussions. Part I is aimed at the programme manager ("team leader") and deals with decisions such as when to use focus groups, how to design a study using focus groups, selecting and training interviewers, selecting participants, developing a topic guide, and managing and analysing results. Part II outlines all the main points that should to be covered when training interviewers.

Griffiths, M. et. al. (1988). *Improving Young Child Feeding During Diarrhoea.* The Weaning Project, Manoff International Inc., Boston.

> This is an excellent, how-to manual for conducting qualitative research on feeding during diarrhoea. The manual is divided into three phases: problem identification, intervention or concept testing, and data analysis and synthesis. Methods discussed include in-depth interviews, observations, household trials, and focus group discussions. Appendices provide sample interview guides, focus group discussion guides, and examples of a final report. Although the manual focuses on the problem of feeding during diarrhoea, the guidelines are particularly clear and could be easily adapted for other topics of interest.

Krueger, R.A. (1988). *Focus Groups: A Practical Guide for Applied Research*. Newbury Park, CA: Sage.

> This is an excellent, comprehensive presentation on how to conduct focus groups. In addition to detailed instructions on the process of conducting focus groups, the book includes discussions about the strengths and weaknesses of focus groups, how they differ from other group and individual data collection methods, and their uses and validity.

Rapid Rural Appraisal (RRA) Notes. London: International Institute for Environment and Development. (To order publications, write to 3 Endsleigh Street, London, WC1H 0DD).

> This is a series whose aim is to share current experiences and methods among practitioners of RRA throughout the world. The name RRA encompasses a wide range of approaches, including a number of group interviewing techniques (participatory mapping, etc.). A special issue on applications for health (RRA Number 16, July 1992) contains a series of articles with illustrated example of participatory appraisal techniques for health programme planning. Many of the IIED publications are free for researchers from the third world.

Observation techniques

Bentley, M.E., Stallings, R.Y. and Gittelsohn, J. (1990). *Guidelines for the use of structured observations in health behaviour intervention studies*. Baltimore: Johns Hopkins School of Hygiene and Public Health. Unpublished document.

> This manual discusses issues of research design, data collection and analysis in observational studies. There is also some discussion of the advantages and limitations of the method.

Boot, M.T. and Cairncross, S. (1993). *Actions Speak: the study of hygiene behaviour in water and sanitation projects*. The Hague: International Water and Sanitation Centre.

> This book provides an overview of the ways that hygiene behaviour can be studied using observation and interviewing techniques. It describes different types of observation techniques than can be used, key considerations in using these techniques, sampling issues, and study design considerations. Although it is specifically focused on water and sanitation behaviours, it is useful for researchers interested in using observation techniques to study other behaviours, as well.

93

Spradley, J.P. (1980). *Participant observation.* New York: Holt, Rinehart and Winston.

> This is an excellent, step-by-step, "how-to" book for doing participant observation. Topics covered include selecting a research site; types of participant observation; how to complement observations with interviews; how to record fieldnotes; data analysis; and write-up.

Taylor, S.J. and Bogdan, R. (1984). *Introduction to qualitative research methods: The search for meaning.* New York: John Wiley and Sons.

> This book provides guidelines for field researchers on how to conduct participant observation and in-depth interviews, and presents several examples of qualitative studies in sociology.

Sampling issues

Crabtree, B.F. and Miller, W.L., eds. (1992). *Doing Qualitative Research.* Newbury Park, CA: Sage.

> Chapter 2 provides a good overview of sampling issues in qualitative research.

Johnson, J.C. (1990). *Selecting ethnographic informants.* Newbury Park, CA: Sage.

> This book presents procedures for selecting key informants, based on a two-step approach whereby potential informants are first identified based on theoretical or data-driven considerations, and only then are issues of personality, empathy, availability, and special personal attributes considered. Examples are used to illustrate sampling strategies.

Social network analysis

Knoke, D. and Kuklinski, J.H. (1982). *Network Analysis.* Beverly Hills, CA: Sage.

> This is a short introduction to social network analysis, designed to guide the interested user through the basic concepts and methods. The book assumes no prior exposure to the subject, but does require a solid background in basic statistics. The book reviews the central features of network analysis and suggests diverse applications to the social sciences.

Scott, J. (1991). *Social Network Analysis: A handbook*. Newbury Park, CA: Sage.

> This is a rather academic introduction to the theory and practice of network analysis in the social sciences. It explains the basic concepts, technical measures and available computer programmes for network analysis.

Ethnographic decision-tree modelling

Gladwin, C.H. (1989). *Ethnographic decision tree modelling*. Newbury Park, CA: Sage.

> This is a very clear and concise, step-by-step guide to building ethnographic decision-tree models.

Data analysis and presentation

Bernard, R. (1988). *Research Methods in Cultural Anthropology*. Newbury Park, CA: Sage. Chapter 14 contains descriptions of several qualitative analysis approaches and styles of presentation, including matrices and tables, taxonomies, flow charts, decision trees, and componential analysis. This is not a "how-to" chapter.

Burnard, P. (1991). "A method of analysing interview transcripts in qualitative research." *Nurse Education Today*. Vol. 11, pp. 461-466.

> This article briefly describes a 14-step process for systematically analysing interview transcripts. The process is done by hand, without the aid of a computer. The aim of the analysis is to produce a detailed and systematic recording of the themes and issues that arise in the interviews.

Miles, M.B., and Huberman, A.M. (1984). *Qualitative data analysis: A sourcebook of new methods*. Beverly Hills, CA: Sage.

> This is an excellent, practical sourcebook for researchers who deal with textual data. Emphasis is placed on the use of new types of data displays, including graphs, charts, matrices and networks. 49 different methods of data display and analysis are described and illustrated in detail, with practical suggestions for the user. The aim of the book is to help researchers draw valid conclusions from textual data.

Tesch, R. (1990). *Qualitative research: analysis types and software tools.* New York: Falmer.

> This book is a very thorough discussion of the principles and mechanics of text analysis. Chapters cover: the history and uses of qualitative research in sociology, psychology and education; types of textual analysis; the mechanics of textual analysis, including how to create coding systems; an overview of computers and the structure and functions of textual analysis software programmes; and detailed introductions to five software programmes (ETHNO, TAP, QUALPRO, Ethnograph, TEXTBASE ALPHA, and HyperQual).

Weber, R.P. (1985). *Basic Content Analysis.* Beverly Hills, CA: Sage.

> This is a concise introduction to text analysis for both novices and more experienced researchers. A step-by-step procedure for developing, testing, and applying a set of content categories is presented.

Qualitative research protocols for specific topics

Agyepong, I., Aryee, B., Dzikunu, H. and Manderson, L. *(1993). Guidelines for the Rapid Assessment of Social, Economic and Cultural Aspects of Malaria.* Draft Manual. (Contact: Professor L. Manderson, Tropical Hygiene Programme, University of Queensland Medical School, Herston Rd., Herston, QLD 4006, Australia).

Herman, E. and Bentley, M. (1993). *Rapid Assessment to Improve the Household Management of Diarrhea.* Boston: International Nutrition Foundation for Developing Countries.

> This manual is modeled after the original RAP manual (See Scrimshaw and Hurtado, below). It provides guidelines for conducting rapid assessments of beliefs and practices related to diarrhoeal disease, and is intended for use by persons already trained in qualitative research methods.

INRUD (International Network on the Rational Use of Drugs). *Qualitative Methods for Drug Use Studies.* Draft document currently being developed. For information write to: Dr. Richard Laing, INRUD Coordinator, Management Sciences for Health, 165 Allandale Road, Boston, MA, 02130.

Long A., and Scrimshaw, S. (1988). *Epilepsy Rapid Assessment Procedures: rapid assessment procedures for the evaluation of epilepsy-specific beliefs, attitudes, and behaviors.* Landover, Maryland: Epilepsy Foundation of America.

This manual (referred to as the ERAP) was developed based on the original RAP manual (Scrimshaw and Hurtado, 1987). The ERAP provides guidelines for conducting rapid assessment of epilepsy-related beliefs and practices. As in the original RAP, it suggests appropriate topics for data collection related to epilepsy.

Scrimshaw, S. and Hurtado, E. (1987). *Rapid Assessment Procedures for Nutrition and Primary Health Care*. Tokyo: UN University.

This manual provides guidelines for conducting rapid assessments of health related beliefs and practices. It is intended for use by persons already trained in anthropological or related field methods, and therefore does not provide detailed descriptions of basic anthropological techniques. It does, however, suggest appropriate topics for data collection on health-seeking behaviours, and presents these topic lists in the form of data collection guides.

The following guides are considerably more structured than those listed above, and contain detailed, step-by-step instructions for setting up and conducting studies, analysing results, and preparing a report.

Blum, L., Kuhnlein, H.. Pelto, P.J. and Pelto, G.H. *Community Assessment of natural food sources of vitamin A: guidelines for ethnographic studies*. Unpublished document. (Contact: Dr. H. Kuhnlein, School of Dietetics and Human Nutrition, McDonald Campus, McGill University, 21111 Lakeshore Rd., Sainte Anne de Bellvue, Quebec, Canada, H9X 3V9).

Family Health International. *Targeted Intervention Research on Sexually Transmitted Diseases*. Unpublished draft document, Washington, D.C.

Griffiths, M. et. al. (1988). *Improving Young Child Feeding During Diarrhoea*. The Weaning Project, Manoff International Inc.

Hudelson, Patricia. *Protocol for conducting an ethnographic study of malaria case management*. (1994). Unpublished, draft document. (Contact Dr. Hudelson at 8 Vieux College, 1204 Geneva, Switzerland).

WHO Programme for the Control of Acute Respiratory Infections. *Focused Ethnographic Study of ARI*. Unpublished document, Geneva, 1993.

WHO Programme for the Control of Diarrhoeal Disease. *Focused Ethnographic Study of Diarrhoea*. Unpublished document, Geneva, 1993.

WHO General Programme on AIDS. *Situation Assessment: Ethnographic Methods in AIDS Intervention Programmes*. Unpublished draft document, Geneva.

APPENDIX IV: RESOURCE LIST OF COMPUTER PROGRAMMES FOR MANAGING AND ANALYSING QUALITATIVE DATA

This Appendix provides a brief overview of some of the computer programmes available for managing and analysing qualitative data, what they can do for you, and where they can be obtained. There are many other programmes available; these are just some of the more popular ones.

For managing and analysing textual data

ZYINDEX

ZYINDEX is a simple, easy-to-use programme which retrieves text by searching for words, phrases, numbers or combinations of these elements in one or more files. It works with files written in nearly all popular word processing programmes, in their original format and with no conversion needed. ZYINDEX can also be used with ASCII files, so that database and spreadsheet files can also be searched. ZYINDEX reads your files, and creates a set files known as the Index List. These files record every word and its relative location within your documents. All files to be searched must first be indexed.

ZYINDEX runs on IBM and IBM-compatible computers, and requires one floppy disk drive and one hard disk drive. It requires DOS 2.0 or higher, and a minimum of 448K RAM. It works with the following word processors: Wordperfect, WordStar, MultiMate, Microsoft Word, WordStar 2000, and many others.

For information contact:

ZyLAB Sales and Service
100 Lexington Drive
Buffalo Grove, IL 60089

GOFER

Gofer has many of the same capabilities as ZYINDEX, but has two main advantages. First, there is no need to index your data files first. Gofer reads and analyzes the original data files. Second, Gofer can be used while you are working in another programme. For example, if you are writing a report using Wordperfect and want to insert a section from another file, you can call up Gofer, search your other files and insert the desired section in the report you are writing, without having to leave the word processing programme. ZYINDEX cannot do this.

Gofer runs on IBM and IBM-compatible computers, and works with a wide range of word processors.

For information contact:

Microlitics Inc
2 Tobey Village Office Park
Pittsford, NY 14534
tel: (716) 248-9150

TALLY

Tally is text management and analysis programme which can be used on IBM and IBM-compatible computers, and requires 256K of RAM.

Tally uses ASCII text files, and allows the researcher to code segments of text on the screen, and then codes are used to search and analyze the text. Selected segments of text can be printed, or imported directly into another file (for example, an article or report). Tally also has a content analysis feature whereby you can request the number and cumulative percentages of codes for any file or set of files.

For information contact:

Duke University Press
6697 College Station
Durham, NC 27708
tel: (919) 684-6837

ETHNOGRAPH

This is a software package for the analysis of textual data. You can use any word processing software package to create data files, as long as it can create ASCII files. ETHNOGRAPH is then used to read and analyze the ASCII files.

Quite a lot of preparation of data files is needed before they can be analyzed using ETHNOGRAPH. They must fit certain specifications for ETHNOGRAPH to be able to read and analyze them (for example, text must no more than 40 characters in width, and identifying information about the text such as date, time, location, circumstances) must be preceded by a '+'). Also, the user must first make a paper printout of the original data with line numbers (which are inserted by the programme) and code the data by hand. These are then entered into the computer, and segments of text can then be searched, sorted and analyzed by means of these codes.

ETHNOGRAPH can be used on IBM and IBM-compatible computers with 256K of RAM. The programme requires DOS version 2.0 or higher.
For information contact:

Qualis Research Associates
611 E. Nichols Drive
Littleton, CO 80161
tel: (303) 794-6420

TEXTBASE ALPHA

TEXTBASE ALPHA can analyze both structured interview data and narrative text. No special format is necessary for data files, and coding of text is done directly on the screen. The programme uses menus, just like other MS-DOS text analysis programmes, and users can become familiar with it fairly quickly. This programme works on IBM and IBM-compatible computers, and requires 640K of RAM. DOS version 2.0 or later is required.

For information contact:

Qualitative Research Management
73425 Hilltop Road
Desert Hot Springs, CA 92240
tel: (619) 329-7026.

For analysing data from systematic data collection techniques

ANTHROPAC

ANTHROPAC is designed to analyze data from free listing, triads, pile sorts, ratings and rankings, and paired comparisons. ANTHROPAC can be used to design questionnaires (for triads, paired comparisons, and ratings); and analyze data either entered directly into ANTHROPAC or entered into other programmes (as long as these are converted to ASCII files). ANTHROPAC can perform the following analyses: consensus, univariate, factor, scaling, and cluster.

The user's manual is not very helpful, but the programme is menu-driven programme, and so fairly easy to learn.

For information contact:

Steve Borgatti
Department of Sociology
University of South Carolina
Columbia, SC 29208
tel: (803) 777-3123

For social network analysis

UCINET

UCINET is a general purpose, easy to use, group of programmes which cover the basic graph theoretical concepts, positional analysis and multidimensional scaling. The programme comes in two versions, a standard version which runs on any XT-compatible computer, and a faster version which works only on machines with an 8087 mathematical co-processor. It requires at least 256K of RAM, but some procedures run out of memory with large data sets even on a 640K machine. The programmes are supplied with a number of example data sets, which are referred to throughout the manual.

For information contact:

Bruce MacEvoy and Linton Freeman
Mathematical Social Science Group
School of Social Sciences
University of California
Irvine, CA 92717