

Chapter 9: Qualitative methods

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1. Introduction

Qualitative methodology has always been part of the set of tools used by health researchers ([Mack et al. 2005](#)). It has become more important now with the rise in lifestyle illnesses and epidemics where human behavioural choices influence risk ([Daniels et al. 2016](#)). There are many pressing research questions about health behaviour and risk-taking that cannot be answered with numbers – for example, why have some AIDS interventions not worked as expected because not all those offered medication were willing to accept it. While research into public health and health systems has been predominantly quantitative in nature, qualitative methods can make a valuable contribution, in particular by allowing an increased understanding of the perceptions, motivations and behaviours of those involved. This approach can be used to generate detailed, in-depth knowledge, often by employing what might appear to be relatively simple techniques of communication and observation, but which require considerable expertise to use effectively ([Serekoane et al. 2014](#)). A knowledge of, and experience with, qualitative methods is therefore an essential addition to the set of skills required for implementation research ([Atkins et al. 2015](#)).

In this chapter qualitative methodology is described in the context of the interpretive research paradigm. [Schwartz-Shea and Yanow \(2012\)](#) explain the underlying philosophy of this approach as follows:

“A researcher can interview based on the belief that she is going to be able to establish ‘what really happened’ in a setting. This reflects a realist – objectivist methodology Or a researcher can interview based on the belief that there are multiple perceived and/or experienced social ‘realities’ concerning what happened, rather than a singular ‘truth’. In this view, the researcher would assume that event narratives are likely to vary depending on the perspective (political, cultural, experiential, etc.) of the persons being interviewed. This approach reflects a constructivist – interpretivist methodology that rests on a belief in the existence of (potentially) multiple, intersubjectively constructed “truths” about social, political, cultural, and other human events; and on the belief that these understandings can only be accessed, or co-generated, through interactions between researcher and researched as they seek to interpret those events and make those interpretations legible to each other.” (p4)

This interpretive process is fundamental to qualitative research, in that it allows analysis to proceed beyond the purely descriptive. Interpretative analysis has also been of vital importance in world history, as it has allowed people to move beyond the obvious and immediate constraints of their environment ([Fossey et al. 2002](#)). Examples include Steve Biko and Martin Luther King, in their arguments against racism, and the suffragettes, who criticised sexism and patriarchy. These people looked at their context, reviewed their own situation in relation to that context, made interpretations and came to conclusions that guided their future actions. Good qualitative research draws on this capacity for interpretation and applies *critical* and *scientific* approaches ([Cooper and Endacott 2007](#)) developing systems of enquiry that are *explicit* and *systematic*.

Uses of qualitative research

Qualitative research can be valuable in many applications.

- In the early phase of a study to explore an area on first entry into a field, to refine concepts or to formulate or clarify hypotheses. For example, in a recent project researchers and activists could not agree as to what constituted an OVC (orphan or vulnerable child). It was seen as important to seek a community perspective on this concept at a very early stage of the research ([Skinner et al. 2006](#)).
- Alongside other types of research in order to gain an additional perspective on a problem. For example, in a project looking at the risks for women in *shebeens*, unlicensed bar or drinking clubs, it was agreed that while the risks were generally well known, an in-depth understanding of the perspectives and attitudes of the various stakeholders was required to develop interventions. Qualitative methods were used to gain this understanding ([Sikkema et al. 2011](#), [Watt et al. 2012](#)).
- To clarify unexpected or significant findings from quantitative studies. For example a number of such studies have revealed differences between men and women as to the meaning of the term 'concurrent partners' and discordant reports as to the numbers of partners individual have had ([Nnko et al. 2004](#)).
- When the aim is to get an in-depth sense of what people think of a particular object, event or construct. For example, it was central to an evaluation of the role and implementation of the South Africa Truth and Reconciliation Commission ([Skinner 2000](#)); to gaining a real understanding of stigma ([Chambers et al. 2015](#)); and the cultural impact of male medical circumcision ([Lukobo and Bailey 2007](#)).
- In standalone research on a difficult topic or with a hard-to-reach population. For example, research on sex workers or with drug users ([Watt et al. 2016](#)).
- In process evaluations, for example to observe workshop interventions and assess how they are received.
- To provide evidence in support of a social action model (for example, [Freire 1970](#)).
- Every day by anyone to examine their own context. What do I really want to achieve by undertaking this research? What do my colleagues think of me? What do I need to do to advance my career?

Theory of qualitative research

Different models exist to define what is meant by 'science' and the development of knowledge over time. The classical model, as used in physics for example, is that of 'falsification', the process by which incorrect theories are rejected on the basis of empirical evidence. Medical science tends to follow an alternative 'hypothesis-induction' approach – a circular process of reasoning in which hypotheses are specified, for example that a given drug will improve the condition of patients with a given disease, and then repeatedly tested, perhaps with variations, for example in terms of the dosage used, over a series of 'trials'. Typically, in any given trial some patients will respond well, some less well, some not at all and possible some badly. Over time there will be a judgement, based on a statistical analysis of all those trials considered to have been appropriately undertaken, as to whether there is sufficient evidence to promote the treatment, possibly in a modified form and possibly only for some categories of patient. A range of methods have been developed to improve the rigour of both observational and experimental trials. The Double-Blinded Randomised Controlled Trial ([Sibbald and Roland 1998](#)) is considered the 'gold-standard', and there have been suggestions that it should be applied beyond the medical field ([May 2012](#)).

The social sciences offer a different approach which led to the development of, amongst other approaches to knowledge, qualitative research methodologies. First we need to look at what is different about the social world and why we need such a different approach. If you do an experiment by mixing two chemicals in controlled conditions they should always react in the same way. Likewise, if someone has an infection and a proven treatment is applied, the person has a high probability of being cured. If they are not, then the reasons can often be clearly determined, including incorrect dosage or the presence of resistance.

In the social world there is generally much less predictability. For example, consider the responses to an anti-smoking campaign. The information provided may be very clear but the responses will typically vary widely. Explanations for these different responses will vary even more widely, between public health officials, different community members, smokers and non-smokers. Even a single individual may offer different explanations, depending on the context in which they are asked. Research within the social world has to cope with these variations. Multiple theories have been developed around behaviour and what influences it:

- Theory of reasoned action ([Albarracin et al. 2001](#));
- Health beliefs model ([NIH undated](#));
- Information motivation behaviour model ([Chang et al. 2014](#));
- Lay beliefs theory ([PHAST 2011](#));
- Social representations ([Howarth et al 2004](#)).

One particularly important approach involves looking at behaviours and decisions in relation to the context within which they are located. It is evident that context strongly influences how people think and act. Not a simple matter, those contextual influences may include culture, language, access to resources, gender, education, age, time, date, knowledge of health issues, social norms, and multiple other factors. The research task is therefore to understand the social world and the context within which individuals are situated in order to make sense of their different responses to external stimulate, such as health system interventions. While the traditional world of scientific experimentation assumes a single empirical reality, the social world can only be examined by reference to the contexts in which that reality is known, and through all the filters that individuals use to understand and respond to that world.

Our basic assumptions can therefore be expressed as:

- Philosophies of human behaviours and beliefs direct the qualitative research approach.
- Those behaviours and beliefs are shaped by the context within which an individual is situated, and in turn influence that context.
- Each behaviour and belief carries meaning.
- These systems of social and personal meanings cannot be adequately described by any statistical model.
- Qualitative research should take an interpretive and subjective approach.
- Researchers are part of the research and must examine the ways in which their own beliefs and context will influence their interpretations of the meanings of others.

Qualitative research attempts to understand people and events by acknowledging the full complexity of their contexts and interpreting behaviours and beliefs within those contexts.

“Qualitative research ... consists of a set of interpretive, material practices that makes the world visible. These practices ... turn the world into a series of representations including field notes, interviews, conversations, photographs, recordings and memos to the self. At this level, qualitative research involves an interpretive, naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of the meanings people bring to them. ([Denzin and Lincoln 2000:3](#))

Paradigms and theories

A *paradigm* is the collective understanding that we have of our world, including our culture, ideology, assumptions of power, and perceptions of ourselves in that world.

Theories are statements about rules and systems that direct how events happen in the world. These include physical, chemical and biological processes, but here we focus on human

behaviour. There are 'grand' theories, for example relating to the importance of self-efficacy in achieving health goals ([Strecher et al. 1986](#)), or provider and consumer behaviour given the relationship between supply and demand in a market. However, in general, qualitative researchers are primarily concerned with the theories they can construct based on their data, interviews and observations. These are normally only directly applicable to the research subjects but with care inferences can often be made about the broader world.

Context

Many theorists have spoken about the importance of context in shaping our behaviour. In different contexts, data themselves can take on new meanings. Traditionally, 'data' are characterised as individual pieces of information, for example as collected in a spreadsheet, each divorced from its context. However, data in qualitative research remain integrated as far as possible in the context from which they are drawn. Even the research process is essentially part of that context.

What does context mean? It may include environmental, physical, political, social, religious, ideological, cultural, and economic factors because qualitative research takes place in a natural rather than an experimental setting. It is clearly not possible to take everything into account, but researchers should try to maintain as much of what is important as possible. Routinely comparing notes amongst members of a research team will enhance the process of identifying those aspects of context that are likely to influence results. Ideally you collect data while interrupting the existing context as little as possible.

Subjectivity

Subjectivity is central to qualitative research. It is perceptions that are important. Subjective knowledge is ultimate based on the testimony of our senses – everything is understood and interpreted through the eyes, ears and brains of individuals. The aim of qualitative research is to fully appreciate the perspective of the respondents, which means removing yours as far as possible from the interaction. Bear in mind that two respondents in the same situation may have very different perceptions of what is happening – consider for instance the complex exchanges and interpretations of those exchanges that may take place between a man and a woman who meet for the first time in a student bar. You have to make sense of such complexities, bearing in mind that you can never get access to the total reality of any respondent.

Everything that we as researchers perceive is affected by who we are and our context. Likewise the information we are given will be influenced by that context, even who we are able to talk to and what we may observe. Compare the different interactions and interviews that might be undertaken in a South African township by a white male academic and a black female local community member. These realities have to be factored in at all times during the research process, when developing the protocol, preparing to enter the field, interviewing and observing, doing the analysis and interpretation and writing reports.

Meaning and interpretation

Pursuit of meaning is the core focus of qualitative research. What lies behind observed behaviours and spoken or written words? What do respondents mean when they use terms such as vulnerability, community, disability or mental illness? Rather than counting and measuring, the core task is to translate these meanings into a report so that the understanding can be shared. Remember that meanings may differ between people even if they have apparent common contexts.

Interpretation is the process of finding meaning. Analysis in qualitative research involves looking at what is shown in our data, understanding it and then offering interpretations within a given context. We explore the meanings of concepts – vulnerability, community, disability or

mental illness – and construct ‘working hypotheses’ relating to those concepts as we go through the data, constantly revisiting and refining them.

Reflexivity

In most research activities we try to eliminate the influence of the researcher. In questionnaire surveys, for example, we train enumerators to ask each question using precisely the same words and we encourage them to adopt a formal approach to each interview, trying not to let their own personality influence the answers provided in any way. In qualitative research, you are the research instrument. The aim is to fully acknowledge and understand the influence that you are having on each interaction. Reflexivity, the process of continuously assessing how your actions, values and perception impact on each stage of your research has been described as:

“a strategy that researchers can use for the purpose of understanding the phenomenon under exploration and accurately portraying the meaning made by participants and where self-examination allows assumptions and biases that could affect the study to be understood” ([Lambert et al. 2010:321](#))

Genuine reflexivity is a skill that develops slowly through experience and continues to develop throughout life. It involves learning how to *really* listen and observe, a skill useful not only in research but in life. It requires a capacity for self-examination and an appreciation of the role of your own context and subjectivity. You need to learn how to analyse your perceptions and how they impact on your responses. There is an inevitable conflict between having to be present as yourself, and aware of how you are perceived in terms of race, gender, class, etc., but at the same time to withdraw yourself from the situation.

Interpretive approach

The interpretive approach incorporates within it the analytic approaches of grounded theory, thematic content analysis, phenomenology, and hermeneutics ([QDA 2011](#), [Mayring 2014](#)). The emphasis is on staying close to the data and interpreting the material from a position of deep empathic understanding. The researcher aims to provide a ‘thick description’ of the characteristics, processes, transactions and contexts that constitute the phenomenon being studied.

2. Methodological issues

There are specific issues that need to be considered in developing a qualitative research proposal. A number of the key elements of the traditional research proposal require a different approach in qualitative research. These differences arise out of the specific philosophical background and the nature of the methodology as described above. Issues of sampling, development of research instruments and ethics require particular attention.

Sampling

Given the methods of data collection and analysis, the sample size is usually limited to around 10 to 30 respondents, and is rarely more than 100. Depth and quality of the information provided by respondents are the primary goal, rather than statistical inference. Probability sampling is rarely adopted and then usually to avoid accusation of bias rather than to validate statistical analysis. Small sample sizes require particular assumptions and approaches. Sampling designs are typically based on the specific requirements of your study. There are few direct rules, but the researcher must be transparent as to what decisions were made, and be able to defend those decisions. Convenience sampling, engaging with only those respondents who are easily accessible and cooperative, is strongly discouraged unless there are no practical alternatives. As discussed in chapter 7, even though they will not use the methods of statistical inference, qualitative researchers will often wish to argue the applicability

of their findings to the population from which the sample was drawn and suggest the potential for transferability of those findings to similar populations.

Purposive or strategic sampling

Particular emphasis is placed on *purposive* or *strategic sampling*. Deliberate choices of respondents or settings are made to ensure coverage of the full range of possible characteristics of interest. This should ideally include both those who are seen as typical and those reflecting the diversity of the population being researched. This can be achieved by *stratifying* your sample in terms of:

- Personal characteristics, e.g. gender, age, education, religion, ethnicity;
- Group membership, e.g. occupation, community organisation, political party;
- Social characteristics, e.g. geographical area, class, educational level;
- Experience level, e.g. length or regularity of participation in a given activity.

For example if you were investigating the experience of nurses providing treatment for multi-drug resistant TB (MDRTB), you might look for variation by age, gender, ethnicity, qualifications, training in MDRTB treatment, years of experience in working with MDRTB patients, type of facility, size of population being served by their facility, etc.. Each nurse sampled would include a number of these characteristics. For instance, a young black female staff nurse with five years of experience with MDRTB patients working in a tertiary hospital who has attended an internal two-week course on the treatment regime for MDRTB patients. The aim would be to cover as many combinations as possible, within a given sample size. Usually you would start with respondents that you consider typical of the group. Then you would interview those who are in some way atypical, to see how perspectives differ as you move away from the core group. Other approaches ([Patton 1990](#), [Suri 2011](#)) include:

- Extreme sampling – select highly atypical cases (e.g. most/least successful outcomes);
- Intensity sampling – select cases that best illustrate the effects of an intervention;
- Homogeneous samples – select cases in a particular subgroup for in-depth analysis;
- Heterogeneous samples – select diverse cases to identify any common experiences;
- Typical cases – select cases to illustrate the most common outcomes of an intervention;
- Snowball sampling – ask existing informative sample members to recommend others;
- Opportunistic sampling – allow sample design to emerge during fieldwork as suitable respondents are encountered; generally used with hard to reach populations.

Sampling as you go

You can adapt your sample as your research progresses and you learn more about the population, research topic and local context. You need to reflect on your aims and on your stated approach to sampling. It is useful if you are able to analyse your data as you proceed, allowing you to develop hypotheses and/or theories that you can then test. For example, if a common set of views is found amongst a core group you can assess if these same views are held further from the core: do all or only most providers in a facility have positive attitudes to an intervention? Or you can draw in additional people to ask specific questions to test an hypothesis: do junior providers welcome the intervention because they expect to benefit as they gain more experience? Focus on the need to collect a sample that will suit your overall research objectives, while remembering that you will need to justify your decisions and defend yourself against possible accusations of bias – especially if your findings are controversial. There will be a temptation to select respondents that are easier to talk to or who are more friendly and accessible. Where access is very difficult, you must sometimes take who you can get, but you must recognise the risks such an approach poses to the creditability of your findings. Do not change your chosen sample design unless it is either unavoidable or you have a valid scientific reason.

Sample size

There are two theoretical arguments that are widely used to make decisions as to sample size, both concerned with the idea of letting the research process play out. The first, data saturation, involves continuing until no further new information is being uncovered, when additional observations or interviews are tending to produce the same results, even when you look at new categories of respondents ([Francis et al. 2010](#)). The second involves forming hypotheses during analysis that become part of later interviews, and continuing until all or enough hypotheses become stable ([Thompson 2011](#)).

However, in most cases resource constraints will be the dominant factor in determining sample size. These include cost, time, access and the number, skills and experience of available fieldworkers. Sample size will clearly depend on the length of the interviews. If interviews are an hour or longer then do fewer; if 20–30 minutes then do more. Assuming that interviews are 45–60 minutes, it is seldom necessary to go beyond a sample of around 30 respondents and many studies can be done with 10–15. A sample larger than 60–70 becomes very difficult to manage. Ultimately these are just guidelines. As the researcher you have to decide if your research questions have been answered.

Other methods of data-gathering such as focus groups, participant observation and use of existing documents have their own approaches to sample selection but the key philosophies remain similar.

3. Preparing a discussion schedule

There are a range of research documents that can be used in the research process. These include discussion schedules, observation schedules, workshop agendas and search lists for secondary sources. This section will focus on the development of discussion schedules which can be used in individual interview and focus groups.

The purpose of the discussion schedule is to assist the interviewer to maintain a focus and to ensure coverage of all issues felt to be important. The content of the schedule should be clearly derived from the described research question being addressed and from the stated aims and objectives. Sometimes specialised schedules can be developed for particular purposes such as: directed accounts of behaviour or thought processes; commentary on interventions; or accounts of specific events. You do need to remember that you as the researcher and interviewer are the key research instrument and not the discussion schedule. So while considerable effort needs to be put into the development of the schedule, it should guide the interview and not control it. Thus if you are using other interviewers to collect the data, they need to be thoroughly familiar with the whole study and not just the schedule.

As a guideline, the schedule should not be longer than one or at most two pages, and should be easy to scan quickly during an interview. It is only a guide. The interview does not need to proceed as per the schedule; not everything on the schedule needs to be covered; and the interview can go beyond the items listed in the schedule if the respondent chooses to go into new but relevant areas. Ideally an interview would evolve organically from a single question but in reality it is safer to start with an initial very open question and then to have a limited number of follow-up questions that cover all the components of interest. Each sub-question should be a logical follow-up to the initial question and be accompanied by a checklist of the important topics to be addressed under that heading.

Interviews with specific respondents may need to address additional issues relating to their particular characteristics. If so, these additional points should be noted on the schedule prior

to the interview, especially if this person was added to address gaps identified in the existing sample. There are a range of considerations for deciding on the level of detail in a schedule:

- The information being sought;
- Current levels of knowledge on the subject;
- The purpose of the interview;
- The experience of the interviewer;
- The likely openness and ease of the respondent.

These considerations need to be balanced against the need to keep the schedule as brief and clear as possible. Some interviews have particular functions, so each study will require several schedules. For instance, exploring the experiences of providers and patients in a facility. Discussion schedules can be adapted during the research if new questions arise that are seen to be important or new groups emerge that need to be interviewed. However, these do need to be relevant to the original research objectives, or these objectives need to be adapted and the reasons for the changes stated. It is important to maintain this consistency.

4. Ethical considerations in qualitative research

Three central principles of research ethics are to ensure: respect for participants; justice; and beneficence. Participants will often need or at least feel they need protection from researchers who they perceive to be in a relatively powerful position and able to cause them harm. Particular concerns in qualitative research include:

- Publishing their stories in ways that might put them at risk;
- Undermining their credibility or that of a group that they represent;
- Breaking confidentiality;
- Misrepresenting them;
- Acting against their best interests in some other way.

Access negotiation

Before research fieldwork begins access should be negotiated with all relevant gatekeepers. This is a part of ethical research that is often overlooked or seen simply as a hurdle that needs to be overcome. Working with the community being researched and their representatives is important not only because they are gatekeepers, but for the protection of the research team and because it is simply morally correct. Doing full-access negotiation is particularly important in qualitative research due to the more intensive level of contact and depth of information obtained. Access negotiation is also an ongoing process. While general access is obtained initially, this does need to be repeated at different levels with each new context entered within the site and for each new interview. Clear and honest accounts of the research must be given and an explanation provided of how the data will be used.

Confidentiality

Confidentiality is a right of all respondents. Especially in qualitative research where a lot of detailed information will be obtained from them. Electronic recordings and transcripts of interviews must be password-protected and all personal identifiers removed. Keep the list of respondents separate from the interview data and refer to each using a code number. All recordings should be destroyed at the end of the project, unless storage in an archive has been negotiated. Be careful when writing up the analysis to protect identity.

There are situations where confidentiality may be difficult to maintain. This is primarily where people are interviewed because they hold a particular position, especially if that position is high-profile. Examples include senior officials, doctors or nurses providing specialised services and university professors in particular disciplines. On these occasions it needs to be

made clear that while you will try to protect their identity there are risks that some readers of the final reports or publications will be able to recognise them. Care needs to be taken that respondents are not inadvertently compromised through the research.

Breaking confidentiality

We also have to be aware that in qualitative health research we often collect sensitive information and as such need to act responsibly when confronted by knowledge that indicates that the respondent or others may be at risk of physical or psychological harm. There may be times when we have to break confidentiality. For example when we encounter:

- Respondents who appear depressed to the point of suicide;
- A child or other vulnerable person being abused;
- A respondent who states that they intend to hurt others;
- A respondent who through ignorance or irresponsibility is risking the health of patients, for example by reusing disposable hypodermic needles.

You must warn respondents in advance that you will break confidentiality under these conditions.

Unintentional possible negative impacts

On sensitive topics, for example serious illnesses of children or mental health conditions, you need to give a warning that the interview may evoke an emotional response. Due care and sympathy are required when such a situation arises and if necessary the interview should be ended. Some respondents may ask for help during the interview. If possible, compile a list of agencies that can offer support to those who need it. These agencies should be local and affordable. Consider state services, NGOs and community-based organisations (CBOs) initially. Private agencies may be an appropriate option, but you need to warn the respondent that they will have to pay for these. Bear in mind that the service which is easiest to access may not be the best choice. For example, being referred to a workplace service may lead to others finding out.

In certain situations it may be necessary to arrange for backup services, for example from a qualified doctor or nurse, to be available within your study. You have to be careful to make sure the respondent is not left feeling more vulnerable at the end of the interview, as this may increase the possibility that they may engage in risky behaviour or even be suicidal. You should avoid getting into a counselling relationship with your interviewee and be very careful about giving advice, however tempting, even if it is directly requested. It can increase your power over the respondent and may potentially provide access to information beyond that to which they consented. The respondent may incorrectly assume that you are offering to take some responsibility for their situation and willing to have an ongoing relationship. This is both unethical and bad research. Refer people to those who can provide help.

Consent forms

The fully informed consent of respondents is essential. They must be provided with a detailed explanation of the research and how their information will be used. In addition, specific consent is required if you wish to record or video-record the research interaction. With a child respondent, consent must be obtained from the parents but also from the child. Particular concerns attach to populations who are vulnerable due to their specific characteristics or circumstances, for example the illiterate, prisoners and long-stay hospital patients ([Hyder et al. 2004](#)). The respondent is entitled to request at any point that a recorder is turned off and also that a recording be deleted and any notes destroyed. This must be respected. It is completely unacceptable for you to exploit the fact that the respondent may see you as someone in a position to act against their interests if they do not cooperate. If tempted,

remember that respondents who feel in any way threatened will typically tell you what they assume you wish to hear rather than what they truly believe.

The process of leaving also has to be negotiated, especially if you feel that you have developed a rapport with the respondent. Deal with any outstanding issues from the interview, such as any painful emotions that may have been released or requests for information that could not be dealt with during the interview. If you wish to correct any misconceptions that arose during the interview this is the time to do it. You should also ensure that promises of follow-up are kept.

Offering incentives for participation

Offering incentives to a potential interviewee may create ethical conflicts. Some argue that it can be considered coercive, depending on the size of the incentive. Others will suggest, especially some respondents, that just taking information without offering anything in return is exploitive. This argument has special force when researchers are seen as obviously more wealthy than their respondents and as profiting from the information gathered, for example in terms of career advancement. The concern often depends on the size of the incentive. One approach is to offer an incentive that will recompense the costs associated with participation, such as the cost of transport to a venue. Incentives for children are often smaller and it is probably advisable to offer gifts such as toys, educational equipment or air time for their cell phones rather than money. One risk is that money given to a child will be appropriated by an accompanying adult, though remember that they may also require compensation if there are costs associated with the child's participation.

Issues for observation research

This may also give rise to ethical concerns as a respondent may unintentionally give away important personal information by their behaviour. You will again have to negotiate access, especially to private venues, usually seeking permission from key gatekeepers. Observational research activities should be in the open, not covert. You can try to blend into the background, but be aware that you may still be seen as an influential outsider – again a position in which you are regarded as potentially having power over others. Those being observed may try to confide in you, for example complaining that they have been waiting for many hours to see a provider. This is not necessarily a problem, but just as in an interview situation you need to be careful how you use information obtained in this way.

5. Writing a qualitative protocol

While being in some respects a relatively flexible methodology, qualitative research demands considerable rigour if its findings are to be seen as sufficiently well founded to influence health policy. As discussed in the opening section, a systematic approach is required to ensure the quality of any research activity. This requirement should be reflected in the development of the research protocol, a clear plan of action that should guide the overall research process, including operations in the field, though, as discussed above, it will remain open to adaptation as information is gathered and alternative hypothesis formulated.

Outline and structure

The following sections should be included in the protocol:

- Literature review;
- Research question;
- Aims and Objectives;
- Research design;
- Sample;
- Instruments;

- Analysis;
- Ethics.

Fundamental to a good qualitative proposal is a clear and consistent narrative that flows from the literature review to the description of the analytical procedures that are intended to deliver the findings. The literature review must provide a persuasive introduction to the specific research question to be addressed, with each reference contributing to our understanding of that question. Similarly, the aims and objectives must flow from the statement of the question and the evidence provided by the literature review, though it is possible to define sub-objectives in a study if there are related areas that you want to investigate. The test of the research design is whether it provides, given the sampling procedures and instruments with which it will be implemented, a convincing way of achieving your objectives. Note that if there are questions that you find yourself adding to the instruments that are not in the objectives section, check if these are important and if so go back and amend that section to reflect this.

Literature review

As discussed in detail in chapter 3, this should be a focused account of the literature that covers the subject matter. As indicated above, it should lead to the framing of the research question, addressing relevant international and local contexts and reflecting on theories relating to that question. It will include quantitative studies but the focus will be on the qualitative research literature, and the context within which each study is set needs to be considered. A literature review should be considered the first step in your analysis and so a qualitative analytical approach should be used.

Research question, aims and objectives

The research question, aims and objectives can be seen as a hierarchy, gradually moving from the general to the specific. Within the broad area of work that you are undertaking, for example the overall implementation process for a given intervention, you should first identify the question to which this research activity will contribute, describing the context in which you will be undertaking the research and the relevance of the question to that context. The aims should then clearly specify the areas within the research question that you do plan to address and the objectives the information that you are seeking within each aim. Qualitative research objectives should be formulated in open or descriptive terms, not in terms of measurable variables or hypotheses. Note that specifying clear aims and objectives should not prevent you being open to new ways of thinking about the research question as the study proceed. You can adapt objectives and aims as you gather more information, but it must be a reflective process, with each adaptation involving a revision of the overall protocol to ensure its consistency.

For example, in implementing a new initiative on the provision of antiretroviral drugs, we might be concerned to maximise the take up of the initiative and wish to address a research question such as: 'What are the factors which tend to encourage or discourage greater openness about an individual's HIV status?' We might know that one particularly problematic issue is that of children with HIV. How and when to tell children that they are HIV+ has caused considerable debate. Parents fear the potentially negative impacts on the child, including depression, negative self-worth or even self-destructive behaviour. But if they are not informed there are also concerns about risky behaviour, a lack of motivation to adhere to medication and the possibility that the child will discover their status independently, without the necessary assistance and support. Given that parents are the key decision makers we might define the aims and objectives of a qualitative research project as follows:

Aim:

- To assess how parents make the decision to disclose their HIV+ status to their child.

Objectives:

- To understand parents knowledge and attitudes about HIV;
- To understand how they understand childhood;
- To understand what they feel about their child being HIV+;
- To understand what they understand by disclosure;
- To understand what they see as the risks in telling their child of its HIV status;
- To ascertain how they talk to their child about medication;
- To identify the signals that indicate that they and their child are ready to go through the process of disclosure.

Research design

In relatively small scale qualitative studies, this will often be a relatively brief description of what you want to do, including the basic methodology, and the context within which the research will be undertaken. You may also include more details on some of the specific issues that you wish to look at within each objective. The design section serves as a framework for the technical components that follow. In the above example it might be described as follows:

Individual in-depth interviews will be undertaken with parents who have had different experiences of disclosure or who are preparing to go through a disclosure process with their child. These interviews will be conducted by the researcher who is trained in the methodology and is familiar with core issues around disclosure from reading the literature and from discussions with health staff. All the interviews will be recorded for later transcription. The focus for this study is on parents whose children attend services at a tertiary hospital. The study can later be expanded to include other sites.

Sample

The information required here typically includes the sampling frame, the intended sample size, the sampling procedures to be adopted and details of the types of respondent you are seeking. Note that in observational studies, for example of health facilities, the sample would be specified in terms of the sites that you will observe and the times when you will be observing them. Thus, in the above example we might decide to select 12 sets of parents and to sample them purposively with the assistance of the health staff who provide services to their children. The sample could then be split into those who have already disclosed to their children and those who have not. Subjects might be selected in order to obtain substantial variation on factors such as: age of child; ethnicity of parents; education level of parents; extent of the child's illness; and, for those who have disclosed, the age of the child at the point of disclosure.

Discussion schedule

This section will describe the instruments that you intend to use in your research. It will include a broad description of the specific content that you are looking for and an explanation of the different components of the schedule. A provisional discussion schedule ([St John's University undated](#)) or alternative instrument if using another methodology should be attached, with an indication that this will probably be modified as the research proceeds.

Analysis

This should provide a detailed description of the ways in which you plan to analyse the substantial amount of qualitative data that your research will generate (see section 13). It should include a discussion of the preparation of documents, recordings and other materials for analysis, for instance transcription and translation. The process for the identification of themes and the approach to coding, including a description of any software that you intend to use, should be described in some detail. You should also explain how you intend to address the issues of data validity and reliability,

Ethics

This should follow the guidelines described above. The key issues relate to: obtaining the informed consent of respondents, with specific consent for any recordings; obtaining consents for children if they are included among the respondents; confidentiality and the circumstances under which it might be broken; data protection; any referral plans for respondents who might request or need support; and the rights of respondents to end participation and request destruction of interview notes and recordings at any time.

Ongoing revisions of protocols

You should remember that in qualitative research the protocol is a living document. It can be adapted as you identify new questions or identify answers to some initial questions and want to focus on other issues in later interviews. New target groups can also be identified.

6. Individual in-depth interviews

Individual interviews ([UK Data Service 2016](#)) are the most common form of qualitative data collection. It takes the form of a discussion between an interviewer and interviewee. It involves a conversation but one conducted with intellectual rigour and a clear focus. The interviewer asks the questions, and directs the discussion to make sure the respondent stays on track, but must allow them the freedom to respond in their own terms. You are interested in the interviewee's world as they construct it – not as you construct it. As discussed above, you should be aware that each interview involves a power relationship and you will need to convince the respondent that you really are interested in **learning about their reality and meaning system from their own perspective**. It should allow them space for personal exploration and detailed investigation of their own understandings of the world, encouraged by the interviewer and guided back to the focus of the interview when necessary.

Practical arrangements

In general, the interview should be formally arranged, with a fixed appointment at a suitable time and place, one that the respondent considers safe and appropriate. It can be a great advantage to conduct all of your interviews in a place of your choosing because then you can control the environment and remove any distractions. Of course, you should make sure that all your respondents can easily travel to that location. The interview should start with a clear explanation of the nature and purpose of the research and any material or equipment that will be used. It should preferably be not much longer than an hour in length. You should make sure that you are fully prepared, that you have all your materials with you and that any equipment is fully operational. If using incentives make sure that these are ready. In many cases the availability of suitable refreshments will enhance the mood of the interview and, particularly in poor areas, the provision of food may be a useful way to show empathy with respondents.

Privacy and quiet are very important. The interview must not be interrupted, so telephones should be turned off, those who might come to see you alerted and a 'Do Not Disturb' sign placed on the door. There should be no TV or computer screens, as these are focal points for the eyes. Comfortable upright chairs should be arranged at about a 70 degree angle so you do not look directly at each other and you should avoid having a table or desk in between you. The recorder should be in a location near to both interviewer and interviewee. As indicated above, if possible avoid places that have meaning already loaded into them, for example religious centres, community meeting rooms or doctors' offices. The home of a respondent can be one of the most difficult places to conduct an interview because you are in the position of a guest and have no control over the environment or activities of other household members. Be careful about photographs or wall posters. Even 'innocuous' images such as photographs of political or community leaders, religious messages or health education posters may influence the behaviour of the interviewee.

Recording equipment

Your research may depend on the quality of your recording equipment. There is nothing worse than doing an interview and then not being able to transcribe it. You should seek advice from someone experienced in the field. Make sure that the microphone is the highest quality that you can afford and that it will record both sides of the interview. Always check equipment before an interview, including the batteries and recording space, and make occasional checks during the interview as quietly and surreptitiously as possible. If the interviewee notices, tell them what you are doing and explain that what they are saying is valuable and you do not want to miss anything that they are saying.

Introduction and preparation

You should respect any concerns expressed by the respondent. If a consent form has been signed, use that to establish clarity. Otherwise, make sure that the respondent has given their verbal consent, that they are still happy to proceed and that they understand that they may stop the interview at any time. If you are recording the interview then make this clear, explaining the right of the interviewee to turn off and delete the recording if they become concerned. This initial phase is important to establish trust. Introduce yourself as is appropriate to the interview setting and focus on creating an open and cordial atmosphere and making sure that the interview process is understood. Explain what will happen to the data and how it will be used, emphasising that you will ensure confidentiality as discussed above.

Preparation

As indicated above, the discussion schedule used in the interview should be regarded as a simple checklist of the key points to be addressed. It should not be seen as a rigid agenda that must be followed. Less structure generally allows more openness and free thinking. Given a high degree of flexibility, researchers need to be well prepared not only in terms of the subject matter of the interview and the context, but also in terms of the impression they need to convey in order to encourage the respondent to feel that they can speak freely. If the respondent feels that your questions display little or no understanding of their situation they may feel that there is little point in trying to offer in-depth explanations. If the subject matter is potentially sensitive or shocking then you need to be prepared to control your own emotions and contain those of your respondent, for example if they cry or get angry. Be aware that even a seemingly innocuous question like 'how many children do you have?' can produce an emotional response depending on the situation.

Your personal characteristics, for example gender, age, ethnicity and class, will impact on the nature of the interview, as will the language in which it is conducted, the words used, your dress, non-verbal communications, and emotional displays. You should be yourself, but indicate acceptance of the validity of the respondent's perceptions and attitudes even if you disagree with them. Remember that the interviewee is observing you and using your responses to guide them as in any conversation. You have to continually lead them back into their own reality in order to elicit a successful interview.

When leading a team, it may be helpful to match your interviewers to the respondents in terms of characteristics such as gender, ethnicity, and language, where this is feasible. However, you should ensure that they do not have too much in common. A respondent will probably not want to share personal information with a neighbour or colleague. Access negotiation is very important in these cases to provide a level of trust. It can be very useful for you to meet the respondent initially, so that you can decide which of your team would be most suitable to conduct the interview.

Language and behaviour in the interview

The interviewer should try match dress style, formal or informal, to those of the respondent. Local language usage which is appropriate to the respondent should be adopted ([Menaca](#)

2013). Where some term is unclear the interviewer should ask the respondent to explain. If trust has been established they will usually be very willing to help and asking their advice can help balance the power relationship and often results in an increased willingness to share information. Neutrality and acceptability should be the key watchwords in each interview. You should be yourself, recognising not only commonalities but also differences in perceptions and attitudes. Acting a role very seldom works, especially with those who may be suspicious of your motives. You should be very careful on issues of physical contact, for example shaking hands, as entry into personal space generates its own dynamics and you may well not be aware of the local meanings attached. This also applies to adapting to local conventions on maintaining a physical distance during the interview. Similarly it is useful to remember that your aim is to demonstrate *empathy* (in the sense of indicating that you understand a respondent's position), rather than *sympathy* (in the sense that you endorse that position). There will be times when it is hard to maintain a positive attitude, especially when interviewees are offensive, have made bad choices or test you with aggressive language or actions. You need to be understanding, avoid judgement and know your own limits.

Some writers talk about presenting yourself as naïve to the subject matter but keep in mind, as indicated above, that acting a part may have unexpected consequences. The respondent may guess that you know more than you are saying or alternatively may feel that you have made little effort to understand even the basics of the local situation. You should remember that you *are* always naïve as to the interviewee's reality, even if you are very familiar with the topic under discussion. They are the experts on their own life. You may guess that there is some degree of common understanding between you, but you need to continuously confirm this. One tactic is to treat the interview as generating new perspectives on what you might regard as old realities

Power in the relationship

As in any relationship, power differentials exist in any qualitative research interview. The best results are obtained when power is more evenly distributed. Generally, you as researcher will be perceived by the respondent to have more power. This can generate distrust, so you need to do what you can to counteract this perception. The more power you hand over, the more open the respondent will be but, as in the matter of language and dress, you should be genuine. Respondents will not easily accept a display of pretended servility. Sometimes, power can go the other way. Interviewees may try to dominate, either from common practice or from fear. People such as politicians, officials and senior clinicians are used to playing the dominant role in conversations with their staff and may treat you in the same way. Power can be used to avoid sensitive topics. Especially in the initial interviews you should be aware of your own nervousness. Try to ensure that you do not feel too stressed, for example by avoiding if possible, circumstances which place you at a disadvantage, and know what you are prepared to cope with. You should certainly not be aggressive, but you must be clear that you need to direct the interview when necessary.

7. Qualitative interview process and techniques

This section explores some of the key tools and processes that you can use or explore during the interview. All can play important roles in developing a successful interview technique and together constitute a strategic approach that you can adapt to meet most contexts. They are presented as simply as possible, but can often prove complex and difficult to implement. Only considerable practice will provide you with the necessary skills.

Interview process

The interview process can be facilitated if your questions follow a natural sequence. Essentially you want to ensure a smooth flow of information that recreate the respondent's world, or this aspect of it, in words. Start with a general open question and follow up with other

that cover the broader areas of interest. Avoid whenever possible jumping between questions or from one question to another. Three key techniques for drawing out responses include summarising, clarification questions and the why question.

Summarising: involves reflecting back what the respondent says to provide an immediate check on the interviewer's understanding, and to allow the interviewee to further develop his or her thoughts on the question. You can think of it as reflective listening. This keeps you present in the interview, maintains the flow, and indicates your desire to fully understand the respondent's perceptions and attitudes. It allows you to constantly be doing validity checks to make sure that you are clear about what they are saying. In an ideal interview this would constitute almost all of your contribution.

Clarification questions: serve to get explanations on issues raised by the interviewee about which the researcher is unclear. Especially in new areas of work, unfamiliar terms or acronyms may be used. You need to find a balance between trying to keep the conversation flowing smoothly and your need to know what words mean in order to understand the interviewee. Make clear why you are intervening. For example, in Ghana a number of words are used to describe symptoms that may be associated with what local people describe as *malaria* ([Menaca et al 2013:p5](#)). An interviewer unfamiliar with these terms might say: "I apologise for interrupting your flow of thinking but can you explain how someone who has *malaria* know that she has poa?". Once you have the response, thank the person and then put them back on track with a reflective summary as above.

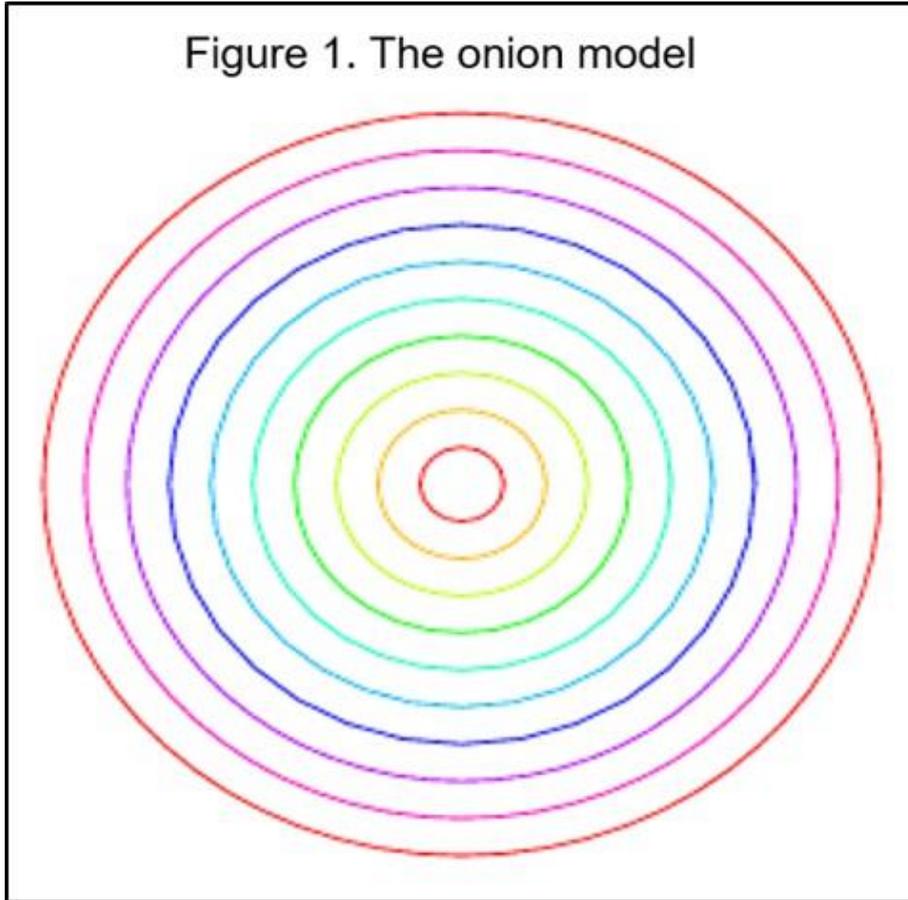
Why questions: can be used to encourage the respondent to think about an issue at a deeper level. A powerful and incisive tool in the interview process, it pushes the person to look behind their beliefs to what these are based on. For example, "You said that you felt uncomfortable buying drugs for malaria in the local market. Why was that?" However, there is a risk that it will meet with a rebuttal if used inappropriately. Even if you get an interesting response it can cut you off from other information that is more broadly descriptive but important. It should only be used very selectively and not in all interviews.

Use of prompts: There are specific issues that you need to cover in your interview. Ideally most of these would be covered using the systems outlined above, but you may need to raise issues from your discussion schedule that have not arisen. These generally constitute items that you have drawn from the literature or from other interviews as being important and you want to make sure they are discussed even if not spontaneously raised by your respondent. Try to attach these prompts to existing points raised in the interview. When introducing prompts be careful to avoid asking a series of questions as this encourages brief responses.

Onion features of the mind

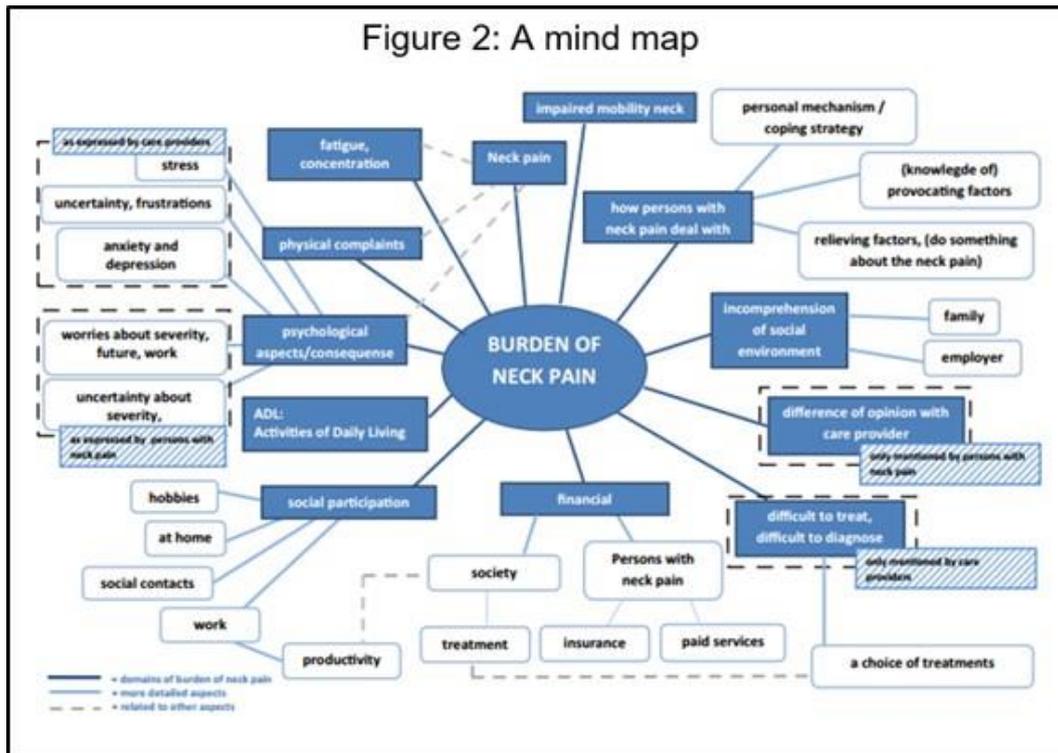
The onion model is often used to signify the different levels of information and meanings of a person/respondent. On the outer levels are the more superficial levels that are easily shared and are generally shown to the world. Below this are the more personal levels including some of the background and underlying reasons for those superficial presentations. Here some information may even appear to contradict what is expressed more superficially. As you get deeper, more inherent understandings and deeper values are expressed, until at the core is found the basic values that the person uses to define themselves.

Figure 1. The onion model



Mind map

A mind map ([van Randeraad-van der Zee et al. 2016:1223](#)) is useful as a model, which can evolve as our research proceeds, as to how different items of information, belief, emotion, etc. link together in the mind. So in an interview we may follow one path to get an understanding of how thinking in that area is structured. Then return to another strand of information to explore that. The additional complexity that is more difficult to show is how these links develop interconnections between them. But it still provides a useful model when exploring how a person constructs their information and their narrative on the question(s) that you are posing.



Narratives

The respondent will generally present their information in the form of a story or narrative. It will generally not be a story in which events take place sequentially, as in the accounts we read in autobiographies, but one in which multiple experiences and time periods are intertwined as in most informal conversations. The narrative can be derived from the connecting themes that they use to make it coherent. These may relate to broad constructs such as inequity of treatment, direct experiences such as being disrespected or abused, or hopes and expectations that their situation will improve. Identifying these separate themes within the narrative can greatly enhance the understanding gathered from the interview.

Writing notes during the interview

Writing notes during the interview should usually be kept to a minimum. It moves your attention away from the interviewee, causes breaks in the dialogue, can interrupt the conversation and may cause the interviewee concern. A limited number of short notes can be useful if there is something you really need to remember, for example if a response give rise to an unexpected insight that you fear may not be repeated when you play back the recording. Try to multitask to avoid interruptions and ensure that your notes are organised, legible and will be meaningful when you review them. Have a notebook and pen ready in advance, and explain at the start of the interview to the respondent that you may take notes and why. In particular, stress that these notes are intended to help you in remembering in detail the important issues they are raising and nothing else.

The interviewee's experience

A research interview is often a unique experience for the interviewee; an opportunity to reflect without judgement or outside purpose on an aspect of their lives. To be listened to with rapt attention for an hour and be accepted as having a valid and important point of view no matter what they say. They do not have to reciprocate and there are no clever return comments and if there are incentives you get paid to do it. It can be a novel and pleasing experience. It can

also be an undiluted re-experiencing of pain or trauma. If the respondent becomes very upset offer support and maybe take a break. Check when the person is ready to continue and be sure they are ready and able to carry on. Ending the interview early may not be the best option for the respondent. It may be important for them to tell their story in an accepting environment. As indicated above, remember that you are a researcher, not a counsellor or social worker, and have a referral list of agencies where they can go for assistance.

Some respondents will want to ask questions during the interview. If these are about yourself, be honest but brief, and try to limit any intrusion on the interview. Avoid answering questions about the interview content. Explain that you really want to know what the interviewee thinks. Do not correct a respondent during the interview, even if you feel their perceptions are dangerous to them, such as that HIV does not exist. You can defer answering questions or providing what you regard as correct information until after the interview. Never lie, unless you feel threatened with physical violence. If you do, end the interview in whatever way seems least likely to make the situation worse and leave as quickly as possible.

Ending the interview

You should conclude interviews with care and with respect for the emotions exhibited and ideas raised. Any unresolved personal concerns need to be addressed. As above, refer respondents to outside agencies where necessary. Clarification should be given again as to how the data is to be used, arrangements to ensure confidentiality and access to feedback offered if possible. You can chat informally afterwards, but you should still be careful about self-exposure. Try to minimise talking about any effects that the interview has had on you.

8. Focus group interviewing

The use of focus groups, as with in-depth interviews and observation, is one more tool in the qualitative toolbox. Each has its specific purposes and applications, and each has its place in the overall research plan. The key value of focus groups relates to their use of group dynamics. Group discussions can stimulate dynamic conversations, which lead to discovery, exploration, direction and in-depth information.

Definition and history

Focus groups are: *“A group of individuals selected and assembled by researchers to discuss and comment on, from personal experience, the topic that is the subject of the research”* ([Powell and Single 1996:499](#)). The concept is about 50 years old and, like many modern innovations, its roots date back to the Second World War. A group of sociologists were asked to investigate how the military’s propaganda films were being received by their audiences. They learned that, with appropriate encouragement, people could identify the exact reason certain scenes, lines, or phrases made them think or act in a certain way.

The typical focus group consists of a group of five to fifteen participants who gather for a period of 40 to 90 minutes to talk about a prearranged topic under the guidance of a facilitator. It mimics in many respects a group of friends holding a joint conversation while sharing a meal or travelling together, but with the discussion being more focused and with a facilitator mediating the process. The power of the focus group is its capacity to draw out shared knowledge around the key issues being discussed. The discussion format produces information on group or community norms and practices, and may also draw out examples of extreme behaviours and sensationalism (usually associated with people outside the group). The nature of the process may encourage people to share when they may not have done so in another environment ([Moosa and Gibbs 2014](#), [Francis and Katz 2013](#)).

Specific roles and use of groups

A focus group produces shared knowledge, with the group building the narrative and information system together. It allows members to confront one another and exchange ideas, building a more coherent story. It is often not the best way to collect sensitive information (depending on context), unless the group is carefully structured for that purpose. It cannot be used to draw out individual information and stories from all the individuals. One group is not equal to six to ten individual interviews, as is commonly stated.

Focus group structure

There are standard features, but as indicated above they may vary by the demands of the situation. There should be between five and fifteen members, though preferably about seven to twelve. There will be one main facilitator plus a co-facilitator who assists by picking up on issues missed by the facilitator and looking after logistical issues. A session should last about 40–90 minutes depending on the group members. You can break longer sessions in the middle to provide refreshments. The group should be seated in a circle with no other furniture except a small table for the recorder.

Venue

The group should meet by prior arrangement at a fixed time in a suitable location. As described above, the place should be considered non-threatening and appropriate by those attending. Again, privacy and quiet are fundamental. There must be no interruptions, so telephones must be turned off and the location should not be one close to areas frequently used by other people. You should warn those around not to interrupt. There should be no TV or computer screens. A comfortable upright chair should be provided for each person and the recorder placed near to the (co-)facilitator in the middle of the group.

Recording equipment

High quality equipment is even more important for focus groups as there are many people talking and most will be further from the microphone, which should be one that is designed for this type of purpose. The group size increases the risk of background noise which can make transcription difficult. You should seek advice from someone experienced in the field. As above, always check equipment before the interview, including batteries and recording space, and keep checking at intervals throughout the session.

Selection of members

Selection of focus group members is important. You can select naturally existing groups such as patients attending a clinic on a given day, drug sellers in a local market or members of a community organisation. Alternatively you may first identify a population, for example all those receiving care for a chronic disease at a health facility, and then use information about the members of that population, for example age, gender and ethnicity, as a basis for sampling the number that you need. Selection of members should be strategic and based on the aims and objectives of the study, and on the study context. The key is to be clear as to what questions you feel that the members will be able and willing to usefully address as a group.

There is a difficult balance to be struck between homogeneity and heterogeneity. Market research companies typically use a reasonably large number of focus groups (perhaps 30–40), with individual groups being composed of individuals with much in common but with substantial variation between groups. Homogeneous groups are easier to manage – fewer serious disagreements on controversial issues – and more likely to provide you with a coherent narrative. However, resource constraints will typically strictly limit the number of groups that you can convene and you may need to construct groups that are more heterogeneous in order to reflect the range of perceptions and attitudes that exist in the population. The sensitivity of the content should influence your decisions. For example, in a discussion of risk behaviours in relation to sexually transmitted infections it would be wise to have separate groups for men

and women. As indicated above, it is important not to rely on convenience sampling. All selection decisions need to be clearly motivated and recorded.

Before the session

You should develop a clear interview schedule as described in the earlier section, but take note of the particular objectives and structure of the focus group. If you are using others as facilitators make sure they are thoroughly trained in the content and approach. Access negotiation with each of the members of the group is very important and will influence the level of trust. You may want to undertake this task even if you are not facilitating the group yourself. On a practical level, ensure that there are no logistical issues, for example in terms of accessing the venue and travel arrangements for the participants – even apparently minor problems can be disruptive. Prepare as described above for an individual interview: check that consent forms and other necessary documents are available; make sure that you have all necessary equipment with you and that it works; arrange appropriate refreshments; and, if you are using incentives, make sure that these are in place.

At the start of the session

First, go through the consent process in some detail and ensure that the forms are signed. You should have made it clear prior to the meeting that you will be recording the discussion, but it is useful to repeat this before starting. Make sure that the nature of the discussion process is understood and indicate the right of each member to end their participation at any time and have their contribution deleted. Explain what will happen to the data and how it will be used, emphasising that confidentiality will be ensured at each stage.

During the group discussion

Building rapport is your main task as a facilitator. Make sure that you are well prepared in terms of both the topic and the context. An ill-prepared facilitator will not be taken seriously by at least some members of the group. You should try to be relaxed, or at least to appear relaxed, as participants will pick up any anxiety that you display. Try to follow the discussion schedule in your head but refer to it occasionally to make sure that no key issue has been overlooked. Use a general warm-up question to get the group started. Then your main activity is to encourage interaction between the group members, using your background knowledge of the participants or impressions that you have gathered in the informal discussions before starting the session. You should continuously be alert for any pre-existing or developing conflicts in the group if these could hinder interaction. Emphasise that everyone should be allowed the space to make their position clear, even if others strongly object. Your role is as a neutral observer seeking clarity. *Ask, listen to the responses and ask.*

The facilitator role includes:

- listening;
- observation;
- intervening – but only when necessary to keep the discussion on track;
- encouraging openness;
- displaying sensitivity/empathy;
- supporting/encouraging;
- challenging;
- interpreting;
- modelling – constructing and testing hypotheses as the discussion progresses.

A good facilitator might be described as: curious, has a desire to learn, enjoys asking questions and listens to the answers; outgoing; flexible but persistent; has an open mind; can direct conversations; analytical and sceptical, does not accept answers at face value. While most of us would like to believe that they possess many of these qualities, in fact good

facilitators are hard to find. Reflect seriously on the extent to which you fit this description and consider whether the research might benefit from allocating this role to a colleague.

For those acting as facilitators it is important to remember that their personal characteristics will impact on the research process. These will include their gender, ethnicity, social class, language, the words they use, their dress, non-verbal communications and emotions. It will be useful to match the characteristics of interviewers to respondents as far as possible but it can be a serious mistake for them to try to pretend to be someone that they are not. It will be much better if they are honest but indicate openness and respect for others.

Facilitators must be very aware of the power relationship that exists in the focus group. Their task is to hand over leadership to others temporarily not to relinquish it entirely. There are some standard procedures that should be observed. It is important to allow ample time for responses after posing a question. You will probably need to curb dominant participants, draw in quiet ones and act to politely prevent multiple conversations. All contributions should be carefully acknowledged. If pivotal points are raised, take time to make sure that all participants have understood what has been said. Try to avoid *any* expression of your own opinions, including using body language which seems to welcome or reject a contribution. You will need to keep careful track of the process and be aware of both alliances and tensions within the group. Be prepared to break strategically if necessary to avoid disruption. Remember that:

- People sometimes cannot explain why they behave the way they do. Many behaviours are instinctive – not the result of careful consideration.
- Attitudes are complex. They consist of knowledge, perceptions, beliefs, feelings, desires, and opinions buried deep in the subconscious mind. By definition people cannot explain their subconscious.
- Emotions influence behaviour. But again, most people cannot explain their emotions and many prefer to keep sensitive emotions secret.
- Issues of culture are often not directly explainable and the respondents may not even be aware of the principles on which they base their beliefs or behaviours.
- Participants will tend to serve up socially acceptable opinions. They will not want to reveal their inner secrets about sensitive matters particularly in a group format.
- Members are affected by one another and so will respond in terms of the group norms, which may not be true to them.
- Most often participants will talk about the behaviour of others, rather than their own.
- You may get sensationalist responses. These need to be treated with care in the analysis. Often asking for details – who, when, where – may determine the reliability of the response.
- The more sensitive the topic, the more on guard the facilitator should be.

The role of the facilitator can be made much easier if they have an efficient and sensitive co-facilitator. Their role includes: monitoring for people or issues that the facilitator may not be picking up on or giving enough focus to; keeping a check on the group atmosphere, particularly of any changes in mood; writing key ideas down, using the words of participants or paraphrasing for brevity. The co-facilitator should introduce themselves and explain their role at the start of the focus group. While the discussion is taking place they should take responsibility for preventing interruptions from outside and keep a check on the recording equipment. They should debrief with the facilitator immediately after the session.

Hidden helpers may also exist. In most groups there will be a person who will act as an unscripted supporter in maintaining the discussion. If you can identify this person and work with them they can make the process considerably easier. Do not expose them. They will usually not be aware that they are playing this role, but, being generally more sensitive to the issues and group process, will assist in keeping the group on track.

The basic approach mirrors that for individual interviews: general questions, summaries, clarification questions, why questions and prompts, but adapted for the group discussion context. If the discussion between members is providing the information you need there is no need to intervene. There will almost always be group members who create problems or who need special attention. These include: difficult people who complain and disrupt; those who want to dominate; perpetual commentators; silent members; those who try to ridicule others; and those who passively disrupt the flow of the discussion, for example by making it clear that they cannot wait for the end.

You should end the session with care and with respect for the emotions and ideas raised. Any unresolved emotions need to be addressed. Again, refer individual to outside agencies where necessary. A final clarification should be given as to how the data is to be used, and feedback offered in whatever form you are willing to provide. Note that it can also often be informative to chat casually with respondents after the focus group is concluded.

Limitations of the method:

Occasionally, focus groups can be of little value, with respondents aiming to please the facilitator or other members of the group rather than offering their own opinions or evaluations. Data is often 'cherry picked' by researchers to support a foregone conclusion. Even commercial market research organisations with substantial resources can have serious failures. The disastrous introduction of [New Coke](#) in the 1980s provides a vivid example.

9. Participant observation

Observation has always been fundamental to health research, for example in the assessment of providers, facilities and treatments ([Leonard and Masatu 2005](#)). Qualitative research applications require systematic detailed descriptive observation of behaviours and communications. The researcher can either observe from a distance, or involve themselves directly in the respondents' lives and try to experience at least some part of their reality. Historically this method was one of the earliest forms of qualitative research, linked to ethnography and the anthropological investigations of different cultures. This sometimes involved 'immersion' – living in and interacting on an ongoing basis with a community. The techniques of ethnographic research remain central to the use of observation as a research tool.

Interview-based methods can be seen as more efficient in that the respondents comment directly on their lives and influences. However, the researcher cannot be certain that they are not being misled or simply not understanding what they are told. There are limits to what people will talk about. Observation may provide valuable complementary information, either confirmatory or contradictory. It is based on the assumption that understanding can only be fully achieved by participating in and observing a subject's world. However, the extent to which ultimate immersion take place will involve both strategic and practical decisions by the researcher.

Power of the methodology

By observing over an extended period and becoming part of the life of the observed you may gain access to information that would not otherwise be available. The key issue is that observation is done in their natural setting, where people are much more likely to provide unexpected insights. Those observed in their own reality are more likely to act and speak naturally and in a manner that reflects their true context rather than feeling that they have to respond in ways that are appropriate to a research environment.

Uses

In most examples where observation is used in health research, it will be one component of the mix of methods used ([Munro et al 2007](#)). Areas of application include the operation of health systems, decision-making processes, disease histories, the spread of epidemics, health risk behaviours, treatment observation, understanding sites conducive of high risk and, of particular relevance here, the implementation of health interventions. Observation can also be very useful in the context of other data collection activities, for example body language in focus group discussions. Everything that you see could be important and worth reporting in your research diary (the use of research diaries is covered in a later section). Observational data is often ignored as it is perceived as too subjective or too difficult to draw into analysis, but this often leads to vital information being missed. Observation should be core part of every research project as it allows for additional detail to be recorded, even in quantitative research.

Observational data

What is observational data? It is everything that you observe, that you hear and possibly that you smell, touch, even taste. It can even include what you do not see – what people are keeping out of sight. It may come in various forms: planned observations of behaviour; observations made during interviews or focus groups; observations of chance interactions; or even secondary sources, where others have described what they have seen. The data usually take the form of written descriptions with some additional sources that may include numbers, e.g. number of patients seen over the period.

10. Workshops

Workshops are another potentially valuable source of information. They can be defined as facilitated and directed discussion forums. Workshops will typically extend over a longer period than a focus group – sometimes up to several days – so there is more space to explore issues and participants can come and go. They involve a structured discussion process with an agenda and a chairperson. They can include up to 50 or 60 people and still be manageable. Workshops are often set up for purposes other than research, such as planning, discussion of the quality of services or new interventions, community group meetings, negotiations, or education and training. If the subject is of interest to the participants, workshops tend to produce enormous amounts of information. However, to be useful for research purposes, data collection has to be systematic. Workshops will typically form part of a broader research process. The outputs may take multiple forms – formal documents, transcribed notes, behavioural observation. Each of these can contribute to an integrated analysis. It is a methodology that has been used extensively by NGOs and CBOs.

Specific practical arrangements are required. Workshops are very different from the focus group in that respondents often need to come prepared on the issues to be discussed and be working towards specific goals. The venue needs to be large enough for all the participants to come together for some parts of the discussion, preferably with breakaway rooms for smaller group meetings. A strong chair(s) and scribes are required to facilitate discussion and take notes. A clear agenda is needed, preferably sent out in advance. It is often useful to get participants to prepare and possibly circulate inputs before the meeting. Catering is often required, especially if the meeting continues over a full day or more.

Selection of participants

The nature of the workshop will often define the participants. Usually it is people and representatives of organisations that are affected by, involved in or knowledgeable about the issue under discussion. Selection is purposive with the aim of putting together the most appropriate combination of participants. Usually only one or two workshops will be held so

there is a focus on getting the right people. Care must be taken about the mix so that serious conflicts do not occur or one group inhibit another.

Facilitation and recording data

Facilitating these meetings requires considerable skills in addition to those indicated above, mainly learned from experience. At the start you should explain your proposed role in the meeting, even if you have previously discussed this when the participants were invited, and the use you intend to make of the final documents, with special reference to arrangements to ensure confidentiality. You should respond to any questions that participants may wish to raise. Given the length of time that a workshop takes, and the comparative size, it is not always practical to record and transcribe a full workshop. This may depend on the relative importance of the event. The most common data are the workshop minutes, jointly created documents, copies of the prepared inputs from speakers and notes from any small groups. The scribes should also take more detailed notes of the discussions, with another possibly asked to take notes on group dynamics. Audio recordings may be made but will typically cover only a small part of the proceedings, given the need for later transcription. Discussions with participants during breaks may also provide information that has not been raised publicly. The validity of the outputs should be confirmed by constantly checking back with selected participants.

Workshop series

The workshop series builds on this approach to implement a staged process, allowing time for reflection between each stage. The first workshop takes discussion to a point where some level of clarity has emerged. This discussion is summarised by facilitators, distributed prior to the next workshop and used as a basis for further discussion. Additional investigations may be undertaken in the interim to provide further information. This process can continue until a full resolution is obtained, or a specified number of meetings has been held. For example, a situation review of a clinic in which there is high patient dissatisfaction may go through several cycles to identify all the problems. In a policy review it may be helpful to focus sequentially on different issues such as content, resources and implementation. Additional information or the need for additional participants to adequately address an issue may be identified in an earlier workshop and then included later. Sometimes the complexity of the issues at hand may require periods of extended contemplation between workshops.

Delphi technique

An adaptation of the Delphi technique could be one type of workshop series. This possibility would arise in the situation where the researcher has to find out 'the truth' or at least some shared account between two or more groups of informants. Sessions are repeated with the divergent groups, separately or together, where conflicting ideas are confronted and some shared position found, or some evidence sought. This process continues until there is agreement or at least sufficient shared clarity.

Workshop series can be conceived in terms of a social action model, which implies a process of community development or social change. In its simplest form, a problem is identified and the community is brought together to find a solution. Ideas are tested and then at a later fixed time, the community meets again to decide the next steps. This is repeated until a solution is found. This methodology has proved very successful as a way of drawing divergent stakeholder groups together in a constructive debate.

11. Additional methods of data collection

Qualitative research methodology is flexible and open to adaptation. You can use your imagination to develop innovative ways to collect relevant information and understand the reality of your target populations. However, you should operate within the overall philosophy

and conform to ethical practice. These are some examples that are found in the literature or that the author has explored or developed, but they do not represent the full universe of options.

Case studies

This is more an approach involving the compilation of data on a small number of 'entities' that are studied in depth, rather than a specific method. It has a long history in health research. There are some famous case studies of individual patients such as those reported at length by Sigmund Freud. But the approach can also be applied to facilities, groups of patients and communities. It usually involves the integration of data from multiple sources, including interviews, focus groups, observation and existing documentation that may have been designed for other purposes, combined with quantitative data, for example on financial resources, costs and service utilisation. It can be a very cost-effective way to study initial implementation processes for interventions, particularly when the selected cases are located in very different contexts.

Example: A prevention of mother to child transmission (PMTCT) programme is to be implemented. The implementation research will focus on levels of utilisation and the quality of services and try to identify barriers to access and bottlenecks in the implementation process. Case studies of a small number of purposively selected clinics might involve: observation of prospective mothers at meetings informing them of the new service and in the clinics during return visits; interviews with mothers, nurses and counsellors; review of statistics and documentation on adherence to the regime for antenatal care; following a cohort of women over time from testing through delivery to completion of treatment.

This approach can quickly expose problems such as: areas of risk, e.g. not entering programme due to lack of understanding; areas of potential breakdown, e.g. queues for service and attitude of staff; lack of clarity about interventions in contexts, e.g. informed consent to test; contextual issues, e.g. stigma; and additional concerns, e.g. knowledge and lifestyle factors. It is especially useful for complex interventions or contexts where it is difficult to take all potential influences into account. It is an often criticised approach, primarily as findings cannot be readily generalised, but that is not the only role of research. Description is important and can be highly enlightening. This is where the case study approach is strongest. It can provide the space to explore new ideas and is describe processes.

Case studies can be made more rigorous. You can undertake a longitudinal study, rather than relying on recall, use standardised measures and find ways to check the validity and reliability of the data used, perhaps using an independent analyst. Check for data sources that may have been missed, especially those that might show a different outcome. Finally, be clear on the limitations of the research and document these. Closeness to the data can create a false sense of certainty. Get an independent colleague to critically review your findings.

Role play and visualisation exercises

Role play involves creating a situation in the research space where subjects are able to play out a real life situation ([Alberta Health Services 2016](#)). It has been widely used in health education initiatives but also has the potential to provide valuable research insights. Visualisation exercises ([IDS undated](#)) create a similar effect, but focus on the responses to visual images ([Kennedy et al 2016](#)). With young children observation of play and interpretation of drawings can also elicit useful information. This approach requires a high level of skill and knowledge, especially in terms of 'debriefing' the subjects once the exercise is complete to understand their perceptions and behaviours. These approaches are useful in situations where the information you seek may be suppressed, for example when patients feel uneasy about criticising providers, or in situations where the data are sensitive and the person will find

talking uncomfortable ([Bogart et al. 2013](#)). These are intensive exercises that require considerable time. They also necessitate careful access negotiations, particularly around the notion of informed consent, as you are seeking information that the person may be hiding, intentionally or unintentionally.

Expert review

Implementation research will very often require detailed policy analysis and a review of technical documentation, such as treatment protocols. It is a mistake to assume that these activities can be undertaken by researchers with limited expertise either in the methodology or the subject matter. Submitting the documents to a small group of experts, with terms of reference stating exactly how they are meant to comment, for an agreed fee, may seem extravagant but be a cost-effective alternative. Select your experts carefully, according to their proven expertise and trustworthiness. The sample of experts is usually small, four to ten people, as they will be expensive. Analysis of their reports involves a modified content analysis, as discussed below in section 13, with you providing continuity across their various findings.

Narrative interviews

Narrative interviews have a long history in health research. They have been used to understand institutional development, experiences of illness and treatment ([Groleau et al. 2006](#)), and community histories ([Walker et al. 2014](#)). Subjects are asked to recount their life story as a whole, or to talk about particular periods, for example of illness. It is usually done through interviews, but often more than one – sometimes up to five or more. Stories are often backed up by pictures, newspaper stories, other published accounts, friends' stories, or objects of importance from a particular time. The [District Six Museum](#) is a very interesting example of such collections of information. Confidentiality will vary according to the purpose of the interview. Multiple people who share a common experience will often be interviewed, either separately or together, to find a shared understanding of events ([Lucas et al. 2009](#)). The analysis aims to clarify a period of time or event in the context of this person or multiple people's lives.

Specialist techniques

Sometimes where it is difficult to access stories or memories, innovative techniques can be useful. There are several online participatory method toolkits that may provide inspiration ([IDS undated](#)), [FAO undated](#)).

Body scans/maps ([Gascardo et al. 2012](#)): have been used with trauma survivors ([Riaño-Alcalá et al. 2010:39](#)) and in studies of reproductive health ([Cornwall 1992](#)). An outline of the subject's body is traced on a large sheet of paper. They then write on the paper linking different parts of the body with pains that they experience, good or bad associations, related past and future events, and why they like or dislike that part of themselves. Putting it on paper provides a distancing, sometimes allowing the person to talk about their life and experiences with less inhibition.

Rope and stones: is one of a range of approaches used to reconstruct life stories ([Whalley 2016](#)). It was very successfully used with refugee children who had often travelled for more than a year ([Ruf et al. 2010](#)). Even before migration their lives had been unsettled and their memories of traumatic events were confused between what they had experienced in their home country, on their travels and in their current location. A rope was laid on the ground to represent the child's life. Stones were used to represent bad events, sticks other important changes and buttons positive events. Arranging these objects was often a shared task, with the child leading and other children and family members or friends assisting, facilitated by the researcher. The method allows the child and the researcher to agree on the order of events. The child can then tell their story.

Memory boxes: were developed both as a therapeutic approach for grief and a way of gathering information around the HIV epidemic, for families where parents with young children were dying ([Denis et al. 2003](#)). A memory box would store the parent's life story and messages from the parent to the child. It would usually include a book with a written story, photographs, print media where available, favourite objects, books, etc. It was primarily used as a family tool for passing on memories of parents, but has been used as a research tool to really understand the lives of those families affected by AIDS. At a simpler level, scrapbooks could form a similar function in a different context.

Photographic essays or posters: involve respondents being given a camera and then asked to go out and take photographs that hold meaning for them around a particular theme ([Photovoice undated](#)). The photographs are organised into a narrative or used to create a poster around the theme, for example HIV prevention, health services, nutrition, etc. The researcher will interview the respondents using these outputs to understand their perceptions and attitudes.

12. Final thoughts on data collection

You should be creative in your approach. Qualitative methods are flexible and can be adapted as necessary to obtain required information. Remember the key rules of inquiry: respect your participants and stay within ethical rules and guidelines; be aware of the impact of different subjectivities on the data being gathered; and be aware that some methodologies require additional levels of skill and/or new technologies and equipment. Be ambitious but honest with yourself about gaps in your expertise and experience.

Keeping journals of observation and of your own experience

The power of observation has already been noted but it does need to be systematic observation. Maintaining a formal research journal can facilitate this and should be used to document the overall research process, being updated each evening. Everything that you see and hear could be significant, but for the journal you need to make decisions as to what could be most important for the project. You should also record your own reflections and those of any colleagues involved in the research. Observation is sometimes perceived as too subjective or too difficult to draw into analysis, but this often leads to vital information being missed. Remember that the researcher is the research instrument, documenting the world as it is seen. Subjectivity and awareness of what is shown and not shown are key.

Research diaries

Three diaries should be kept, especially by less experienced researchers. These are less formal than the research journal and each has a different focus and role.

The first diary is of observations in the field. This literally means recording anything you see of interest, including the physical context, people that you see, events that happen, notes from conversations or even the impact of the other senses. It is not only what you see, but if you are working with fieldworkers or know others familiar with the context, recording their insights. It is mainly an aid to memory. The entries will consist of short notes, each with a date and time of day.

The second diary will contain your ongoing analysis and the development of ideas, interpretations and hypotheses. It will usually be written up during periods of inactivity and provides a chronological record as to how your ideas developed. It is for your use only and therefore can include crossings out, side notes and personal reflections.

Especially for less experienced researchers it is also useful to keep a personal diary. It will be used: to record lessons learned; the impact of interviews or experiences, emotionally, intellectually, spiritually or even physically; ideas for self-improvement; technical notes for future research or interviews; and questions or concerns that need further reflection. It is useful for your development as a research instrument and to promote the valuable habit of reflexivity.

13. Preparing for analysis

The key to analysis of qualitative materials is to work slowly and carefully. If you do not allow enough time or are not relaxed, you risk making serious errors of judgement. Remember that these materials are all you have to make sense of your experiences in the field. You need to give them your full attention.

Transcribing and preparing for formal analysis

Taped material should be transcribed ([Dresing et al. 2015](#)) and where necessary translated. The task of transcribing should not be underestimated. It will take approximately six hours of transcribing for one hour of recording, nine hours if translation is required. This is where you start to value the extra money you spent getting a good-quality recorder. Use this transcription process to reflect on your own interviewing technique and skill. Pages of transcription need to be prepared for analysis. They should be done in a standard text format, not in a table. Use 1½ line spacing and have a wide margin, at least 7cm on the right.

Decide on the level of detail for the transcription. You need to make sure at a minimum that all words are included. Decide whether to add: notes on body language; interruptions; time taken in pauses; speed of speech; and other expressed emotions, such as crying, laughing or shows of irritation or anger. Make sure that it reads easily and grammatically, if translated. If transcribed in the original language, do not correct the grammar.

Add a brief introduction to each transcript to provide background. This can assist in contextualising the interview during analysis. Include: personal characteristics of respondent; some background and reasons for their selection if purposive; the context of the interview, including place and time; notes on other events during the interview, e.g. interruptions, external noises; any specific notes on the interview, e.g. overall attitude, body language, signs of anxiety; and notes on yourself while undertaking the interview, e.g. tired, emotionally affected, angry, excited. Both the voice of the interviewer and that of the respondent need to be transcribed. Validity checks should be carried out on the transcription. Best practice is for the person who did the interview to do the transcription and for a colleague to validate the transcription using the summaries described in the interview process.

Where you have to translate as well as transcribe, it is generally better to do both at the same time. Doing both together allows for a meaningful translation rather than a direct translation. You will need to take into account that words and even more so sentences can have alternative meanings in every language. If you conducted the interview using a translator, everything from all three participants has to be translated and transcribed. This is important, as translators working in the field will often miss some of the details of both your questions and the subject's responses.

Computer assistance

You can purchase specialist equipment but this is not essential. Transcribing programmes can be downloaded from the web at no cost and work reasonably well. [Express Scribe](#) is one programme that the author has used successfully. The media player on MicroSoft Office can also be used. Some researchers prefer to purchase a foot pedal control to advance and stop the recording.

14. Analysis and interpretation of qualitative data

Qualitative analysis involves extracting meanings from the texts and other materials that you have compiled to generate persuasive narratives ([Pope et al 2000](#)). A range of analytical techniques have been developed ([Taylor and Gibbs 2010](#)). This section will outline an approach adopted by the author, which can be described as *contextualised interpretive content analysis*. Note that data analysis does not require to be undertaken as a strict sequence of distinct steps. Different aspects of the analysis will overlap and you can constantly backtrack on earlier decisions, and even review your original aims and objectives. However, the final version should reflect a systematic and coherent process of evidence-based analysis and interpretation.

Process of data analysis

In qualitative research analysis should start from the conceptualisation of the project, with an increasing focus over time, as the data are assimilated, on synthesis and conclusions. Many important insights will come in the early phases of research and these should not be lost. You should keep reviewing your research journal and diaries. In an open-ended project you can always go back into the field if you are not satisfied with your findings. The key requirements are for 'immersion' – becoming totally familiar with your data. If you have done your own interviews and transcription you should already know the content well. If not it is even more important to read and reread the transcripts so that you can get beyond the linear account. Read your field notes and diaries alongside the interview transcripts, such that they become a cohesive unit.

Identifying themes

From your knowledge of the material you can identify themes, "recurrent unifying concepts or statements about the subject of inquiry" ([Bradley et al 2007](#):p1761), preferably arising out of the data, but also those that you will want to impose based on your research question ([Atkinson and Abu El Hap 1996](#)). The former approach will provide a rich description of the totality of your data, while the latter allows you to focus in on selected aspects. These themes are the building blocks for extracting meaning. Use the language of the interviewees to name the themes. Imposed themes will usually be derived from existing theories, but you can still represent them using the words of the research subjects. You should try to go beyond simple descriptive terms to look at processes such as the relationships between concepts and the power dynamics that underlie perceptions, attitudes or behaviours ([Vaismoradi et al. 2016](#)). Keep your aims and objectives in focus. The themes need to reflect back to these but remember that you can still adjust aims and objectives to take new findings into account.

It is worth spending time on this exercise as it will guide the rest of your analysis. Test your initial system of themes by reviewing a selection of interviews. Keep the word length of themes short, at most a few words, as this will make the coding and analysis easier. Add definitions to each of the themes to ensure accurate coding. Remember that this is just an initial phase of the analytic process. You still have to interpret the data, but this will determine the constructs underlying the analysis. The next step is to organise your themes. Ideally you need to end up with about 40 to 60 themes, classified under some five to eight major themes. For example, in a recent study on community knowledge and attitudes regarding non-malaria febrile illnesses in Eastern Tanzania, [Chipwaza et al. \(2014\)](#) categorised their data using the following major themes:

1. Participants' understanding of fever.
2. Awareness of the community on non-malaria febrile illnesses.
3. Treatment seeking behaviours for febrile illnesses.
4. Health workers' practices towards non malaria febrile illnesses.
5. Capacity for diagnosis and management of febrile illnesses in health facilities.

Under the first major theme, they identified the themes:

1. No knowledge of exact meaning
2. Illness: malaria, colic, rheumatism, sleeping sickness
3. Symptoms: 'hot body', headache, coughing, rashes, body pain
4. Causes related to illness – measles, tuberculosis (TB), typhoid fever
5. Other causes – change in weather, sunlight, etc.

During the process of identifying themes, you should also be developing 'research memos'. These are notes that you make to yourself, just as you have been doing in your research diaries. They may be on points of interest, possible alternative meanings of a section of text in the transcript, ideas for further analyses, or hypotheses that you may want to test at a later stage in the analysis. Memos can be attached to individual pieces of text or be general notes to yourself.

Elaborating

Elaborating is the process of making connections across different sections of a single transcript or across multiple transcripts. As an interview progresses key themes may be returned to several times. Connections need to be made between these points as each return can offer a new perspective. Connections across transcripts also allow for different perspectives, but you must also take into account the different contexts. This occurs once you have immersed yourself in your data and are looking at quotes across interviews out of the sequence in which they originally appeared. It provides an opportunity for reflection and, where necessary, expanding your analysis. There is a delicate balance to be struck as the researcher needs to distance themselves from the text, while being aware of their own subjective relationships to the content

Coding

Eventually you should be able to establish a reasonably stable set of themes, which can be used to code the data ([DeCuir-Gunby 2011](#)). This involves re-reading all of the transcripts and attaching themes to sections of text. This may be a line, sentence, paragraph or several paragraphs. It can and often will be necessary to assign multiple codes, as any piece of text can carry multiple meanings. The sections may overlap, so you can code a paragraph with one theme and then code one sentence inside it with another.

As you are coding, new themes or areas of interest may arise that you need to add to your list, or new meanings may need to be attached to existing themes. This may necessitate you going back to recode earlier transcripts. There are different systems of coding:

- Computer-based coding (provided in the analysis software discussed below);
- Writing in the margins (similar but less control, and can become untidy and confusing);
- Colour coding (but this requires a large number of distinct colours and it is difficult to identify overlapping themes);
- Cutting and pasting (again it is difficult to deal with overlapping themes and you risk misinterpreting text that is taken out of context).

Working with a computer program is therefore strongly recommended. [Software](#) makes coding simple and easy to modify, overlaps are clear and it allows for a systematic cut and paste function (in this case the interview name is listed with each quote so the context is maintained). Two of the most widely used programs are [Atlas.ti](#) and [Nvivo](#). These can provide both systematic control over your text, themes and memos and the flexibility that will allow you to change and develop themes and coding systems as you go along. They are also very useful in terms of validity checking, as you can review all the quotes on any selected theme. However, you still have to read and define your themes, undertake the coding and draw out the analysis.

They are reasonably expensive, and like all software programs, are constantly being developed and improved.

Interpretation and establishing conclusions

Now all the pieces are in place for you to undertake an in-depth interpretation. Your hypotheses, inductions that you have developed as you went through the thematic content analysis, need to be tested against the data and accepted, modified or rejected. If your theme development was done well, and reflected your original aims, then these themes will become the focus for interpretation, though perhaps not exclusively, and the section titles of your findings will reflect this.

Interpretation has to happen at multiple levels. To illustrate, each of your headed sections should provide a discussion as to how this area of the content was addressed and interpretations made. You should try to present the reader with a coherent narrative account of the relevant research material. You should usually start with a discussion as to how the main theme is understood, and then look at variations and elaborations around this. Quotes should be used to illustrate key points. In the conclusions these points have to be drawn together into a more coherent analysis. Again, it is essential to establish a distance between the researcher and the text in order to be able to reflect on the content. There should also be an acknowledgement of limitations and the possible impact of these.

Incorporating context

It is generally agreed that a detailed knowledge of context is important in understanding what people say. Context works on multiple levels. In reading the transcript of an interview, statements need to be considered in terms of what else the person is saying at that time and in relation to the general subject matter of the interview. For example, parents may respond quite differently to questions relating to traditional medicine depending on whether the interview relates to the health of their child or themselves. The location in which an interview was undertaken, for instance in a clinic or their home, should be taken into account when interpreting the responses of a patient, as should their personal characteristics, for example their gender, age, race and educational background. It may also be important to consider the emotional state of the respondent. Questions about the quality of health services may receive very different responses if the subject has recent painful experience of the death of a loved one in hospital. Finally, remember that the interviewer is also part of the context and that their characteristics, such as race and gender, level of skill, state of mind, etc., must also be considered.

Verifying interpretation and testing validity

Qualitative methods has produced new challenges in terms of demonstrating validity. Some tools such as inter-rater reliability, with the data being independently coded and the codings compared, are overvalued and outdated ([Armstrong et al. 1997](#)). Such approaches do not work well with qualitative methods due the freedom of thinking and interpretation that is encouraged. A more useful approach is to set up theories and then search the data for contradictions. When these occur, you can use that information to modify the theories and then continue looking at more data until these stabilise.

Having an audit trail is important so that the process of reaching conclusions is fully documented. Triangulation, for example using the findings from a reanalysis of existing quantitative data, may provide a useful guide. Validity can also be enhanced by drawing in additional people, either by getting other researchers to look at the same materials, or by getting the community from which the respondents were drawn to comment on the findings. Such approaches do however have to take into account the role of subjectivity. External validity can be explored by considering if the theory developed or the interpretations made have a value in explaining aspects of the wider world. You can also assess how others, for

example fellow scientists, officials and health providers working in the field of study respond to the results. The assessment of such stakeholders as to the quality of the description of the context and research process will often be the key to looking at the potential for applying the knowledge gained to other settings.

As emphasised above, it is essential to recognise your own influence, from the setting of the research question to the final conclusions. This is true no matter what the methodology but the impact can be considerably greater in qualitative research, given that it embraces subjectivity. Acknowledgement of the influence of the researcher can range from a detailed discussion to a brief statement. It is good practice to state upfront the position from which you approached the research and then in the conclusions to again state what influences you may have had on the findings.

Remember you are not doing inferior quantitative research. Numbers are really only useful when describing your research methods, for example to indicate the number of interviews or focus groups conducted and the numbers of different types of respondent in your sample. Even statements like 'most felt this' and 'a smaller number felt that' should be avoided. The role of the researcher is to provide insights – not descriptive summaries. The other crutch adopted by some researchers is to fix on a particular analytical approach and apply it slavishly. This will give you a narrow perspective. The analysis process should be creative and flexible, and must be treated as such.

At the same time, make sure that the interpretations that you make are genuinely grounded in the data. You can make conjectures, but you must identify these as such and stress that they will need further research. You should also avoid individualising a text, by getting too involved with a few respondents and allowing your findings to be dominated by the perceptions, attitudes and behaviours of those individuals. Similarly, you should not get personally involved with the text, for example by attacking or expressing your admiration for an individual. You can strongly disagree with the position they have taken, for example advocating the use of herbal remedies to treat AIDS, while avoiding personal criticism.

Research report

The stated aims of the research should be the focus of the final report. This is where the ordered flow of your analysis really facilitates the presentation of findings. Each major theme can act as a section heading. The sub-themes under each become important discussion points. The conclusions draw these together to make a final statement. Finding the right balance between discussion and quotes is sometimes hard. Especially when the material is interesting there is a tendency to add more quotes and for the findings to be dominated by these. There is also a false belief that by just using quotes bias is removed. The researcher has the responsibility to lead the analysis and present the findings. Quotes are there to illustrate these conclusions and to contribute to the narrative. As a rule of thumb there should be at least twice as much discussion text as there are quotes.

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