

Qualitative Research for Tobacco Control

A HOW-TO INTRODUCTORY MANUAL for Researchers and Development Practitioners



research for international tobacco control
recherche pour la lutte mondiale contre le tabac

QUALITATIVE RESEARCH FOR TOBACCO CONTROL

**A HOW-TO INTRODUCTORY MANUAL FOR
RESEARCHERS AND DEVELOPMENT PRACTITIONERS**

Research for International Tobacco Control (RITC)

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RITC is a Program at the International Development Research Centre (IDRC) in Ottawa, Canada.

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Library and Archives Canada Cataloguing in Publication

Mathie, Alison

Qualitative Research for Tobacco Control: A How-to Introductory Manual for Researchers and Development Practitioners.

Prepared by Alison Mathie and Anne Camozzi.

Co-published by International Development Research Centre.

Includes bibliographical references.

ISBN 1-55250-074-8

1. Tobacco habit – Prevention – Research.

2. Tobacco habit – Research.

3. Qualitative research – Methodology.

4. Social sciences – Methodology.

I. Camozzi, Anne

II. Research for International Tobacco Control

III. International Development Research Centre (Canada)

HV5748.M37 2005

362.29'66'072

C2005-900966-7

Acknowledgements

This manual is a result of the effort of many contributors. The manual was written by Dr. Alison Mathie, Coady International Institute, St. Francis Xavier University, and Anne Camozzi, CORVID Enterprises Inc., Nova Scotia, Canada. Prof. Blake Poland, University of Toronto, gave generously of his time and expertise to ensure the technical appropriateness of the manual. Thanks also go to two anonymous readers who offered valuable insight and suggestions on a draft of this manual. Special thanks go to Garret Mehl whose pioneering work is referred to in detail in the manual and whose generous permission is much appreciated. The manual also benefited from the dedicated work of several support staff members at Coady International Institute, Research for International Tobacco Control, and CORVID Enterprises Inc. Their enthusiastic help made the journey much easier. The continuous professional and technical guidance given by Dr. Montasser Kamal, former Senior Program Specialist, RITC, is also highly appreciated.

Sources of information for the manual are listed in the references section. However, special mention should be made of the second edition of Michael Patton's *Qualitative Research and Evaluation Methods* (Sage, 2002) which is highly recommended for those wishing to pursue qualitative research further.

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Introduction

This manual is designed to encourage users from around the world to engage in tobacco control research using qualitative methods and tools. The objective is to expand the body of knowledge that can influence tobacco control policies and programs. In addition, the manual is intended to serve consumers of qualitative research by helping them critically assess the utility of qualitative data for policymaking and programming purposes. This manual furthers the mission of Research for International Tobacco Control (RITC) to create a strong research and knowledge base for effective tobacco control policies and programs that will minimize tobacco-related risks to health and human development in low-income countries.

The tobacco epidemic is one of the leading preventable causes of death and disability among adults in the world today. Once largely a problem in high-income countries, the epidemic caused by tobacco use has become an enormous, and growing, problem in many low- and middle-income countries. Already, half of all global deaths from tobacco occur in these countries. By 2030, that proportion will have risen to 70% of all tobacco-related deaths. This trend is exacerbated by the fact that many people still underestimate the harm to health that tobacco causes, while overestimating its economic importance. As a result, many governments have not yet adopted or implemented strong policies to discourage tobacco use. If this trend is to be reversed, country-specific research is essential for generating the data necessary to convince policymakers to take action, and to guide them in shaping policy that will have local impact.

In general, most of the research related to tobacco control that has been done in low-income countries has been quantitative in nature, relying on statistical analysis. While quantitative research is important for quantifying smoking prevalence, smoking patterns, and smoking-related illness and health costs, it

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cannot alone capture the complex social, cultural, political, and economic dynamics of tobacco production and consumption. Qualitative research has thus emerged as a means to improve our understanding of some of the more elusive aspects of the epidemic, such as why people start and continue to smoke, or why tobacco growing attracts many farmers. Qualitative research has also been recognized as a means to explain some of the findings from quantitative research or to provide data that can inform research questions in quantitative research. Furthermore, qualitative research can provide a better understanding of the forces shaping tobacco production and consumption, which will hopefully lead to the identification of more effective tobacco control strategies.

While qualitative research has much to offer the field of tobacco control, it is often neglected in favour of quantitative research. Sometimes this is due to lack of experience in qualitative research; in other cases, it is because policymakers and program planners do not always know how to make maximum use of qualitative data for tobacco control.

Understandably, many policymakers need statistical evidence in order to make policy decisions and design programs. Yet a combination of qualitative and quantitative data can often be extremely useful in developing policies and programs that will be effective, efficient, and lasting. We believe that the examples in this manual will help health professionals, economists, program planners, and others to appreciate more deeply the potential benefits of strengthening the foundation of tobacco control with qualitative research.

For these reasons we have produced a training manual that provides the necessary information on how to use qualitative methods in tobacco control research with a particular focus on low-income countries.

Intended Users

Those who will find this manual useful are:

- Researchers who require skills in qualitative research
- Staff and members of nongovernmental organizations who have strong community links and are interested in researching a particular aspect of the smoking epidemic
- Qualitative researchers who would like to focus specifically on tobacco control issues
- Quantitative researchers who may want to learn more about qualitative research or a combined approach
- Consumers of qualitative research, such as policymakers and tobacco control program planners

The Purpose of the Manual

The modules in this manual are designed to introduce the reader to the basic skills necessary to be a successful qualitative researcher in tobacco control. All of these skills will require practice. It is hoped that this manual will stimulate an appreciation for the value of qualitative research, and encourage the user to apply these skills and tools in the field. Ideally, the user should work closely with someone who has experience in qualitative research and who can take on a mentoring role.

Presentation of the Manual

The manual is divided into seven modules each with its own objectives. Key terms appear in **bold** in the text and are listed with their definitions at the end of each module. Books and articles that are referred to are also listed at the end of each module. A complete list of key terms and definitions, a complete list of references, and a list of additional resources are provided at the end of the manual.

Module 1 Tobacco Control Research

After reading this module, the reader should have a clear understanding of:

- Key issues in tobacco control
- Key issues in tobacco control in a developing country context
- Important themes in tobacco control research
- The potential contribution of qualitative research in tobacco control
- Illustrative case studies of tobacco control research

Module 2 Understanding Qualitative Research

After reading this module, the reader should have a clear understanding of:

- The nature of qualitative research
- Terminology describing qualitative research
- Similarities and differences between qualitative and quantitative research
- Strengths and limitations of qualitative research
- How mixed methods can be used in tobacco control research

Module 3 Qualitative Research Methods

After reading this module, the reader should have a clear understanding of:

- The different methods commonly used in qualitative research
- The strengths and weaknesses of each method
- How these different methods can be applied to tobacco control research
- The concept of “the researcher as the instrument” in qualitative research
- The skills and training required for the researcher to carry out these methods
- The concept of triangulation

Module 4 Research Purpose and Design

After reading this module, the reader should have a clear understanding of:

- The purpose of the research
- Designing research question(s)
- The focus of the research

- Different sampling methods
- Internal and external validation methods
- Key ethical considerations

Module 5 Planning Fieldwork

After reading this module, the reader should have a clear understanding of:

- Preparing a pre-departure checklist prior to fieldwork
- The importance of building relationships with “gatekeepers” and other key individuals
- The importance of building a rapport with those involved in the research
- Common fieldwork tools
- The requirements for comprehensive field notes
- What must be accomplished upon returning home from the field

Module 6 Qualitative Data Analysis

After reading this module, the reader should have a clear understanding of:

- Organizing data
- Sorting, coding, and filing qualitative data
- Inductive analysis
- Deductive analysis
- Data synthesis
- Quantifying qualitative data
- Common qualitative data analysis computer programs and software

Module 7 Dissemination of Research Findings

After reading this module, the reader should have a clear understanding of:

- Different requirements for various audiences
- Writing an outline for a research report
- Planning a presentation of research findings, both written and oral
- The importance of follow-up

Throughout this manual the word “subject” is used to refer to those individuals or organizations that are studied in the course of the qualitative research. Some people take issue with the use of the word “subject” because they think it depersonalizes those who are involved in qualitative research. They may prefer to use terms such as “participants,” “informants,” or “respondents.” For the purposes of this manual, however, the term “subjects” is used because it is sufficiently generic to include all the alternative terms that might be appropriate in particular research studies. We use this term with the utmost respect for those who participate in qualitative research.

Wherever possible, we have used examples of tobacco control research that have taken place in low-income countries. However, because there is little internationally published qualitative tobacco control research from these areas, we have included some examples from North America and Europe. They have been selected because they illustrate particular methodological issues introduced in this manual. Ultimately, of course, the goal is to reduce the use of tobacco and to increase health conditions globally, and many of the principles and practices of qualitative research outlined here have universal application.

**MODULE ONE:
TOBACCO CONTROL RESEARCH**

Objectives:

Upon completion of this module, you will be able to:

- ✓ List the key issues in tobacco control.
- ✓ List the priorities for tobacco control research.
- ✓ Discuss the reasons why qualitative research can contribute to tobacco control.

What is Tobacco Control?

Tobacco control involves measures to restrict both the consumption and the production of tobacco. Inevitably, there are competing interests at stake. Tobacco growing and the manufacture of tobacco products bring economic benefits to some, while others bear the costs of the social, environmental, and health consequences of tobacco production and consumption. To make effective tobacco control policy, therefore, decision-makers need accurate information about the costs and benefits of tobacco, and the likely cost-effectiveness of specific measures to restrict its use and production.

The available evidence provides a compelling case for strengthening tobacco control measures. In 1999, the World Health Organization (WHO) estimated that 4 million people would die from causes attributable to tobacco in 2000 and that this would increase to 10 million by 2030 (World Health Organization, 1999). It also highlighted the fact that the public health burden of tobacco consumption is unevenly distributed among high- and low-income countries. Tobacco use is falling in high-income countries, while it continues to rise in low-income countries, such that 80% of tobacco users now live in low-income countries (11th WCOTH, 2000).

The case for reducing consumption is made stronger by the fact that quitting tobacco use has been shown to have positive impacts on health within a short period of time (Tobacco Fact Sheet, 2000). The challenge is to find the best combination of measures to help people make the decision to stop and stay tobacco free.

Financial interventions, such as increasing taxes on tobacco products, and strategies to heighten awareness of risks, such as warning labels, education programs, and counter-advertising, can be combined in various ways with

pharmacological aids and tobacco reduction programs to address the physiological and behavioural influences on tobacco consumption.

Addressing the demand side of the problem needs to be complemented by policies that address the supply side of tobacco use. The World Bank (1999) reports that tobacco is grown in more than 100 countries worldwide, but four countries (Brazil, China, India, and the USA) account for two-thirds of the global production of tobacco. It is estimated that 70% of global production takes place in low-income countries, some of which are heavily dependent on export earnings and employment from tobacco. Malawi, for example, relies on tobacco for 61% of its export earnings. To maintain an edge in the world market, some countries have used subsidies to maintain production, making it uneconomical for individual farmers to switch to alternative crops.

Advocates of tobacco control may therefore have to confront the issues of potential job loss, reduced taxation revenue, and loss of foreign exchange earnings. They also have to confront the power and influence of the multinational corporations that dominate the control and production of tobacco products worldwide.

While governments may gain tax revenue from the domestic sale and export of tobacco and tobacco products, there is now evidence that much of the potential benefit is being lost to smuggling. About one-third of all cigarette exports disappear into the black market. While international treaties have been developed to reduce trafficking in other products, such as drugs and firearms, no similar systems have been implemented to reduce tobacco smuggling. Smuggling not only reduces government revenue and undermines tobacco tax policy, it also makes tobacco products more readily available to young people.

Efforts to negotiate a global tobacco control treaty (The Framework Convention on Tobacco Control) began formally in 1999 when all 192 member states of

WHO endorsed the first global health treaty under the auspices of the WHO. The FCTC was adopted unanimously by the World Health Assembly in May 2003. Following ratification of the treaty by 40 countries, FCTC entered into force on February 27, 2005.

If the production, distribution, and consumption of tobacco is to be effectively controlled, research that will assist policy and program decision-makers is a critical first step toward action. The following section outlines the current priorities for such research.

Tobacco Control Research

One of the strongest arguments for increased investment in tobacco control research and prevention globally is that their costs are modest compared to the costs associated with tobacco-related disease. A concerted mobilization of resources is now needed to build research partnerships and conduct comparative research and analysis, on issues related to tobacco production, consumption and control. This manual hopes to help address this need by stressing the valuable contribution that qualitative research can make to this endeavour.

RITC and WHO (1999), in collaboration with various stakeholders, identified several priorities for a global tobacco control research agenda. Some of those that lend themselves particularly well to qualitative research are summarized below.

- 1. Country-specific research** on behaviours and attitudes with respect to tobacco control measures, as well as cross-cultural comparisons of differences in the acceptability of tobacco use. There is a need for increased knowledge of the level of awareness among different segments of the population of health risks associated with tobacco use, as well as an examination of pricing

policies backed by country-specific studies to determine the impact of taxation. Research is also required to determine the impact of tobacco control policies, including taxation, pricing, and clean indoor air policies, and obtain a better understanding of the process and impact of illegal trafficking. Other research areas include opportunities for – and barriers to – harmonization of prices and effective international trade agreements on the production, trade, and marketing of tobacco products.

- 2. Research on program interventions**, particularly in the area of school- and community-based education programs, the components of a comprehensive tobacco control strategy, and effective messages to counter tobacco industry promotion. There is also a need to develop and evaluate novel approaches to preventing tobacco use. More work is also needed on the treatment of tobacco dependence, including cessation programs and pharmaceutical interventions and delivery mechanisms.
- 3. Tobacco product design/regulation** studies that examine people's behaviour with respect to new products and alternative labelling will also add to the body of knowledge on tobacco control.
- 4. An analysis of the tobacco industry**, including an overview of the ownership, corporate structure, and regulation of the tobacco industry at the local and international level. Research into tobacco production as a trade issue in terms of earnings, employment, imports, exports, and smuggling is also needed. Further investigation is required into the tobacco industry's relationship with government, including lobbying practices and involvement in smuggling activity. Other priorities include research into the tobacco industry's advertising, marketing, and promotion efforts, especially those aimed at women and youth, and the tobacco industry's influence on the content and direction of research.

5. **Tobacco production research**, to shed light on the relationship between tobacco production and deforestation; pesticide use and soil degradation; and the attitudes, beliefs, and practices of tobacco farmers. The economic impact of tobacco control on low-income countries that grow and manufacture tobacco products (and on small-scale farmers in particular) also needs further research. Finally, policymakers need further information on the cultivation and curing practices of tobacco farmers; the occupational health hazards related to cultivating, curing, and handling tobacco, including exposure to pesticides, herbicides, and fertilizers; and opportunities for alternative crops and livelihoods.

6. Studies of **high-risk population** groups are needed to improve understanding of the socio-cultural, psychological, physiological, and genetic factors that influence tobacco use, susceptibility to tobacco advertising and promotion, and resistance to intervention.

These are a few of the research areas identified as global priorities in the area of tobacco control. You will need to assess research needs based on the situation of tobacco cultivation, tobacco use, and tobacco control in your particular context.

Importance of Qualitative Research in Tobacco Control

While the social and behavioral factors associated with tobacco use and cessation in high-income countries have been well researched and documented, comparable research in low-income countries has been limited. Now, however, the increase in tobacco use in low-income countries makes it imperative to fully understand the whole range of reasons as to why people are beginning to use tobacco and why they are continuing to do so. Qualitative research, as you will find out in this manual, is particularly suited to this form of inquiry. While quantitative

research tends to ask “how much?” or “how many?” qualitative research addresses the underlying reasons behind an issue or behaviour. As such, it can often be used to help design more focused and effective quantitative research.

Additionally, qualitative research may be particularly useful for politically or socially sensitive issues, such as study of the organisation of tobacco production, the smuggling of tobacco products, or the consequences of tobacco addiction on the family.

This section has provided you with an overview of some of the key issues in tobacco control. The rest of the manual will help you understand how to apply qualitative research to this important topic.

Case Studies in Tobacco Control Research

As you proceed through the manual, you will find repeated references to the following four studies:

1. Tobacco Smoking in Central Sri Lanka: An Ethnographic Study of Male Urban Young Adults by Garrett L. Mehl

This study of influences on smoking behaviour in young males in urban Sri Lanka is an excellent example of an iterative design using both qualitative and quantitative methods. Because detailed reference will be made to this study, a summary of it is presented below.

2. Girls, Pecking Order and Smoking by Lynn Michell and Amanda Amos

In this case study from Britain, in-depth and focus group interviews were used to gather information to explain why there were differences between boys and girls in smoking up-take during adolescence. A summary is in the Appendix.

3. Smokeless Tobacco Use among Adults in the Northern Province of South Africa: Qualitative Data from Focus Groups by K. Peltzer, N. Phaswana, and D. Malaka

This case study from South Africa uses focus groups to examine why people use “snuff” or smokeless tobacco. Of particular interest is the way data were coded and analyzed to ensure that they were reliable and the findings valid. A summary is in the Appendix.

4. Focus Groups: a Tool for Developing Better Health Education Materials and Approaches for Smoking Intervention by L.G. Pucci and B.J.A. Haglund

In this case study from Sweden, focus group interviews were used to gather information that could be used to develop education materials for employees of a municipality that had just adopted a smoke-free workplace policy. Of particular interest is how qualitative methods were used to reveal cultural nuances that needed to be taken into account when translating and adapting materials from outside the Swedish context. A summary is in the Appendix.

The study by Garret Mehl is presented below as a case study that will be referred to frequently in subsequent modules of the manual. The other studies have also been written as case studies and can be found in the appendices.

Case Study 1 - Tobacco Smoking in Central Sri Lanka: An Ethnographic Study of Male Urban Young Adults

Garrett L. Mehl

Since prevalence surveys began in the 1960s, the rate of smoking in Sri Lanka has steadily increased, especially among males. Sri Lanka is now estimated to have the highest rate of tobacco consumption in the Asian region. Although the health care system has been very effective in extending life expectancy, there is now concern that with 50% of males smoking the positive results of health care services will soon be offset by illness related to tobacco use.

Research Purpose and Objectives:

The study was designed to explore how and why individuals in Sri Lanka become smokers and to understand the influence of local tobacco advertising on purchase decisions and actual behaviour. With this information, it was hoped that policymakers could tailor anti-smoking programs to counter the use of tobacco.

In order to find out specific details related to tobacco use, and bearing in mind the research resources available to him, the researcher decided to focus on the particular socio-cultural contexts in which smoking occurs in urban areas, and the individual and community determinants of tobacco use in those contexts. His focus was therefore geographical, cultural, social, and gender specific: factors influencing young males in an urban community.

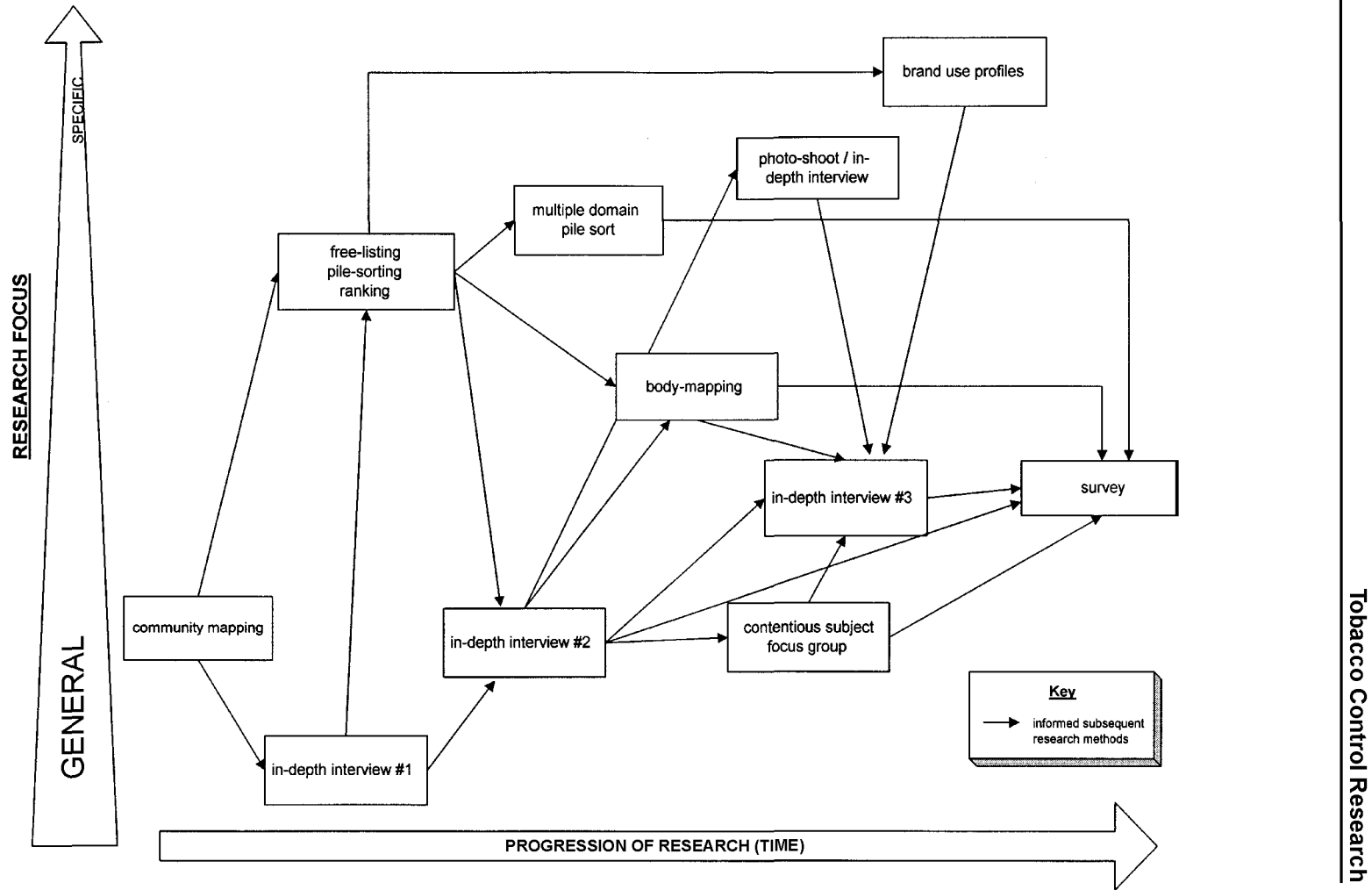
Research Design

In order to develop an understanding of the factors influencing smoking in this context, he chose an iterative design. In other words, he began at exploratory and general levels, proceeding over time to more specific issues. The methods for data collection were therefore selected on the basis of findings from earlier methods.

By the end of the research, Mehl had used a wide variety of methods, including both qualitative research methods (focus groups, in-depth interviews, community mapping) and quantitative methods (surveys using randomized sampling).

This design is illustrated on the following page:

Figure 1: An example of how research progresses from a general to a specific focus and uses different methods over time



As can be seen from this illustration, Mehl began with in-depth interviews and community mapping. For the community mapping exercise, seven focus groups in different community settings with a total participation of 43 youths were selected to draw a map of their community indicating settings of importance to young people. This allowed the researcher to determine smoking and non-smoking “spaces” within the community and surrounding area.

Throughout the study, in-depth interviews were used to explore issues in more detail. For example, to examine the influence of tobacco advertising on youth, three male interviewers conducted in-depth, semi-structured interviews with a total of 93 smoking or non-smoking males between the ages 16 and 30 years. Earlier research showed that smoking prevalence and attitudes towards smoking varied according to income and cultural grouping. The sample selected for interview was therefore representative of these groupings. In both low- and high-income communities within the urban area, lists of households representing different cultural groups were obtained from local government offices. Specific households were approached and if a 16-30-year old resident showed an interest in participating in the research, an interview was scheduled. The sampling procedure was systematic, yet the final sample necessarily depended on the voluntary participation of subjects. Ideally, in this situation, the researcher continues to invite participation until a saturation point is reached. This is the point beyond which no new information is emerging from the interviews.

An interesting aspect of this research study was the use of innovative techniques for data collection. Young participants quickly became bored with standard interview techniques, so additional methods were used, such as asking them to sort different tobacco products into categories, to map places in the community where young people smoke, and to compile typical characteristics of tobacco users. This made the process more fun, engaging young people and ultimately providing richer data through the conversation that such activities generated.

Such techniques are also very effective in establishing and maintaining rapport. In this case, because of the rapport built through the use of these methods, the validation of findings with the young people could be done with greater confidence.

Data Analysis

All data from the interviews and other qualitative methods were in the form of written notes and transcripts of tape recordings. As the research continued, field notes were expanded, translated into English, entered into a qualitative analysis software package (ATLAS/ti), and coded for analysis. To develop a category system, the content of the transcripts was analyzed to identify common themes and points for further discussion.

Toward the latter part of the study period, researchers fluent in Sinhala, English, or Tamil were trained to conduct a structured survey in order to collect quantitative data. Surveys were given in the subjects' native language until a total of 529 males between 16 and 30 years of age had been reached. Subjects were sampled from 46 randomly selected areas within a municipality. The subjects completed the survey, with assistance provided by the researcher as necessary. While the survey was meant to gather data for comparison with previous Sri Lankan studies, as well as with data from other countries, it was also meant to establish how well the qualitative findings could be generalized to the larger population.

Results of the Research

1. Based on the findings, the researcher produced a list of the different types of social, psychological, and physical environments (“contextual spaces”) related to smoking. Types were listed in order of the commonly experienced progression in which new smokers first try smoking while among peers on a “jolly trip” for fun; proceed to smoking in situations where the act is perceived as useful (“easing problems,” “warding off cold,” “easing loneliness,” etc);

and eventually become a “public smoker.”

2. In addition, the research shed light on the way particular tobacco products become associated with particular lifestyles. Smoking had become a means to the status of a particular lifestyle, while its socioeconomic and health hazards were rationalized, downplayed, or ignored.
3. Finally, the work of a youth anti-tobacco nongovernmental organization (NGO) was shown to be effective in demonstrating the viability of lifestyles, social activities, and identities that did not involve smoking.

Comments on Reliability and Validity

As is typical in reporting on research, Mehl concludes his study by commenting on the limitations of the research that might jeopardize the reliability of the data gathered and the validity of the findings. For the most part, he focuses on the quantitative methods used, but also raises a number of issues about the research in general and the qualitative methods in particular. He notes, for example, that the pool of suitable communities from which to draw a sample was much more limited than he had expected. This was because, “in a clear departure from the norm,” other studies in the region had paid people to participate in their research. He was limited, therefore, to areas where this expectation had not been raised.

He also notes that it was difficult to establish rapport in some communities, a problem that can severely limit the quality of the data and its reliability. He describes the mistake he made in trying to build a relationship with local institutions with which these communities had a negative experience; he therefore had to spend more time clearing up misunderstandings about his intentions. He also refers to the tension arising from the on-going civil war that made potential research participants more wary than they might otherwise have been.

It is noteworthy that for the qualitative research, Mehl used interviewers and research assistants who were fluent in the various languages of the communities

under study, rather than interpreters. Semi-structured interview guides were developed and used by all the interviewers to ensure reliability of data across all interviews. During each phase of the research, all interviews were conducted in the local language and then translated into English from detailed field-notes or tape recordings. In this way, Mehl could have more confidence in the reliability of the data than if the data was being “interpreted” by each interviewer. Nevertheless, effective training of interviewers was a critical requirement for high quality data collection.

In discussing the internal validity of the findings, Mehl notes that he had to return home before all the data were entered and analyzed. This meant that the findings were not member-checked (checked with the subjects of the research in order to have greater confidence in the validity of the findings), nor did the research benefit from the additional insights the participants might have given once presented with the findings. However, the research demonstrated rigour in terms of the multiple methods used to triangulate the findings, as well as to develop new insights. The external validity of the qualitative research component was evident from the detailed descriptive data generated, and the extensive sample of young men representative of different cultural and social groupings. The results of a quantitative survey further strengthened the external validity of the findings.

Ethical considerations

Mehl highlights three ways in which he ensured that ethical standards were maintained in his research: the research methodology was scrutinized by Johns Hopkins University’s human subjects review board; subjects were all required to sign a consent form; and, to guard against pressure being placed on subjects to participate, no financial incentives were provided.

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**MODULE TWO:
UNDERSTANDING QUALITATIVE
RESEARCH**

Objectives:

Upon completion of this module, you will be able to:

- ✓ Define qualitative research.
- ✓ List and define some of the terminology describing qualitative research.
- ✓ Compare and contrast qualitative and quantitative research.
- ✓ Identify the strengths and limitations of qualitative research.
- ✓ Know how qualitative research can be used in tobacco control research.
- ✓ Identify how mixed methods can be used in tobacco control research.

Understanding Qualitative Research

Both quantitative and qualitative research have a valuable contribution to make to the field of tobacco control, whether used separately or in combination. The focus of this manual, however, is on qualitative research.

Often qualitative research is described by the methods most associated with it, such as participant observation, in-depth interviews or the case study. In fact, qualitative research is more than just method; it is a particular *approach* to inquiry, based on a particular set of assumptions about how knowledge is produced and about the nature of reality itself. It is quite distinct from the quantitative approach to research which, borrowing from the scientific method of the natural sciences, proceeds on the assumption that reality can and should be measured and verified objectively by using a set of standardized methods to test hypothetical understanding. Qualitative researchers, by contrast, take the position that it is less important to discover what is “real” (in the sense of objectively verifiable truth) than it is to understand what contributes to people’s subjective understanding of reality. For this reason, the qualitative research aims to build an understanding of people’s “lived” experience, discovering how people interpret the world around them and how this influences their actions.

While the philosophical differences between qualitative research and quantitative research continue to be debated, it is important to point out that each has its own strengths and limitations when it comes to practical application. A qualitative approach is particularly well suited to research that seeks to explain and find meaning in social behaviour. To develop an understanding of why people smoke or why farmers grow tobacco, for example, the starting point might be to interview an individual or a group. The research builds on data gathered from this particular

context until patterns of behaviour start to emerge and a theoretical understanding of why people engage in certain behaviours can be made.

The emphasis is on how people perceive and interpret the world, and how this is linked to many other influences in their lives. The conclusions only hold true for the particular individuals or groups in the study. However, these findings can, if necessary, be tested in a wider population by means of a quantitative study.

How does the purpose and function of qualitative research differ from that of quantitative research?

While the purposes of qualitative and quantitative research may overlap, it is helpful to distinguish between:

1. the role of qualitative research in eliciting explanations of social behaviour in particular populations – getting at the detailed “why?” and “how?”; and
2. the role of quantitative research in testing a particular hypothesis about the relative importance of different variables for social behaviour in the general population.

These differences are associated with different approaches to knowledge and theory building. Qualitative research tends to use an *inductive approach* to develop theory. In other words, it examines the data generated from the study of a particular population and builds an understanding of social behaviour as it emerges from the data. In contrast, quantitative research tends to take a *deductive approach*, starting with a hypothesis and testing it to see if it holds true for the general population. This is called *deductive analysis*. For example, if we proceed *inductively* from the data collected in a particular qualitative study on teenage smoking, a pattern of teenage smoking behaviour may emerge that suggests an association with a sense of loneliness. From this we may build a theory about the

relationship between a sense of loneliness and smoking behaviour in the teen years. We may then use a quantitative study to test this theory. In this case, we would proceed *deductively* from a hypothesis that such a relationship exists, and then test the degree and extent to which this theoretical relationship holds true for the general population.

Because qualitative and quantitative inquiry have different purposes, they also differ in how much importance is attached to fieldwork, in the way subjects are selected for study, in the type of data collected, in the methods used to collect data, and in how data is analyzed. A good starting point for understanding qualitative inquiry is to look at these key differences in more detail.

The importance of fieldwork: Given the importance attached to discovering how people understand their world, it is important to go into the subjects' environment, rather than taking them out of that environment. This is what it means to "go into the field." Fieldwork is an essential activity for qualitative researchers. During fieldwork, the researcher is able to have direct and personal contact with the subjects of research and to place their lived experience in a specific local context. Unlike quantitative researchers, who tend to remain detached from subjects, qualitative researchers make a conscious effort to develop relationships in the field. In this way, they begin to see things in the way the research subjects see them, and appreciate why they think, act, and feel the way they do. While quantitative researchers also go into the field, this is typically to solicit information, or to take specific measurements, rather than to experience the lives of, or build relationship with, research subjects.

Selection of subjects or *units of analysis*: In qualitative research, the selection of subjects is made in different ways, depending on the purpose of the study, hence the term *purposeful sampling*. Sometimes, the purpose of the study dictates that a broad range of subjects should be sampled, in which case *maximum*

variation sampling would be used. Sometimes *extreme case sampling*, may be appropriate. An example of this would be interviewing those who have never smoked and those who have smoked from adolescence to old age. This is done in the expectation that particular insights into extreme cases will highlight factors and patterns less apparent in typical or average cases.

By contrast, quantitative research relies on *random sampling* so that each subject has an equal chance of being selected. This is because quantitative research is designed to lead to conclusions that can be generalized. It is only possible to do this if the sample selected is random. The logic here is that if everyone has an equal chance of being selected, then the sample will be representative of the whole population under study.

Type of data collected: Very simply put, qualitative data are words, while quantitative data are numbers. In their raw form, qualitative data could be the notes prepared by a researcher or tape recordings of interviews. The researcher's notes could include physical descriptions based on observations or responses from informal interviews. Another source of qualitative data may be existing written material such as reports or correspondence. This is often called *secondary data* to distinguish it from the *primary data* collected through interviews and observations.

The data generated from all these sources can be voluminous, but it yields the *rich description* that is the hallmark of sound qualitative research and the basis for qualitative data analysis. For example, the qualitative data in Michell and Amos' (1997) case study on girls and smoking provided rich "insider accounts" of the smoking world of teenagers that could not be fully captured using a quantitative study. By contrast, in quantitative research, the primary data are numbers or fixed responses (such as YES/NO) that are given numerical values

so that they can be easily counted and statistically analyzed. Quantitative research gathers a limited range of relatively little data about a lot of cases, while qualitative research gathers a relatively broad range of data about a few cases.

Box 1: Rich or thick description

The term *rich* or *thick description* is used to refer to the way in which data is converted into a coherent, comprehensive, and detailed description of whatever is being studied. For example, if the study is about smoking habits among street children, it is not enough to simply record what the children are doing, or what they are saying. This would be superficial rather than rich description. To deepen the description, information is needed about the children's expressions and emotions; their relationships to others; and the appearance, smell, and feel of the environment. In other words, the description should reflect everything that the researcher has observed and heard, whether or not these things seem significant at the time.

Rich or thick description is the basis for qualitative analysis. From the description, it is possible to build analytical explanations about what is going on. The richer, or thicker, it is, the greater the possibility of a thorough analysis.

Methods of collecting data: The data collection methods most commonly used in qualitative research are observation, interviews, case studies, and visual representation techniques such as mapping, drawing, and graphing. Given that the purpose of qualitative research is to build understanding of complex social issues, the methods are typically geared to gather deep and rich insights into the topic being studied.

Because of the ability of qualitative research to handle a lot of information, observations and case studies can be comprehensive; interviews can be designed with open-ended questions to allow maximum flexibility and freedom; and visual representation techniques can be designed to let the respondents fully express themselves on a particular topic. While the methods may all be geared to gathering data on the topic, the research questions will vary depending on what is needed to draw out a detailed response.

This is in contrast to quantitative research methods, where the purpose is to draw conclusions from a sample population that can be generalized to the population as a whole. The methods for quantitative research inquiry are therefore standardized. In each and every case, the same questions are asked, the same observations are made, and the same measurements are taken. The results can be compared across all cases. Frequencies can be calculated, correlations established and causal relationships analyzed statistically.

Another contrast between qualitative and quantitative research is the role of the researcher. In qualitative research, the researcher is often described as “the key instrument.” This is because all the research methods associated with qualitative research are heavily dependent on the researcher as interviewer, observer, facilitator, communicator, and interpreter of data. In other words, all data is filtered through the researcher. In quantitative research, instruments such as the questionnaire survey, and other data collection tools, are not so researcher-dependent. This difference means that in qualitative research, extra care has to be taken to ensure that the researcher’s methods can be scrutinized.

Methods for data analysis: The analysis of qualitative data relies on a systematic organizing of the data into categories and themes, sometimes with the aid of specialized computer software. The researcher identifies patterns and relationships on which to base an analysis of the findings. Whether or not computer software is used, the researcher is the primary interpreter of the data.

The qualitative researcher acknowledges that there may be bias in interpretation and takes steps to correct this by ensuring that evidence for the analytical findings exists in the data, and that different interpretations of the data can be reconciled. In this way, the research conclusions are demonstrated to be grounded in the real-world patterns that emerge from the research findings. It is therefore crucial for the researcher to document the process of analysis thoroughly so that the

logic of the analysis can be tracked. It is also useful to have several researchers analyze the same data and compare their different interpretations.

In quantitative research, the analysis of the data relies on the application of standardized statistical procedures. This analysis makes it possible to see patterns of similarity and variability; factors contributing to the size and direction of change; and the significance of any differences between groups in the study. Because the statistical procedures are standardized, the logic of analysis is the same across all cases and is less vulnerable to researcher bias.

Similarities between qualitative and quantitative research

While there are many differences between qualitative and quantitative research, there are also similarities that need to be recognized. Both research traditions are rigorous in their methods (although each may use different criteria for validity and reliability), and both demand the highest ethical standards with respect to the treatment of people in the study. It is also important to acknowledge that there are wide variations within both the qualitative and quantitative traditions, so that distinctions between the two may be more blurred than has been indicated here. For example, qualitative researchers may use elements of a quantitative approach to test theory, while quantitative researchers may pursue an interest in subjects' interpretations of their experience, which is more typically associated with qualitative research. The critical issue is that the choice of approach and choice of method be appropriate for the purpose of the research. For tobacco control research, like other applied research, this means taking into consideration the users of the research findings, such as policymakers and program designers, and making sure that the research suits their purposes.

The following table summarizes the differences between the two research approaches.

Table 1: Comparison between Qualitative and Quantitative Research

Qualitative Research	Quantitative Research
Purpose and Focus	
Discovering and interpreting meaning and perceptions.	Testing a hypothesis developed before the research begins.
The study is particular to the subject group. Replication is rare.	The study is standardized so that replication across different sites is possible.
Units of Analysis	
Subjects are selected to fit the purpose of the study.	Subjects are selected randomly.
Data	
The primary data produced are words. Raw qualitative data may be researcher's notes, audiotapes, or transcripts of informal interviews. Secondary data such as existing written material and observations are also often used.	The primary data are numbers or fixed responses that can be quantified.
Methods	
Data are gathered using less structured methods, such as observation and interviews, to generate rich description.	Methods and instruments are structured beforehand to gather standardized data that can be coded or numerated.
Questions are typically open-ended, allowing for flexibility in response.	Questions are asked in such a way that the answers are a fixed set of choices.
The researcher is the main instrument of inquiry, aided by semi-structured interview guides, observation strategies, and a thorough review of secondary data.	Instruments such as surveys are carefully designed to measure specific variables and are administered systematically, in a standardized fashion, to avoid researcher bias.
Research generally takes place in the field and often involves face-to-face encounters with the subject.	Research can take place without direct contact with the subject, as in the case of telephone or mailed surveys.
Results and Analysis	
Data is analyzed by systematically organizing and interpreting information using categories, themes and motifs that identify patterns and relationships.	Analysis is done using standardized statistics and procedures.
Results are in-depth explanations for patterns of behaviour.	Results tend to summarize patterns of similarities, variability, size, direction, and/or significance of any differences between specific groups.

Adapted from Bamberger (2000, pp. 10-12)

Strengths and Limitations of Qualitative Research

In this section we describe the strengths and limitations of qualitative research that may influence decisions about research design.

Strengths

- Issues can be examined in detail and depth.
- The researcher is not restricted to specific questions or lists. Interviews are in-depth discussions guided by the researcher to yield relevant information.
- The research framework and direction can be quickly revised as new information emerges.
- Methods are adaptable for use with a wide range of subjects. For example, visual representation and mapping exercises can be done with people with low levels of literacy.
- Data collection can be more informal, relaxed, and fun, which encourages subjects to participate in the research.
- Research can be done with an analytical mind along with pen and paper. Computer skills may not be needed.

Limitations

- Data is collected from a few cases or individuals, which means that findings cannot be generalized to the larger population.
- Research quality is heavily dependent on the individual skills of the researcher.
- Rigour is more difficult to maintain, assess, and demonstrate.
- The volume of data makes analysis and interpretation time consuming.
- It is not as well understood as quantitative research. It is therefore often more difficult to convince others of the importance of its contribution.

When should qualitative research be used?

For individuals involved in tobacco control research, the decision about whether or not to use qualitative or quantitative research will depend largely on the focus and rationale of the study.

As has been outlined already, qualitative research is particularly suited to:

- Research topics seeking an explanation of “why?” or “how?” For example,

Michell and Amos (1997) ask: Why do girls take up smoking? Peltzer et.al. (2001) ask: Why do people take snuff and how do people start using it? New research might ask: Why is smoking increasing among women? How does the tobacco industry recruit and maintain the loyalty of some scientists and politicians?

- Research topics that are at the exploration stage, when it is not clear yet what the notable variables are and what theoretical position needs to be tested. For example, in its early stages, Mehl's research (2000) was designed to explore the various social and physical contexts of tobacco use in urban Sri Lanka. New research in the area of tobacco production could ask: What factors do farmers take into consideration when deciding whether to switch from tobacco to an alternative crop?

Sometimes, tobacco control researchers will find that neither a qualitative study alone nor a quantitative study alone completely meets their needs. In these cases, mixing different research methods may be effective, as discussed in the next section.

Mixing Methods

In tobacco control research, a combination of quantitative and qualitative methods can be highly effective in making the most of the strengths of both research approaches. Often this mixing of methods is done within a single study. For example, Mehl (2000) used qualitative research in the form of in-depth interviews to find out about the characteristics of users of different types of tobacco products. He then carried out a quantitative survey of young smokers in the general population to find out how accurately these characteristics fit other smokers.

There are several different reasons for combining methods in one study, and these are outlined below. We will refer again to these different combinations in Module Four when we discuss the design and focus of the research.

Triangulation: Different methods are used to examine the same research question in order to verify findings or identify biases in one of the methods used. Mixing methods for this purpose strengthens confidence in the research findings if the same results are obtained using different methods.

Complementarity: Different methods are used so that the findings from one method are elaborated, illustrated, or clarified by the findings of the other method. For example, in the Michell and Amos (1997) case study of young girls in Britain, quantitative analysis was used to identify peer group structure and qualitative methods were used to elaborate the resulting sociograms.

Conceptual Development: In this case, various qualitative and quantitative methods are used sequentially at different stages of the research, thereby building a full understanding of the relationship between ideas and issues. For example, in the Sri Lanka study conducted by Mehl (2000), the findings from the qualitative research informed the direction and development of the questions used subsequently in the quantitative study.

Expansion: For this purpose, different methods are used to increase the scope and breadth of the study. For example, qualitative interviews may be used to find out the underlying causes of smoking behaviour while a quantitative survey is conducted to examine the extent of smoking related illness within a specific population, or how increased tobacco taxation affects different populations of varying socioeconomic levels. The results of such studies expand the knowledge about smoking from both a behavioural and an epidemiological perspective by using qualitative and quantitative methods, respectively.

Whatever the purpose, combining different methods may uncover contradictions or new ways of thinking about tobacco control. Sometimes this is the deliberate intent of a mixed method design, while sometimes a fresh perspective arises as a result of triangulating different methods and discovering that the results do not converge. Qualitative researchers often describe this as *initiation*.

We now turn to learning more about the different methods used in qualitative research and how they can be applied in the field.

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Key Terms and Definitions

Complementarity A reason for combining research methods so that the findings from one method are elaborated, illustrated, or clarified by the findings of the other method.

Conceptual Development One of the reasons for combining qualitative and quantitative research methods, so that methods are used in sequence for different stages of the research.

Deductive Analysis Testing a theory during data analysis.

Expansion A reason for combining qualitative and quantitative research methods to increase the scope and breadth of the study.

Extreme case sampling A means of selecting subjects who are far from the average or mean in their behaviour, so that particular insights into extreme cases will highlight factors and patterns less visible in other cases.

Inductive approach An examination of data from a particular population to create understanding of more general social behaviour.

Initiation A fresh perspective that arises as a result of triangulating different methods and discovering that the results do not converge.

Primary data Data collected directly from the subjects of the research.

Purposeful sampling In qualitative research, intentionally choosing subjects so as to ensure representation of all important groups.

Random sampling Sampling that ensures that every individual in the sampling frame has an equal chance of being selected.

Rich description Detailed descriptive data gathered in qualitative research.

Rigour Thoroughness of method. Research is rigorous if the methods used have been carried out thoroughly and the results of the research can be accepted with confidence.

Secondary data Written material such as reports, correspondence, or other materials that are relevant to the topic under study.

Triangulation The use of different research strategies to examine the same research question in order to verify findings or to identify biases. Examples include mixing methods, using different researchers, and collecting data from different sources. Triangulation is important for validating and improving confidence in research findings.

Unit of analysis The subject(s) of the research. This may be the individual, family, group, or community, depending on the research focus.

**MODULE THREE:
QUALITATIVE RESEARCH METHODS**

Objectives:

Upon completion of this module, you will be able to:

- ✓ List and define the different methods commonly used in qualitative research.
- ✓ Identify the strengths and weaknesses of each defined method.
- ✓ Identify examples of how these different methods can be applied to tobacco control research.
- ✓ List the skills and training required for the qualitative researcher to carry out these methods.
- ✓ Understand and demonstrate the concept of “the researcher as the instrument” in qualitative research.
- ✓ Understand and demonstrate the concept of triangulation.
- ✓ Name at least one example of a qualitative tobacco control research case study and the method(s) used.

In the previous module you learned about the nature and definition of qualitative research. In this module we will explore the most commonly used methods for carrying out qualitative research.

Methods of Data Collection

Generally, qualitative research methods can be divided into four ways of collecting data:

- ✓ Observations
- ✓ Interviews
- ✓ Case Studies, including life histories
- ✓ Mapping and other visual representation techniques

This module is designed to give you knowledge and understanding of each of these data collection methods, and to highlight their strengths and limitations.

Observation

The observation method is used to describe a setting, the activities that occurred, the people who were there, and the meaning of what was seen. Researchers typically use all of their senses to record impressions and thoughts. Although observation usually involves some kind of direct contact, it can also be done remotely using photographs, video taping or audiotaping, provided permission has been granted. It is uncommon, however, for observation to be used alone.

Everyone is an observer of life. The difference between the general observations we make every day and the observations made by qualitative researchers is the systematic way in which the latter are organized. Observation takes place when

researchers intentionally place themselves in a specific location to observe what happens around them. In some instances, researchers actually follow specific subjects to different locations (for example, farmers going to their fields) over a time period or observe an event as it unfolds. The type of observation depends on the purpose of the research and the information needed to suit that purpose. As researchers become more knowledgeable about the setting and the subjects, more specific observations occur.

An example in tobacco control research could be a team of researchers observing a group of teenagers smoking outside a school. The researchers build an understanding of the behaviour of different teenagers and the group dynamics by making progressively more detailed observations about their actions and roles in this setting. Other examples of using the observation method might be watching women in the fields in order to learn more about the role of women in tobacco farming, or observing compliance with anti-smoking bylaws in public buildings.

Types of observation

There are essentially two types of observation:

Participant observation: This requires researchers to study the setting through their own participation. As participant observers, they become a part of the group and are fully engaged in experiencing what those in the study group are experiencing.

Most often, researchers as participants conduct casual and informal interviews while watching and recording what they see around them in order to increase their understanding. Participant observation is especially useful when researchers need to examine complex social relationships and intricate patterns of how people and groups interact. In tobacco control research, this could involve going to the

fields with farmers, accompanying tobacco smugglers, or watching law enforcement officials at work.

It might also be useful for understanding basic values and behaviour patterns associated with particular activities. For example, it could be used in situations where researchers are trying to understand what motivates certain groups to smoke or why they are involved in some aspect of tobacco farming, smuggling, or other activity.

There is no hard and fast rule for how much researchers participate in the group. The level of participation will depend on the nature of the study and the desired outcomes, as well as the length of time it takes for the researchers to collect information unobtrusively, without influencing the behaviour of the group. In some cases, there may be gender, language, social, or cultural factors that limit the participation of the researchers.

Depending on the nature of the study, participant observation may take place over a long period of time. For example, it may be appropriate to observe changes as they unfold over the course of daily or even yearly life. By sharing experience on a day-to-day basis, the researchers can gain a deep understanding and sensitivity to the subjects' world. This enhances their powers of interpretation and analysis, and helps them build the trust of the group that is being studied, so that information can be more easily accessed.

Direct observation: This method consists of systematically observing and documenting something in its natural setting. Video photography can be an asset in direct observation as long as it is not intrusive. In direct observation, researchers are silent observers and do not interact with the research subjects or the situation (although interviews and conversations may also take place at a different time during the research period).

Here are some relevant points about direct observation that researchers should keep in mind:

- ✓ Observation always occurs in normal, natural settings and contexts.
- ✓ Researchers watch while events unfold.
- ✓ Actions, conversations, and interactions usually continue without researchers intruding into the scene or activity.
- ✓ Observers do not intervene or deliberately influence the subjects in the study.
- ✓ Researchers look for many things and describe the situation at many different levels.
- ✓ Researchers need to address ethical issues to ensure that participants have given permission to be observed. This also means protecting confidentiality if necessary or desired. More information on ethical issues is outlined in Module Four.

Box 2: Case study examples of the use of observational methods in tobacco control research

Several studies have used observational methods to examine doctor-patient interactions regarding smoking. Some used video technology to capture observations.

For example, Willms et al (1992) used observational methods to examine physician smoking cessation counselling practices in Canada. The study compared what family doctors and patients said about health promotion messages delivered during patient visits to the doctor's office. Twelve doctors participated in interviews and focus groups as part of the study. In addition, the researchers undertook observation of doctor-patient interaction in four office settings. Each of the 98 patients included in the study were interviewed in their homes. This paper is particularly helpful because it is written with an emphasis on describing the methods used.

In a similar study carried out in the region of Leicestershire, UK, Coleman et al (2000) and Coleman and Murphy (1999) used video-recordings of doctors' consultations with smokers. Doctors were shown the video prior to participating in a qualitative semi-structured interview, to enhance their recall of events surrounding the consultation. Using these methods, the

researchers discovered that doctors knew that they should raise concerns with their smoking patients and thought they did so fairly frequently. In practice, however, they often did not bring the subject up unless the patients themselves did. The doctors justified this as being in the interest of “preserving good doctor-patient relationships and avoiding negative responses from patients.”

In a similar study of smoking cessation counselling practices among a group of physicians in Nebraska, USA, McIlvain et al (1997) used a combination of direct observation of clinical encounters, chart reviews, and in-depth interviews.

Lundberg (1999) used participant observation methods, together with ethnographic interviews, with 10 key informants and 16 general informants living in Uppsala, Sweden, to investigate the understanding and practices of health among Thai immigrant women married to Swedish men. Smoking was one of several health-related behaviours explored.

Lawn (2001) used a combination of qualitative interviews and observation of 24 mentally ill clients who smoke to examine the “smoking culture” within clinical and community environments, as well as the financial and social consequences of smoking in this population.

Using observational methods in a non-clinical setting, Ammerman and Nolden (1995) recorded and compared all bus-stop-shelter billboard advertisements over a one-year period in two distinct San Francisco neighborhoods (one predominantly white, the other predominantly Latino). They analyzed the type of products advertised; the frequency and content of tobacco advertisements; and the possibility of adolescent exposure.

Another example is a 5-year longitudinal study of tobacco, drug, and alcohol use in two remote Alaskan villages near the Bering Sea. Stillner et al (1999) recruited a panel of villagers comprising key informants in a wide variety of formal and informal leadership roles (magistrates, school teachers, village police, mayors, council members, village health aides, parents, store clerks, city managers, native corporation leaders, public officials in village offices, and village elders). This group became the “eyes and ears” of the research team, who met with members of the panel twice a year. This data was complemented by a survey of Head Start parents, a limited records review, and participant observation in public and private settings conducted by members of the research team.

What are the weaknesses and limitations of the observation method?

The following table outlines some of the limitations of observation and suggests solutions for combating them.

Table 2: Weaknesses/limitations of the observation method and suggested solutions

Weakness/Limitation	Solution
Observer bias.	Have several researchers make observations at the same time; have researchers of different ages and gender make observations; use triangulation.
Questionable reliability because observations could be limited to a particular circumstance.	Systematically repeat observations over varying conditions, times of day, or season.
Observer may influence action (subjects may behave differently because of being watched).	Repeat observations; spend enough time integrating with the group or the community to reduce self-consciousness.
Only external actions can be seen; the researcher cannot tell what people are thinking.	Mix with other methods such as interviews, which are designed to elicit thoughts and ideas.

As can be seen, many of these limitations can be overcome or offset by experience and rigorous effort.

What are the strengths of observation?

- It helps develop a deeper understanding of issues, practices, problems, and people.
- Researchers see things that they may not notice in normal time-bound social interaction.

- Researchers can examine previously held assumptions and see if they hold true in a natural setting.
- Researchers gain access to information that subjects may not talk about in interviews or other research situations.

What should researchers observe and document?

This depends on the focus of the research, or the research question. However, the following guidelines are appropriate for many research situations:

- ✓ Researchers should take specific notes on the **physical environment**. Researchers should use all of their senses to describe the setting (sight, sound, smell, taste, and touch). This might be a school, a workplace, a village, a farm, a bar, a private home.
- ✓ Researchers should describe and observe the **social environment**. This means documenting the behaviour and interaction of different groups by gender, age, culture, race, and any other category or grouping that is meaningful to the tobacco control research topic.
- ✓ Of particular importance are **decision-making patterns**. In tobacco control research one might ask: Who offers someone a cigarette? Who accepts the offer? Who smokes first? If you are observing a group of smugglers or a black market sale, who is the leader? How are decisions made?
- ✓ Observers should also note the **specific language** used, including idioms and slang. Identifying language usage can influence the plan and design of education, policy, or marketing programs targeting specific groups. For example, if members of a group refer to cigarettes or smoking by a particular word, this word can be used in specific education or counter-marketing messages. Youths and teens, in particular, often have their own form of slang to refer to tobacco and tobacco-related activity.
- ✓ Researchers should also observe and document **non-verbal communication**.

Often the way a person moves his or her body can give researchers substantial clues about group functioning and decision making. How do people look when they are smoking? How do they move when asked about health risks? Are they comfortable? Complacent? Resigned? How do people behave on the tobacco auction floor? How do farmers relate to company representatives or middlemen?

- ✓ One of the most common areas of observation overlooked by qualitative researchers is the documentation of **things that do not occur**. Sometimes something that does not happen gives the researcher noteworthy information. For example, if certain people in a group are smoking and others are not, this observation could be important. Are there specific reasons why some are not smoking? If you are observing a parliamentary debate about tobacco control legislation, which members are silent? Is there a specific reason why someone did not behave in the same way as others in the group?

When gathering data using the observation method, the researcher designs a specific tool for recording information. Here are some ideas for designing an observation data sheet. It should include:

- ✓ Date, location, researcher(s) name(s)
- ✓ Participants' names (if known and if confidentiality is not an issue) or identifying notes
- ✓ Activity that occurred (or did not occur as might have been expected)
- ✓ Social interactions including grouping, language, decision-making
- ✓ Direct quotations and answers to questions (if participant observation)
- ✓ Observer's notes, reactions, feelings, reflections

A sample observation sheet designed for observing schoolyard smoking is illustrated here.

**Figure 2: Tobacco Control Research Study
Observation Data Sheet**

Researcher: _____ Date: _____

Location: _____ Time Began: _____ Time Ended: _____

Weather: Sunny Overcast Rain Windy

Temperature: _____

of people in group observed: _____

of females _____ approx. age range _____

of males _____ approx. age range _____

Time to smoke one cigarette _____ minutes.

of times cigarettes shared _____ in each 30-min. observation.

of males who smoked: _____.

of females who smoked: _____.

Items to observe and note:

1. Describe where in the schoolyard the smoking is taking place.
2. Did you observe any adults? Were there any interventions from others to stop the smoking? If so, describe.
3. How are the smoking groups formed? One group? Several groups? All male? All female? Mixed?
4. Are there any behaviours from individuals to encourage or even coerce others to smoke?
5. Collect any comments, quotes from participants (only with informed consent).
6. Are there any in the group not smoking?
7. Describe how the teenagers look when they're smoking.
8. Note any other information relevant to the study.

Interviews

Qualitative researchers use interviews to find out peoples' experiences, perceptions, values, and opinions. Interviews can be used for many different purposes and take many different forms. They can happen repeatedly over a long period of time or only once. They can be short or long. The common element in all interviews is that researchers ask different people questions on a particular topic. Ideally this takes place with individuals or groups in face-to-face settings, although interviews can also be done over the telephone or Internet.

What are the different types of interviews?

Interviews may be conducted with individuals or groups. The decision to use individual, mixed group or focus group interviews will depend on the purpose of the research and the type of information required.

Group Types

Mixed Group Interview: The mixed group, which is made up of diverse representations (for example, age, gender, ethnicity) from different populations, brings different viewpoints to the topic under discussion. The interviewer tries to bring out these diverse viewpoints, and may try to bring about consensus. In tobacco control research, a mixed group could be a group of male and female smokers representing a wide age range, perhaps talking about when they started smoking. In Sweden, Pucci and Haglund (1992) outlined the many advantages of this method, particularly the value of group interaction for generating vital insights. They emphasize that sometimes individual interviews do not offer such an effective stimulus for rich discussion.

Focus Group Interview: Usually a focus group brings together people who are similar in some way — a group of nurses who discuss health issues about smoking, for example. They do not need to know each other. The purpose of a focus group is to learn about the perspective of this particular category of persons. For example, it may be of interest to know the perspective of men, a particular age group, or a particular ethnic group. Very often in qualitative research, several different focus groups will be conducted, each with a group of people of the same category. The data will show how different categories of people respond to the same issue.

In South Africa, for example, Peltzer, Phaswana and Malaka (2001) selected 10

focus groups to learn about the use of smokeless tobacco among adults. Five of these groups were middle-aged staff at a local university and five groups were elderly people from a nearby village. These groups had very different experiences of, and opinions on, smokeless tobacco use. Their different insights were necessary for the design of effective consumer-specific health promotion strategies.

The following types of interviews are used depending on the nature of the research; whether individuals or groups are being interviewed; and whether in-depth information, specific information, or information that can be more widely generalized is being gathered.

Interview Types

Informal Conversation: For use with both individuals and groups, this flexible method is often used in conjunction with participant observation. In this method, the questions emerge from natural conversation. It is usually a highly responsive method and is useful when researchers can stay in the setting or settings over a long period of time. Usually it involves more than one interview and these interviews build on one another. The individualized questions help establish rapport with the subject so that the information gathered is both increasingly detailed and trustworthy.

Semi-structured interview: Both individuals and groups may be interviewed using an interview guide comprised of a list of questions, topics and/or issues that are prepared prior to the interview or discussion. This list of questions is developed to ensure continuity between the subjects and to help interviewers cover essential topics. Because the list serves as a guide only, the interviewers are free to ask whatever questions they feel will result in information appropriate to the purpose and focus of the interview. This is why it is called semi-structured. Making a list beforehand, however, ensures that critical topics to be covered are not missed.

The case study on girls smoking in Britain (Michell and Amos 1997) provides a good illustration of the use of the interview guide. In this study, the researchers constructed loose interview guides so that each interviewer could start the interviews conversationally, find out what animated the group, and build the interview accordingly. However, the guide provided sufficient structure to ensure that each researcher found out information essential to the study: what was important to the group, and what role smoking and other risk-taking behaviour played in the girls' lives.

Mehl (2000) used interviewers and research assistants who were fluent in the various languages of the communities under study, rather than using an interpreter. Semi-structured interview guides were developed and used by all the interviewers to ensure reliability of data across all interviews. At each phase of the research, all interviews were conducted in the local language and then translated into English from detailed field-notes or tape recordings.

In this way, Mehl could have more confidence in the reliability of the data than if the data was being “interpreted” in the course of the interviews. Nevertheless, effective training of interviewers is critical to successful data collection.

Guidelines for Semi-Structured Interviews

- ✓ Use a list of topics and a few key questions (your interview guide).
- ✓ Begin with a greeting and light conversation to help people relax.
- ✓ Let people know the purpose of the interview.
- ✓ Ensure that they have given permission for notes to be taken or for the interview to be taped.
- ✓ Conduct the interview informally, mixing questions with discussion.
- ✓ Listen attentively and actively.
- ✓ Be open-minded.

- ✓ Carefully lead up to sensitive questions.
- ✓ Probe for specific answers and examples, especially when the responses are vague or too general.
- ✓ Periodically check your interpretation of the responses (for example, “So, what I hear you saying is...”).
- ✓ Encourage people to speak from their own experience with specific examples.
- ✓ If someone is dominating, intentionally seek out the views of others.
- ✓ If someone is taking a long time to express himself or herself, politely interrupt and check your interpretation of what he or she has said so far. This may help him or her to get back on track.
- ✓ Accept all responses with interest, rather than suggesting that one response is more interesting or acceptable than another.

Avoid:

- ✓ Helping interviewees give an answer
- ✓ Finishing sentences for hesitant interviewees
- ✓ Asking vague questions
- ✓ Asking insensitive questions
- ✓ Asking leading questions
- ✓ Asking questions that require only “yes” or “no” answers
- ✓ Allowing the interview to go on too long
- ✓ Relying on the more articulate, better educated, “authority figures” in the group
- ✓ Ignoring anything that does not fit your preconceptions

To illustrate the above points, the following box shows a sample interview guide for a tobacco control research project.

Box 3: Sample Interview Guide: Smoking Cessation Study

The focus of this study is to identify the key influences on smoking cessation among middle-class males in their mid- to late-thirties. The following questions should serve as a guide and provide themes for discussion.

- 1. Key demographic information (age, country of origin, when started smoking, how long they smoked, how much they smoked, and when or if they have quit).*
- 2. Why did they start smoking?*
- 3. What did they like about smoking?*
- 4. If they have quit, what influenced them to make the decision to quit?*
- 5. How were they able to quit?*
- 6. What ideas do they have about influences that might help other people decide to quit smoking?*
- 7. If they quit smoking and started again, can they identify the influences that led to the relapse?*

Note: Interviewers should use the answers to these questions to lead to other questions that will probe more deeply for detailed reasons from the subjects.

Standardized open-ended interview: In this instance, interview questions are written precisely and asked without deviation in wording. This method would normally be used only for individuals, as there would be little gained by conducting such an interview in a group setting. In this method, the questions are worded carefully and usually different research subjects are asked the same questions.

This method is useful when a number of interviewers are carrying out the research and there is a need for standardization between researchers so that the findings can be generalized across all cases. It is also useful when interview time is limited.

Box 4: Sample Standardized Open-ended Interview

Each of the following questions should be posed to each interviewee.

1. *When did you start smoking?*
2. *Why did you start?*
3. *Do you still smoke?*
4. *If yes, how much?*
5. *If no, when did you quit?*
6. *What were the influences that prompted you to quit?*
7. *What do you think are the health impacts of smoking?*
8. *Why did/do you continue to smoke?*
9. *What is/was pleasurable about smoking?*
10. *What do you think would prompt others to quit smoking?*
11. *Is there anything else you would like to add about smoking?*

What are the limitations of the different interview methods?

The following outlines some of the weaknesses and limitations of the various interview techniques outlined above:

Informal conversation: Sometimes it may take several conversations to get all the information needed for an interview of this type. Because of this, data may be more difficult to organize. It relies heavily on the conversation, listening, memory, and note-taking skills of the researcher.

Semi-structured: If the researchers follow the guide too closely, they may miss information of importance to the topic. On the other hand, if the interview is not structured enough, it may result in the collection of irrelevant or unnecessary information.

Standardized open-ended: Sometimes this method does not allow the researcher to pursue issues that arise during the interview but were not anticipated when the interview was designed. A standardized interview can also reduce the extent to which individual issues and opinions are allowed to surface.

What kinds of things should researchers ask in interviews?

Patton (1990) suggests there are six types of questions that interviewers should cover. These are:

Behaviours and actions: What is the subject doing? In tobacco control research, examples would include smoking behaviour habits or tobacco buying practices.

Values, Opinions, Morals: What does the subject think about the issue? *e.g. Under what circumstances is smoking acceptable? What do you think about smoking smuggled cigarettes?*

Feelings: What does the subject feel about the research topic? *e.g. What do you feel when smoking with friends? What does the legislator feel about the health risks of smoking?*

Knowledge/Facts: What does the subject know about the research topic? Is this knowledge based on facts? *e.g. Do you believe there is a link between your smoking and your children's asthma? How profitable is tobacco farming to farmers and the country?*

Experiences: What do people see? Smell? Hear? A typical question in tobacco control research might be what subjects experience and feel when they smoke or are around smoke. *e.g. How do you feel when you smell cigarette smoke? How do you feel after picking tobacco?*

Demographic/Background: These questions identify information such as age, education, ethnic background, occupation, and gender. Demographic and background information can be used to identify relationships between these variables and the responses to interview questions.

Box 5: How others did it: Pre-testing

A group of students from the Faculty of Health Sciences (FHS), the American University of Beirut (AUB) under the supervision of a faculty member pre-tested the manual. As a group, the team decided to conduct audio cassette recorded in-depth interviews on the topic of why people start smoking. The team went to the field for three and a half days and then returned to the classroom for another two half days in order to conduct the analysis.

The team first conducted three pilot interviews and from that experience, developed a semi-structured interview schedule. Then each field worker individually conducted two more in-depth interviews using the revised interview schedule. After intensely reviewing all the interviews and half a day's discussion, the team developed a coding scheme. Each individual first transcribed the interviews and then applied the coding scheme to her own interviews.

Cultural sensitivity and interview questions

The team from FHS, AUB found that some of the demographic questions were sensitive topics. For example, Lebanese women in the district of the research did not like to reveal their age. Raising the question at the beginning of the interview jeopardized the entire interview. They quickly learned that the ordering of the questions is a cultural thing and perhaps needs an initial pilot interview to determine.

Case Studies and Life Histories

The *case study* approach is a specific method of collecting data in a comprehensive and systematic format. Case studies are often done with individuals, but they can also be compiled on groups, organizations, communities, or programs.

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When a case study is biographical in nature, about an individual's activity over a period of time, it is often called a *life history*. A life history could, for example, be that of an individual (researcher, advocate, politician) who has spent his or her life advocating higher tobacco taxation. Typically, a life history documents major events, problems, or decision-making moments of a person, group, or organization.

In collecting data on smoking, for example, momentous events could be the time the smoker had his or her first cigarette and the time he or she quit, and what prompted these actions. In the case of the life history of a tobacco control advocate, it might be the "life-changing" event that encouraged him or her to get involved in this issue.

The information collected during a case study is called *case data*. This data could include:

- ✓ Basic facts about the person such as age, level of education, size of family, etc.
- ✓ Family tree, program, or organizational history
- ✓ Diaries, letters, certificates, awards
- ✓ Newspaper clippings, media articles
- ✓ Clinical records
- ✓ Relevant documents
- ✓ Interview notes
- ✓ Observation notes

Once all this data is collected, it is sometimes written in a *case record*, which is a summary or synthesis of all the material in the case data. Usually this is done when there is a great deal of information to analyze.

The final case study is a written compilation and analysis of the case data or the case record (if it was done) that tells a thematic or chronological story about an individual or organization.

A good case study should:

- ✓ Help the reader feel a part of the subject, group, or setting.
- ✓ Provide information that is both personal and focused on the issue, ensuring a balance between both.
- ✓ Compare and contrast (when different case studies are presented together).
- ✓ Be highly descriptive and as specific as possible.
- ✓ Be easily understood and interpreted.
- ✓ Include translations or definitions of terms when necessary.
- ✓ Include analyses highlighting themes, categories, “common threads,” differences, variations, and other factors that help reveal key information about the research topic.
- ✓ Analyze common perceptions or definitions of terms.

Further information on the analysis of case study data is discussed in Module Six.

What are the limitations of life histories and case studies?

A case history depicts the experience, perceptions, and ideas of the individual or program chosen for the study. Because it is based on a limited perspective, the analysis may have limited relevance or credibility for developing a model that can apply to a larger population, if it is the only research method used. The rich, textured detail of case studies is therefore often best used to elaborate concepts, theories, and ideas found through other methods, or to capture specific stories. Researchers who want to build theoretical models based on case studies need to collect a sufficient number of case studies to provide a wide enough range of information to justify theory construction.

Box 6: Examples of the use of case studies and life histories in tobacco control research

As part of the Family Practice Smoking Prevention Project in Kitchener-Waterloo, Ontario, Canada, Willms et al (1990) interviewed 43 heavy smokers 11 times to construct a series of detailed case summaries of smoking and smoking cessation. The case summaries included life history, smoking history, information on how people stopped smoking, and a variety of related themes.

In 20 focus groups, Kegler et al (2000) gathered smoking “start stories” from 144 non-reservation American Indian youths in order to better understand the social context of smoking uptake among aboriginal youth in the United States.

Parry et al (1999) describe in detail insights gained from the use of “life grid interviewing” methods for studying life-course patterns of smoking behaviour among elderly respondents with smoking-related illness. They focused in particular on the way in which researcher and respondent together reconstruct the respondent’s life course as a result of their discussion.

Mapping and Other Visual Representation Techniques

Inviting research subjects to draw maps, charts, or illustrations to communicate ideas, facts, and perceptions is effective in qualitative research for a number of reasons. Although these methods are not commonly used in all qualitative research, their use is increasing and their effectiveness for specialized situations makes them worth mentioning. First, these methods are a systematic means of gathering information, allowing group members or different individuals to express their views quickly, comprehensively, and creatively in a non-verbal manner. This can be useful in settings where translation is problematic. Second, in a group setting, visual information can be readily discussed and modified by the group so that consensus can be reached about the findings. The discussion itself elicits data that can be used to further enrich the information gathered and its analysis. Finally, these methods often lend an element of informality to the

research activity, and are less intimidating and more stimulating to the subjects than other more formal techniques.

In the Sri Lanka study, Mehl asked youths to draw a map of their community indicating settings of importance to young people, so that he could begin to determine smoking and non-smoking spaces within the community and surrounding area. Mehl found that young participants were quickly bored with standard interview techniques, and that such additional methods made the process more fun and engaging. Thus, he was able to sustain the interest and participation of young people and gather richer data.

Examples of the range of methods and tools of this type are:

- ✓ Maps – to illustrate spatial relationships
- ✓ Charts and Matrices – to illustrate the relative importance of different elements
- ✓ Drawings – to illustrate perceptions, feelings
- ✓ Timeline – to illustrate historical events and trends
- ✓ Seasonal charts – to illustrate seasonal patterns
- ✓ Visualization in participatory programs (VIPP) – to illustrate consensus views about a topic or issue

Many of these methods and tools have been developed over years of experience in participatory research (see Box 6 on page 65) . They are characterized by a high level of participation on the part of the subject group and the use of local materials. Some sources of information about these techniques are listed at the end of the manual. At this point, we illustrate two of these – VIPP and matrix ranking.

VIPP (visualization in participatory programs): This combines techniques of visualization and interactive discussion to collect views and thoughts about a research topic. It can be expanded to find consensus points in these views. It can also be used as a method of prioritizing topics of concern to the participants.

It is particularly useful for helping less talkative participants express their opinion in situations where others might normally dominate the discussion. The researcher acts as a facilitator in the VIPP process and assists each individual to express personal experience and knowledge.

VIPP may be designed and used in many different ways, but the core of the process is the use of coloured paper and specific questions. Here is an example of how VIPP might be used in a qualitative study to collect data about the smoking behaviour of males working in a local community development association. Thirty men from the association could be gathered in a room. All men are smokers who have indicated a willingness to quit smoking. Each man is given five different colours of paper and asked to brainstorm individually on the following five questions:

1. What were the reasons that influenced you to start smoking? (responses put on pink paper)
2. What were the influences that caused you to continue to smoke? (responses put on blue paper)
3. What reasons do you have for wanting to quit smoking? (responses put on yellow paper)
4. What do you think would help you quit smoking? (responses put on green paper)
5. Why do you like to smoke? (responses put on orange paper)

The men put their responses to each question on a separate piece of coloured paper. They are allowed to use as many pieces of paper as they want, as long as they put only one idea per piece of paper. Then all of the pieces of paper are collected and put into colour-coded piles. The individual contributions are therefore anonymous. The technique, however, reveals a great deal of information about each question or topic. This information can be summarized and displayed

visually by creating visual schematics with the pieces of paper, or by tables, drawings, and matrices created by the participants.

This data can then be further developed by either the group or the researcher into thematic areas or categories. Often the group is best at developing this analysis through discussion. This technique is particularly useful when it is necessary to obtain data from subjects quickly and inexpensively.

Matrix Ranking

Matrices are one of several ways to stimulate discussion in a group setting and generate data for qualitative inquiry. For example, it may be of interest to compare the extent of smoking and other substance use among girls and boys over two different time periods. This can be used to stimulate discussion about why such changes in patterns of substance use have occurred.

Table 3: Matrix ranking of the relative levels of consumption of different substances in two time periods

Substance	Youth 15-20 yrs (males)		Youth 15-20 yrs (females)	
	10 yrs. ago	Now	10 yrs. ago	Now
Home grown tobacco	***			
Betel nut chewing	*****	***	*****	***** ****
Cigarettes		*****		**
Marijuana		***		
Locally brewed alcohol	**	***		
Beer		****		
None of the above	*****	*	***** *****	*****
	(20)	(20)	(20)	(20)

The group is given 20 seeds or stones to distribute in each column to indicate what they think is the relative level of consumption of each substance for each time period.

This exercise could be done with two focus groups – youths (male, female) or older males and females - and the results compared. In this way, different perspectives on the patterns of consumption among the youths can be recorded.

The strength of these methods is their informality and the fact that every single person in the group can participate regardless of age, gender, or education. They allow subjects with lower levels of literacy to participate equally and with less of the suspicion associated with more formal interviews or methods.

What can researchers document using mapping or other visual representation?

Many aspects of tobacco control can be researched with these methods and tools, including:

- ✓ Whether or not the group views tobacco control research as important.
- ✓ Community or group priorities for research and education, such as growing alternative crops to tobacco.
- ✓ Places and times where people smoke.
- ✓ Strategies to deal with increasing tobacco taxation.
- ✓ The role of tobacco growing and selling within the overall economy.
- ✓ The relationship among smokers and between smokers and non-smokers.
- ✓ The expenditure patterns of smokers and non-smokers.
- ✓ Gender differences in tobacco production and consumption.
- ✓ Trends in smoking levels over time.

Box 7: Participatory Research

Participatory research is an approach that involves stakeholders in an issue in defining the type of research questions that need to be asked, in analyzing the data, and in making future plans based on the findings. As a set of research principles and practices, it began as a reaction to conventional research practice that was – and still is, in many cases – characterized by research professionals and academics extracting information from people who derive little benefit from the research findings. Some proponents of participatory research argue that research is only truly participatory if it is owned and controlled by the people rather than the researchers or the officials commissioning the research. For this reason, much work has been done to develop techniques that people with little or no formal education can use to conduct and analyze their own research to inform their own decisions for action. For example, members of a farming cooperative who want to know the difference between tobacco and other cash crops in terms of their impact on sustainable livelihoods may decide to do this research themselves. With the help of a researcher-facilitator, they may decide on the indicators they want to measure, carry out the qualitative or quantitative data collection, and conduct the analysis of the findings. This research then informs the decisions they need to make.

Although participatory research techniques have been developed that people with little or no formal education can use, this does not always mean that they are used in a participatory manner. These same techniques can be used by outside researchers to collect data for conventional applied research, in which case it is not participatory.

In most instances, participatory research is conducted as a collaborative effort between professionals and people whose issues are being researched. The research therefore seeks to provide information for a variety of stakeholders, while empowering those with the least education or professional experience to contribute to decision-making. To avoid misunderstanding, it is therefore important to be clear about who owns and controls the research, and how the results can be used once the research is complete.

All research, whether participatory or not, needs to be done in a climate of trust and respect, where exploitation of people for the sake of research must be avoided at all costs, as outlined in Module Four.

The Researcher as the Instrument

As we discussed in Module Two, qualitative methods typically rely on fieldwork. During fieldwork, researchers must spend time in the setting they are studying. This setting could be a program, an organization, or a community. The researcher is the key instrument of inquiry. For this reason, validity of findings depends largely on the skill, experience, competence, and rigour of the researcher. To be an effective research instrument, therefore, the researcher needs training and practice.

What are the skills of the qualitative researcher?

All researchers involved in any type of qualitative research should have the following skills:

- ✓ The ability to write clearly in an organized fashion.
- ✓ The ability to take complete, comprehensible notes.
- ✓ The ability to operate essential equipment (where applicable) such as a camera, videotape or audiotape recorder.
- ✓ The skill and experience to separate crucial details from longer descriptions.
- ✓ Knowledge of local language and/or dialect.
- ✓ Knowledge of and experience with the particular social, cultural, religious, or economic characteristics of the group, community, or setting.
- ✓ Good verbal communication skills.
- ✓ Respect for individuals and/or groups.
- ✓ The ability to gain the trust of an individual or group.
- ✓ Awareness of ethical responsibilities associated with handling information about a person.
- ✓ The ability to organize and synthesize many different types and amounts of data.

Specific skills for observation include:

- ✓ The ability to remain a silent, passive, observer without influencing the action or situation is particularly important. The ability to listen and observe attentively takes practice.

Specific interviewing skills include:

- ✓ The ability to formulate questions that are open-ended, clear, and neutral.
- ✓ The ability to help the subjects feel at ease.
- ✓ An understanding of how to sequence questions and how this affects the subjects' response.
- ✓ Good communication and listening skills, to ensure that the interview flows with comfort and ease.
- ✓ The ability to refrain from imposing one's own views on the interview.
- ✓ The ability to form quick and intuitive insights during a conversation. This means knowing when to "dig" for more information, and how much information can be gained from the research subjects before they tire or become bored with the experience.

Specific skills for mapping and other visual representations include:

- ✓ Knowledge of various techniques for involving subjects in data collection.
- ✓ Facilitation skill and experience.
- ✓ Creativity in adapting techniques so that they are appropriate for the particular setting or subjects.

Being prepared for qualitative research takes a combination of education, training, and personal qualities, including being able to accept and understand other people's points of view. Knowledge of tobacco control issues is also important. Whatever your background, experience in qualitative research will improve through practice and training.

Role-playing is very effective in training new researchers in the practice of various research methods. Good communication skills, especially listening, must therefore be included in the training package.

Triangulation

In Module Two we discussed triangulation in terms of mixing qualitative and quantitative methods in one study.

The concept of triangulation also applies to researchers, data sources, and theories.

Data Verification

In order to crosscheck the accuracy of data collected or the interpretation of interviews and observations, qualitative researchers apply the principle of triangulation. The origin of this word comes from surveying, where angular measurements are taken from three different places in order to fix a point in a specific location on a grid, so that plans and maps can then be drawn with accuracy. The same idea is used in research. In this case, in order to be confident of the accuracy of measurement or of an interpretation, the same research question is approached by at least three different routes. In this way, bias in measurement or interpretation can be corrected. There are several different dimensions to triangulation:

- **Methodological triangulation** is the use of different research methods to study a single research problem. For example, the researcher may want to find out what influences a farmer to grow tobacco. A group interview, participant observation of farmers during planting season, and a case study of a particular farmer may be used, and the results from these different methods can then be compared. Any differences in the results can then be analyzed to determine whether the differences are due to biases introduced by any one of

these methods, or whether further research is warranted in order to obtain credible results.

- **Investigative triangulation** is the use of different researchers to study the same research problem with the same people and with the same methods. If the same results are discovered, the findings and interpretations have stronger validity because of this corroboration.
- **Data triangulation** is the use of different data sources to crosscheck findings. For example, if there is evidence from interviews with company executives that tobacco sales have been targeted at young smokers, the researcher may also find evidence of this in secondary data, such as company reports, or in company advertising.
- **Theory triangulation** involves using different theoretical perspectives to look at the same data. For example, social scientists may interpret data drawn from an ethnographic study of a community in different ways depending on their theoretical preferences. Someone trained in theory that explains how a community functions (with all members playing complementary roles) will interpret the data one way. A theoretical perspective that highlights sources of tension in the community may interpret the data differently. Examining the data from various perspectives yields similar or different findings. As with other forms of triangulation, this prompts the researcher either to correct for bias, conduct further research in order to arrive at credible findings, or report the findings from these different perspectives as alternative interpretations of the data.

Triangulation is based on the idea that no single approach ever really solves, delineates, or validates a particular problem. Different methodologies, investigative approaches, and other types of triangulation yield more complete data and result in more credible findings. Remember that many qualitative researchers use the principle of triangulation not so much to verify findings, but to find agreement between different perspectives.

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Now that you have an understanding of what qualitative research is (Module Two) and the different research methods that can be used (Module Three), in the next module (Module Four) you will learn the fundamental principles of qualitative research design.

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Key Terms and Definitions

Case data All information collected during a case study.

Case record A synthesis or summary of all the material in the case data.

Case study A specific method of collecting data in a comprehensive and systematic format. Case studies are often done with individuals, but they can also be collected for groups, organizations, communities, or programs.

Data triangulation Using a variety of data sources within the same study, such as interview data and written reports, to verify findings.

Direct observation A qualitative method that consists of systematically observing and documenting a subject in its natural setting.

Focus group A group of people brought together to discuss their views regarding a particular issue. Most often members of the group share some common characteristics.

Informal conversation A qualitative research method whereby questions emerge from natural conversations, as opposed to responses to specific questions.

Investigative triangulation Using different researchers to study the same research topic.

Life history A case study of an individual that is biographical in nature and completed over a period of time. A life history may also be a description of a person's behaviour over time, rather than a history based on data collected over time.

Matrix ranking A visual representation technique whereby matrices are used to stimulate discussion in a group setting and generate data on preferences, priorities, or other ranked phenomena.

Methodological triangulation Combining different qualitative research methods within one study to verify the accuracy of data and conclusions.

Mixed group interview A group of people that reflect the diversity of the population in terms of age, gender, and race, for example, and who bring different viewpoints to the topic under discussion.

Participant observation A research method that involves the researcher studying a situation through personal experience and observation while talking informally with the subjects about what is happening.

Semi-structured interview Research conducted using a list of questions, topics, and/or issues prepared prior to the interview or discussion (an interview guide). Interviewers are free to ask whatever questions they feel will best help them to elicit information.

Standardized open-ended interview Interview questions are written precisely and are asked without deviation in wording. Normally used with individuals only.

Theory triangulation Using multiple theoretical perspectives to interpret a single set of data.

VIPP (visualization in participatory programs) A technique using visual representation and interactive discussion to collect views and thoughts about a research topic.

**MODULE FOUR:
RESEARCH PURPOSE AND DESIGN**

Objectives:

Upon completion of this module, you will be able to:

- ✓ Understand the importance of a literature review.
- ✓ Understand how to determine the purpose of the research.
- ✓ Design research question(s).
- ✓ Understand how to determine the focus of the research.
- ✓ List different sampling strategies.
- ✓ Define internal and external validity.
- ✓ List ways to strengthen internal and external validity.
- ✓ List key ethical considerations.

In the previous module you learned about different qualitative research methods. In this module, you are ready to learn how to design your own research project. Because qualitative research is not based on precise, standardized instruments and processes, thorough attention at the design stage is particularly important so that your research is well defined, focused, rigorous, and ethical.

In this module you will learn how to do this, especially related to tobacco control research. Throughout this module you will be developing your own research plan. As the module proceeds, you should have a complete research plan and ideas on how to implement it. Like most aspects of qualitative tobacco control research, the design of your research will be unique – there is no perfect design that suits all purposes.

Before you begin designing, it is necessary to narrow a topic down to something that is relevant and feasible in the study context. A literature review can help you to do this because it may show you that an apparently simple topic may not be feasible because it is more complex than you had thought. Or it may show you the gaps in knowledge that you might be able to explore. Once you have settled on an appropriate topic, a more focused literature review can then help you focus your topic even further.

The Literature Review

The literature review identifies gaps in knowledge, strengthens your understanding of the issue and, most importantly, helps you decide what to focus on. The process involves searching for literature and reviewing it.

Qualitative Research for Tobacco Control

If a researcher has a definite concept or particular tobacco control issue in mind, the initial search will be smaller. The primary purpose of this kind of search is to:

- ✓ Make sure this research has not been done already.
- ✓ Understand what has been done so the new research can build on earlier knowledge.
- ✓ Identify additional information that will aid your study.
- ✓ Identify research methods that were used to study this issue in the past, and the lessons learned.
- ✓ Gain further knowledge about the topic.

The most common searches use computer databases of scholarly journals, articles, and conference proceedings. Secondary sources such as magazines, web pages, and newspaper clippings may also be used.

By the time you have completed the literature review you should know:

- ✓ Different views on the issue, its causes, solutions, and previous research done
- ✓ Whether or not there is consensus about these views
- ✓ Your own view on the topic
- ✓ What is missing from the evidence
- ✓ What questions have not been asked about the topic
- ✓ What data collection and analysis methods have been applied in related research on this issue

Once you have become better informed about the current status of the particular issue in tobacco control, you will need to complete the following steps:

1. Define the purpose of the research.

2. Establish the focus of the research.
3. Select appropriate methods for data collection and analysis.
4. Pay attention to practical details.

During each of these steps, it may be necessary to re-visit or review the literature, depending on your needs.

Step 1: Define the Purpose of the Research

Tobacco control research is needed to inform policies and programs that address all of the issues outlined in Module One. However, each study will have a specific purpose that should be stated clearly. The purpose statement of the study is important because it explains why this research is relevant and what decisions will be made on the basis of its findings.

Examples of the purpose of a study are:

- to improve or guide health policy or programs related to a smoking issue
- to reduce health care costs associated with treatment of tobacco-attributed disease
- to lower the healthcare cost of tobacco-attributed illness in a certain geographical area.

Questions you need to ask before you define the purpose are:

✓ Who will use this research?

Examples include:

- government officials responsible for tobacco control policy
- local politicians
- community leaders
- educators
- others

✓ **How will this research be used?**

Examples:

- to guide tobacco control policy
- to design education programs about quitting smoking
- to develop advocacy strategies and campaign for laws related to environmental tobacco smoke
- to identify areas for further research
- other

✓ **What do the users of the research need to know so that the research will be most useful?**

Examples:

- factors required for success from other tobacco control policies or education programs
- special patterns or themes of smoking behaviour
- reactions of different populations to similar tobacco control policies
- other

Answers to these questions will guide the research design so that the end results fit the purpose of the research.

The design of a qualitative study is often described as *iterative* or *emergent*. This means that qualitative research is flexible so that it shifts and changes as new information develops. You will notice that in Mehl's study (2000), he first explored the issue of male youth smoking generally. His earlier findings helped him identify which specific questions required further study.

Step 2 - Establish the Focus of the Research

The focus of the research should be a specific statement of what is going to be studied. By clarifying your specific objectives and questions, you are limiting the study to what is achievable, given your resources and the resource requirements of the research topic. Before establishing the focus, answer these questions:

- ✓ What resources do you have to carry out the research?
- ✓ How much and what *in-kind* resources are available to you?
- ✓ Do you have any time constraints or deadlines?
- ✓ Are you interested in answering broad questions (breadth)?
- ✓ Are you interested in very specific questions (depth)?
- ✓ Based on your purpose in Step One, what is/are the question(s) you are trying to answer?

The focus of your study defines the scope of the research including the people who will need to be involved. This means you also need to ask:

- ✓ Who can best answer the question(s) you need to know?
- ✓ Are there other sources of information besides people that will help you in your research?
- ✓ Where can these people or this information be found?

When you put all these questions together you will produce the purpose and focus of your study. For example, the purpose of Mehl's study (2000) was to inform policymakers about how and why individuals in Sri Lanka became smokers, so that better anti-smoking programs to counter the use of tobacco could be designed.

In order to find out specific details, and bearing in mind the research resources available to him, Mehl (2000) focused on the social and cultural context in which

smoking occurs within an urban community, and particular individual and community determinants of tobacco use in that context. His focus was therefore geographically, culturally, socially, and gender specific: factors influencing tobacco use by young males in an urban community.

In this module, the emphasis has been on qualitative research that takes place at a single site. This is because qualitative research lends itself to in-depth studies for the purpose of developing understanding and meaning of particular cases. Sometimes, however, qualitative researchers need to enlarge the scope of the research in order to obtain findings that can be generalized. In such instances, teams of field researchers may be formed to conduct multi-site research, as indicated earlier as a strategy for strengthening external validity. This “scaling-up” needs to be done with caution. Such a research strategy requires a more standardized approach, which means some of the flexibility of qualitative research has to be compromised.

Step 3 - Select the Appropriate Methods for Data Collection and Analysis

This involves deciding on the following:

- ✓ What strategy to use for sampling.
- ✓ How to collect and analyze data.
- ✓ How to ensure rigorous data collection and analysis.
- ✓ How to deal with ethical considerations.

What are the main sampling approaches in qualitative research?

Before selecting a sampling strategy, determine who or what will be sampled. As we discussed in Module Two, this is referred to as the *unit of analysis*. Is information needed about:

- ✓ Individuals? For example, individual variations and views about tobacco smuggling.
- ✓ Groups? For example, comparing variations between groups in views about tobacco use and production (male vs. female, teenagers vs. younger children, growers vs. non-growers.)
- ✓ Programs? For example, understanding the effectiveness of a particular tobacco control policy.
- ✓ Sites? For example, comparing smoking at home with smoking at school.
- ✓ Communities?
- ✓ Countries?

Once you have a clear understanding of the unit of analysis you will use in your research, you need to decide on the different strategies for *purposeful sampling*. In qualitative research, purposeful sampling allows you to select a sufficient number of particular cases to provide enough in-depth information for you to build a credible analysis of the issue under study. This is quite different from *random sampling*, used in quantitative research, which ensures that all potential subjects have an equal chance of selection and are therefore truly representative of the whole population.

For qualitative research, the most common types of sampling are as follows:

Extreme or deviant case sampling: This approach focuses on unusual cases, assuming that understanding the unusual might provide particular insight for understanding other behaviour. For example, in Indonesia smoking is rare among

women. Those who do smoke, tend to be light smokers. Some, however, are heavy smokers. What is it about the few who do smoke heavily that explains this unconventional behaviour? Would this information help plan a policy or program that might prevent other women from becoming heavy smokers? To answer this question you would sample the extreme cases of women who smoke heavily.

Maximum variation sampling: In this approach, cases are selected to give as wide a range of perspectives or experiences as possible. It is equivalent to representative sampling in quantitative research. The reasoning behind this approach is that if common features can be identified across such variation then these might reflect important core experiences or shared impacts. Sampling people from different geographical areas or different social groups are commonly used applications of this approach. In order to do this type of sampling, you first have to decide which categories of people are of interest and then select people that represent each of the full range of categories. For example, to examine cultural attitudes towards smoking, you may want a sample that includes: men and women, employed and unemployed, children and the elderly, rural and urban dwellers, and representatives of all the major religious groupings. Everyone in this sample will represent several categories, so it is important that each category be **sufficiently** represented. For example, if half of your sample is women, you can be sure that a woman's perspective is well represented. But if the Hindu perspective is represented by only one adult male, it will be important to ensure a sufficient number of women and children who can also bring a Hindu perspective.

Homogeneous sampling: This approach focuses on studying cases that share similar characteristics. The purpose here is to develop an in-depth analysis of a particular category. For example, if the research objective is to study smoking behaviour among pregnant women, a homogeneous sample of pregnant women

who are similar in age and socioeconomic status would be appropriate. To identify similarities and differences between pregnant and non-pregnant women, a homogeneous sample of non-pregnant women would also be required.

Typical case sampling: In this type, subjects are sampled according to what is typical, normal, or average. This approach is chosen to describe what is typical about the program, group or individual. Typical case sampling is often used when entire programs or communities are the units of analysis. Usually the site that is selected is not in any way unusual. For example, if the focus of inquiry is on cultural or economic reasons for growing tobacco, a community where tobacco growing is typical may be selected for comparison with a community where tobacco growing is rare.

Snowball sampling: This type of sampling is used when the tobacco control researcher does not know where or from whom to obtain the best information, especially in exploratory research. Typically, during the course of one interview, the researcher asks for names of others who could supply relevant information. The selection of cases is therefore not systematic but rather evolves as the research proceeds. This form of sampling may be used early in a research program to help identify later parameters and methods of sampling.

Stratified Purposeful Sampling: In stratified purposeful sampling, the intention is to capture the major variations between the cases studied without using a maximum variation sample. The potential cases for study are divided into “strata” containing average, below average, or above average cases. Each stratum therefore contains relatively homogeneous cases while the sample as a whole captures the major variations between strata. For example, if a study is seeking to find out the factors that influence farmer decisions about whether to grow tobacco in a particular country, a multi-site design could take into account the

size of farm and its ecological zone. The stratified purposeful sample for a multi-site design would therefore draw farmers from each size stratum (small-scale, medium-scale, large-scale), and each ecological zone stratum.

In qualitative research, choice of sampling strategy is a question of judgement. While there are advantages of this for the researcher, it does not mean that sampling is any less rigorous than in quantitative research. Sampling must be done carefully, and sampling decisions justified meticulously. Unless it is done well, the validity of the research findings will be jeopardized.

How many should be in the sample?

Qualitative researchers use the concept of *saturation*. This means that data collection continues until the researcher finds that no new information about the research question can be obtained from additional cases.

Box 8: Examples of sampling strategies used in tobacco control research

In order to explore decision-making processes with respect to addictive behaviours, McCartney (1997) sampled 100 individuals from the electoral register together with a clinical sample of 55 dependent gamblers, drinkers, smokers, and eaters.

Poland et al (2000) drew their sample of smokers and non-smokers from respondents to a Canadian province-wide survey on smoking, smoking cessation and tobacco control who indicated willingness to be re-contacted for research purposes.

Kolben and Lurie (1999) used an internet listserv for tobacco activists to gather information on cigarette labeling practices in 40 countries across the globe. They discovered that the average size of the warning content on cigarette packages in developing countries was less than one-third of the size of the warning content on cigarette packages in developed countries.

Coleman (1996) discusses how doctors were recruited to a study of smoking cessation counseling in general practitioner (GP) consultations and, in particular, the impact that the decision to videotape doctor-patient interaction had on recruitment (response rates and volunteer bias). The use of a screening questionnaire instrument to guide maximum variation sampling is also discussed.

Taylor et al (1999) conducted a study of gender and ethnic differences in beliefs about smoking among adolescent middle-school children in southwestern United States. A multi-stage sampling approach was needed, given the target sample. First, the research team met with school district personnel from a large city in southwestern USA to gain permission to conduct the study. Then an urban middle school with a multi-ethnic population was chosen in order to study this critical period in smoking initiation. Two teachers volunteered time in their sixth-, seventh- and eighth-grade classes to facilitate recruitment. The project was presented to students as Project Health VOICE (an acronym for Views, Opinions, Ideas, Convictions, and Expectations). In each classroom of the volunteering teachers, Project Coordinators explained the participation requirements, procedures, and incentives. The students were invited to participate in an interview to help the investigators learn what young people feel and think about several health-related topics. Required consent materials for parents were distributed at the conclusion of the recruitment presentation. Incentives were given to the classes returning the greatest proportion of signed consent forms. Of the 280 invited to participate, 80 returned consent forms and 63 were interviewed individually. Seventeen students were not interviewed because they could not be scheduled before the end of the school year. The authors describe the ethnic mix of the final sample as follows: 57% African American, 25% Hispanic, 13% European American, and 5% other ethnic groups (total 53% girls, 47% boys).

How should research methods be selected?

In the previous module, we outlined the different methods for collecting data in qualitative research. At the design stage, the researcher needs to select methods carefully to ensure that the methods suit the research purpose and focus.

It is not always necessary or appropriate to decide on all the methods to be used before you start the research. Consistent with an iterative design, Mehl's study

(2000) shows how methods were selected for new areas of inquiry that emerged from the findings of earlier stages of the research. As the research progressed, a wide variety of methods were used, including qualitative methods (focus groups, in-depth interviewing, community mapping) and quantitative methods (surveys using random sampling). Additional methods were used with young participants, such as community maps, photographs, and the compilation of “typical user profiles.” These methods were deliberately chosen to make the process more fun for the young people, motivating them to participate more openly, and ultimately providing richer and more reliable data.

In thinking about the purpose of the research you will need to consider the audience for the research findings. Different audiences may have different expectations and preferences for particular methods, depending on how they intend to use the research findings.

Another consideration in choosing a methodology is the time available for data collection. In the case study on girls’ smoking behaviour in Britain, one researcher spent an entire term in the school, which allowed her to gain acceptance by the subjects and not just be associated with a “smoking study.” She was able to establish rapport and create an openness that was reflected in the quality of the data collected. If less time had been available, the data quality might have been different.

How should qualitative research be validated?

Research needs to demonstrate valid findings and conclusions. When you assess validity in qualitative research, you assess whether or not the claims made by the research can be justified. In part, this justification depends on whether the data interpretation and analysis is credible given the data that has been collected. In part it depends on the reliability of the data collection and analysis methods used.

There are two types of validity that need to be taken into account in the design of the research.

Internal validity is the extent to which research findings are an accurate representation of what has been studied. The first test is whether or not there is logical coherence in the interpretation of the data: for research to have internal validity, its findings must be consistent and credible. This validity relies largely on rigorous methods of data collection and its interpretation and analysis. Here are some methods that you can use to strengthen the internal validity of a study:

- ✓ **Triangulation:** In the last module we learned that this means using several different methods and/or researchers to study the same thing.
- ✓ **Member checks:** Respondents are asked to verify that their views have been accurately reflected in the research findings. Remember, however, that this is time-consuming and might not work with sensitive issues. People may change their testimony because of fear, or they may simply change their point of view.
- ✓ **Long-term observation:** Observation over a long period of time ensures that the observations are not biased because of seasonal variation or the influence of a particular event.
- ✓ **Peer examination:** Other researchers are invited to review and critique the methodology and analysis. This is often used to identify any individual bias of the researcher and to ensure that the analysis is grounded in the evidence found in the data.
- ✓ **Ensuring reliability:** Qualitative researchers need to check that the research instruments (especially the researcher) are consistent in their observations and use of methodology. For example, if several different interviewers are using the same interview guide, try to ensure that the same basic information is being obtained in the interviews, and that the interviewers are consistent in note-taking. In studies where translation is taking place, the reliability of the translation must be checked.

When Mehl (2000) commented on the internal validity of his findings, he noted that he had to return home before all the data were entered and analyzed. This meant that the findings were not *member-checked* (to have greater confidence in their validity), nor did the research benefit from the additional insights the participants might have given when presented with the findings. On the other hand, the research does demonstrate rigour in that the multiple methods were used to triangulate the findings and develop new insights.

External validity: External validity is the extent to which the research findings for a particular group hold true for the general population. In quantitative studies, external validity is assessed by looking at the size of the sample and the sampling procedures. In some qualitative studies, this may be also appropriate. For example, Pucci and Haglund (1992) needed to select a large enough representative sample to demonstrate that the findings from group interviews could be generalized to all workers in the Swedish municipality involved. In qualitative research, which focuses on particular contexts, external validity may not be as critical as it is in quantitative studies. However, thick descriptive data that results in a detailed analysis is often used to demonstrate external validity in qualitative research. This is because complex and comprehensive analysis may have broader application to contexts other than the particular group under study.

Validity, therefore, has more to do with the richness of the data and the capabilities of the researcher. Sample size is often less of an issue than it is in quantitative research.

In the Mehl study (2000), the external validity of the qualitative research component was evident from the detailed descriptive data generated, and the extensive sample of young men representative of different cultural and social groups. The quantitative survey served to further strengthen the external validity of the findings.

How can external validity be strengthened?

- ✓ **Compile detailed descriptions:** In qualitative research, data should generate *thick description*. Generally, the more detailed the description, the more confidence there is in the applicability of the analysis to wider settings.
- ✓ **Use typical cases:** If the study focuses on cases, categories, or settings that are agreed to be typical, there is usually more confidence in the analysis. These typical cases can be included in a maximum variation sampling strategy, if necessary.
- ✓ **Use multi-site and multi-category design:** Research that is conducted at different sites or with different categories usually results in findings that can be generalized with greater confidence. For a long time, for example, it was assumed that research done with male subjects could be generalized to women. However, theoretical developments and experience have shown how important it is to include both genders, and analyze both separately and comparatively if valid generalizations are to be made about the whole population.

Validity can also be strengthened by clearly outlining the limitations that occurred during the research. For example, Mehl (2000) concludes his study by commenting on the limitations of the research that might threaten the reliability or the validity of the findings. For the most part, he focuses on the quantitative methods used, but a number of issues are also raised about the research in general and the qualitative methods in particular. He notes, for example, that the pool of suitable communities from which to draw a sample was much more limited than he had expected. This was because, “in a clear departure from the norm,” other researchers in the area had paid people to participate in their studies. He was limited, therefore, to areas where this expectation had not been raised. He also notes that it was difficult to establish rapport in some communities, a problem that can severely limit the quality of the data and its reliability. He also refers to

the tension arising from the on-going civil war, which made potential research participants more wary than they might otherwise have been.

What about the bias of the researcher in qualitative research?

It is difficult to have *value neutrality* or lack of bias in qualitative research. In order to be rigorous, therefore, qualitative researchers are obliged to be conscious of the biases they bring to the research, and to try to offset such biases by externally and internally validating their work.

Rigour in qualitative research also has to do with the quality of the observations made by the researcher. Researchers must be honest and factual. Patton (2002) suggests that researchers can learn a great deal from the approaches of investigative journalists. Journalists try to describe accurately what is happening in front of them, by paying close attention to: Who? What? Where? When? and Why? Like a journalist, as a qualitative researcher you should be careful not to insert your own opinion into the observations.

Tobacco control researchers bring a commitment to tobacco control to their research, a perspective or world view that in itself can bias the researcher. A world view is the general interpretation of life and its events by a particular group of people. We may refer to the world view of a particular culture or a particular social group within a culture, such as scientists, rural farmers, or teenagers. The ability of a researcher to understand the world view of another person is the hallmark of a good qualitative researcher. For example, understanding “fatalism” as a cultural worldview may assist in understanding what is, and what is not, possible as far as behaviour modification of smokers is concerned. Among researchers, there may be different worldviews depending on their research discipline and social class. These may influence data collection and analysis. Consider, for example, the worldview of the researcher who is

strongly against smoking and how this may affect how he or she asks questions, and how people respond during the interviews. Researchers should examine their world view, report on it, and assess whether it has any impact on the research itself.

Ethical Issues

In any kind of research, the ethics of research practice have to be considered. Professional ethics include fundamental principles such as:

- honesty
- fairness
- respect for persons
- beneficence (try to do good, but whatever you do, do no harm).

These fundamental principles should guide you to conduct research that in no way deceives people about any aspect of the research process, and in every way ensures that they are respected and appreciated for their participation in the study. These fundamental principles also underlie the principles that are specific to social research:

Informed consent. In seeking this, you should not just ask people to give their consent to participate. People also need to understand fully why they are participating in the research, what will happen to the data that they contribute and whether there are any negative or positive consequences of their participation. Transparency – explaining clearly the purpose of the research – is therefore an essential element of informed consent, and this must be complemented by the ability of the subjects to understand what they are consenting to.

Privacy. Respect for privacy is important when you are trying to collect sensitive information, if you are trying to observe people in private settings, such as their homes, or if you are disseminating the results of the research. While people's informed consent may allow you access to private information and private settings, it is an ethical responsibility to ensure that this information is never used in any way other than originally intended or in any way that would infringe on their right to privacy.

Anonymity and Confidentiality. Rights to privacy are often protected by anonymity and confidentiality. Anonymity is achieved if there is nothing reported in the research findings that would allow a subject to be identified. One way of doing this is obvious: do not write the names of the subjects. However, information could still be written in such a way that it is easy to identify the subject, even if the name is not used; so it is the researcher's responsibility to ensure that the identity of the subjects cannot be detected. Confidentiality refers to the trust placed in the researcher to use the information responsibly, not to share information about the subject in ways that could prejudice their interests, and specifically not to share information that someone asks to be removed from the researcher's record. Both anonymity and confidentiality deal with the real threat posed by giving information for one purpose if there is any chance that it might be used for another purpose that could be harmful to the subjects. Without anonymity and confidentiality, tobacco farmers and middlemen, for example, might never agree to take part in a study of the role of the tobacco industry in promoting tobacco farming for fear of the consequences of saying anything critical.

In addition to ethical principles, there are *contractual obligations*. Sometimes, you may need to hire research assistants or translators. Fulfilling these contractual obligations – whether formally or informally made – is an obvious ethical, and often legal, requirement. All researchers should ensure that they fully understand

and agree to a code of ethics, such as the one found in Frankfort-Nachmias (2000). See also Bhutta (2002).

In the reporting stage, you must state how ethical standards are maintained. In Mehl's study (2000), all interviewees were required to sign a consent form, and his research design and strategy were scrutinized by Johns Hopkins University's Human Subjects Review Board.

Special care should be taken when children or minors are research subjects. In the case of the Mitchell and Amos (1997) study, permission was sought from both parents and students. A letter was sent to the parents explaining the purpose of the study and they could return a form if they did not want their children involved. In other cases, it will be important to ensure that parents give their active consent and research cannot proceed until that consent is given.

Step 4 - Pay Attention to Practical Details

Even though it is tempting to design a research project that attempts to answer a large number of important questions, a focused study will have the better chance of success. In addition, there are a number of practical issues to consider. These are:

- ✓ **Level of skill of the researcher** This is important because researchers are the main instruments of inquiry in qualitative research. Therefore, the skill they bring to their work is critical to successful data collection and analysis.
- ✓ **Equity** We have already discussed the importance of including both genders in the study. Strive to achieve equity in the team as well.
- ✓ **Flexibility** Flexibility is fundamental to qualitative research because the first stages of the research often illuminate areas that need to be researched further. In Mehl's study (2000), one aspect of his research led to another and, as a researcher, he had to be flexible to allow this to happen.

- ✓ **Budget** All donors and institutions will require that a budget be submitted with your research proposal and design. Because a budget is so important, we have provided more detail on this aspect of planning. This budget should contain everything you need to complete your research, including research prior to fieldwork, the fieldwork itself, data analysis, and dissemination of results. Make sure that you are aware of local costs if the field portion of your study is taking place in a country other than your own. Also ensure that you budget for adequate time for all stages of the research process. Keep in mind that some funding agencies are not flexible about moving funds between different categories of expenditures. Securing funds is often a complex and lengthy process requiring detailed and rigorous proposals. Make sure that you start this process long before you expect to begin the actual research. Each item in your budget should have a different “line” or category.

Typical line items in a research budget are:

- Overheads (rent of office space, maintenance, etc.)
- Research expenses
- Office equipment
- Communications costs (phone/fax/internet/postage)
- Office supplies
- Staff time (professional and support, including benefits)
- Travel and transportation
- Meeting expenses
- Printing/photocopying
- Dissemination

Some of these items may be provided *in-kind* by your institution. Always clearly identify these in-kind items as well as other sources of funding and the actual amount you are requesting.

It is during the design of your research that you organize your thinking and ensure that you have considered all aspects of rigour and ethics in defining the purpose, objectives and methods of your research. Now you are ready to practice what you have learned.

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Key Terms and Definitions

Contractual obligations The legal and ethical commitments that are made between employer and employee regarding the terms of employment.

Emergent A way to describe the flexible nature of qualitative research design, which shifts, changes, or emerges as new information develops.

External validity The extent to which the research findings for a particular group hold true for the general population.

Homogeneous sampling A qualitative research sampling approach that focuses on studying cases that share similar characteristics. The purpose is to develop an in-depth analysis of a particular category.

Informed consent An ethical requirement that subjects understand why they are participating in the research, what will happen to the data that they contribute, and whether there are any negative or positive consequences of their participation.

In-kind Support for research provided by a donation of goods or services, but not cash.

Internal validity The extent to which research findings are an accurate representation of what has been studied.

Iterative A way to describe the process of knowledge development because it shifts and changes or emerges as new information develops.

Maximum variation sampling A qualitative sampling approach where cases are selected to give as wide a range of perspectives or experiences as possible.

Member-check Presenting findings back to the subjects of the study so they can verify their accuracy.

Saturation The point during data collection when the researcher finds that no new information is being discovered.

Snowball sampling A qualitative sampling approach where the researcher asks for names of others who can provide further information.

Stratified purposeful sampling A sampling approach that captures the major variations between cases by assigning everyone to a particular category or stratum, and then sampling purposefully within each stratum.

Thick description The more detailed description of qualitative research, called “thick” because of its detailed nature.

Typical case sampling A qualitative sampling method where subjects are sampled according to what is typical, normal or average.

Value neutrality The absence of bias.

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**MODULE FIVE:
DOING FIELDWORK**

Objectives:

Upon completion of this module, you will be able to:

- ✓ Prepare a checklist for pre-departure preparations prior to fieldwork.
- ✓ List some of the concerns and challenges of fieldwork.
- ✓ Understand the importance of building relationships with *gatekeepers* and others who may influence the research process.
- ✓ Understand the importance of and how to establish rapport with those involved in the research, and how to do this.
- ✓ List common fieldwork tools.
- ✓ Know some of the requirements for comprehensive field notes.
- ✓ List what must be accomplished upon returning home from fieldwork.

By now you understand qualitative research, its methods and how to plan a research project. This module will help you to prepare for and conduct fieldwork, and to understand your responsibilities upon completion of the research.

Whenever you undertake fieldwork in qualitative research, it will be a new experience. Experienced qualitative researchers who have done extensive fieldwork say that every time they engage in fieldwork, there are new problems as well as interesting new discoveries. The planning you do before you leave and the organization and enthusiasm you bring with you will all help ensure success. Probably two of the most important virtues of good fieldwork researchers are patience and respect. For many people, fieldwork can be the most creative, exciting, and stimulating part of qualitative research.

In the Field

All qualitative research is field based. Field research or *fieldwork* is the study of events, activities and interactions in a systematic way in a particular location. This usually involves observing and interacting with people, groups, or sometimes organizations.

Fieldwork in qualitative research can be:

- Live-in (away from your home)
- Short visits staggered over a period of time
- Carried out in your own community

Qualitative researchers need to be well prepared, organized and thoughtful to ensure efficient, effective, and ethical research. Once you have secured the necessary financial resources you are ready to:

1. Prepare for fieldwork
2. Live in the field (if fieldwork is conducted away from your current location)
3. Conduct fieldwork
4. Return home from the field study

Step 1- Prepare for Fieldwork

What preparations are necessary?

The following areas should be completed prior to departing for fieldwork:

- Identify the research site(s) (if not already done in research plan)
- Obtain research clearance and visas if necessary
- Gain access to the individuals, groups or organizations involved in issues relevant to the study
- Finalize the research design
- Finalize the selection of methods
- Acquire appropriate fieldwork equipment and supplies
- Consider and plan for ethical considerations
- Train a research team

Identify research site(s): The choice of the site is tied closely to the purpose and focus of the research. Often, the selection of a research site is partially determined by how easy it is to get access to certain individuals or groups. Local authorities, agencies and individuals can best assist in this task as well as colleagues in tobacco control. The most important consideration about the research site is that its selection should be based on how it best addresses the particular issue or population under study.

Obtain research clearance and visas: Fieldworkers who go to countries other than their own to conduct tobacco control research may need permission to carry out the research (commonly called *research clearance*) and/or visas to enter the country where they plan to work. Sometimes, even local citizens will require some form of official permission to do fieldwork in their own regions, countries or institutions. For example, in school-based research, you may need permission from the head teacher, the local education authority, or the ministry of education. A thorough understanding of the bureaucratic requirements of the area where you will be working will help in this part of the planning process. You should be prepared for the possibility of delays in receiving important visa, travel and clearance documents. Begin this process well in advance of undertaking fieldwork.

Gain access to individuals, groups or organizations: Once you have identified the research site, you need access. Gaining entry or accessibility to individuals, groups, or organizations can often be complex, and depends on the researcher's familiarity with the subjects, the location, local culture, bureaucracy, and political situation. Cooperation is required from everyone, informally and formally, and involves being clear about the nature of the research, its intent and purpose, and what will be done with the results. Ideally, a community will see that the research is of benefit to them and that it is therefore worth their while to contribute to its success. As discussed in Module 3 (Text Box 6: Participatory Research), it may be appropriate to conduct collaborative research, where community members take an active role in the research process and are not simply informants. With particular institutions or individuals, letters of introduction will be required. People will need to understand the purpose of the research, its sponsors, and how the results are to be disseminated before they give access. No matter how faithfully bureaucratic and cultural protocols are followed, researchers may still encounter "*gatekeepers*" who intentionally or unintentionally prevent easy access to study subjects. Patience and open communication will be most helpful when this happens.

Prepare theoretical approaches and research design: Because qualitative research does not involve the testing of a well-defined hypothesis and because conceptual models often need to be modified or discarded once in the field, researchers start by identifying a general area of inquiry and develop tentative working methodologies. Flexibility in the design, as mentioned previously, is a fundamental aspect of qualitative research.

If you asked qualitative researchers from around the world about their fieldwork experiences, probably the most frequent comment that would be made is that fieldwork is unpredictable. If you are inflexible about how you are going to approach your research, you may be frustrated in the field. For example, flexibility to accommodate the wishes of the local people may be key to developing local support for the research. This does not mean that theoretical preparation is not important, but rather that you must make allowances for the possibility of change once you are established on-site. Part of this preparation will be reading about the subject that you are researching, as well as about the locale and culture of the area. This means that the period prior to fieldwork is a good time to check the literature again. Local magazines or newspapers with tobacco advertisements or stories can also be useful to illustrate and define the topic and give a local perspective.

Design the necessary methodological tools: Preparing the research methodology means designing the tools required for each method you have selected. For example, if you are conducting research that involves observation and interviews, you will want to develop an observation data sheet and interview guides (if it is a semi-structured interview) prior to going into the field. Even though these data sheets may change as your research evolves, getting this work done before you enter the field will save time and energy. Remember that data sheets can include diagrams, layouts, and descriptive checklists to make them more useful. Test the use of these sheets before beginning.

This is also the time to practice the skills that you need to carry out the methods that you will use. Very often, a colleague can act as a “subject” and you can role-play methods prior to arriving on-site. This is especially useful if you are planning to use methods that you have not used prior to fieldwork. Talking with others who have conducted similar research can also give you useful insights into the practice of qualitative research.

Remember that preparation for fieldwork is a mental exercise as well as an exercise in preparing the documentation and materials that you need in order to complete the project. Conducting a small pilot study is an excellent way to test both your methodological and mental readiness for the task.

Acquire appropriate fieldwork equipment and supplies: Prior to going into the field, ensure that you have all the necessary equipment. This may include:

- ✓ Clipboard, data sheets
- ✓ Tape recorder, dictaphone
- ✓ Cameras (still and/or video)
- ✓ Typewriter, laptop computer
- ✓ Office supplies (paper, stapler, scissors, markers, tape)
- ✓ Supplies for visual representation techniques (any special items required for a specific method)
- ✓ Extra batteries, film, tapes, powercord, computer disks, as necessary

If you are using technical equipment, make sure you have all necessary attachments and extras (batteries etc.) and that you know how to use the equipment. Test the equipment before departing for the field. This will help avoid the disappointment and anxiety of technical difficulties that can cause serious disruptions and distractions during research.

Consider a code of ethics: As we discussed in the previous module, ethical considerations require that no harm be done to the subjects and that participants are well informed and consent to the research. When you are preparing to enter the field, think about how you will keep the promise of confidentiality that you may offer the participants. You also need to consider how this research will benefit the communities or individuals under study, and how you might be able to reciprocate for their time and participation in this work. Some individuals are satisfied with receiving a copy of the research report or being called to a meeting where you discuss your findings. If you are using assistants in the research, you must also ensure that they have a clear understanding of ethical issues and follow ethical procedures.

Box 9: Ethical issues

The following is an example of how a qualitative researcher in Argentina dealt with the ethical issue of payment for participation in the study:

In writing a research project recently, I struggled with these issues. This particular project allowed for participants' compensation. I felt that providing individual compensation, even if I had the funds, would present difficulties for future research projects by others in this location. Furthermore, our culture in the region has a strong collective component and compensation on an individual basis could have had negative consequences on the way people think and function on a daily basis. On the other hand, reciprocity is also a key cultural element. Individuals and families support each other and provide mutual help through the exchange of goods, work, etc. Therefore it is customary to give something in return for a favour or for any form of contribution, such as participating in a research activity.

Since this was a school-based research project, I decided to plan for providing compensation to participating schools in the form of learning materials (rather than money). In other cases, compensation in the form of different resources can be provided to participating communities, organizations, or institutions.

A common mistake made in qualitative research is that researchers promise to deliver reports to research subjects, and then find out that they are bound by the

research funder's restrictions in the dissemination of results. Make sure that you understand all of your commitments thoroughly and have considered the ethics of these commitments prior to fieldwork.

At this point you should review the section on ethical considerations outlined in the previous module.

Final Fieldwork Preparation Checklist

- ✓ Have you established the appropriate clearance to complete the research?
- ✓ Have you practiced the methods you will be using?
- ✓ Do you have the appropriate equipment and tools?
- ✓ Have you tested and practiced using the above?

Step 2 - Live in the Field

If your fieldwork requires that you go to live in the location of the research you will need extra preparation. While it is impossible to anticipate every need, there are key areas that require attention. These are:

- ✓ Accommodation and other practical issues
- ✓ Time management
- ✓ Physical and mental health

Accommodation and other practical issues: Try to live as close as possible to the research site. This is important, not just for convenience, but because it also helps you become an active participant in community life. When researchers show a willingness to live among the participants, it helps break down barriers and establish rapport. Try to arrange accommodation ahead of time and be clear about other arrangements such as the cooking of meals. Be prepared for the fact that you may not have as much personal space and privacy as you are accustomed to.

Think about practical considerations such as clothing and weather. For some locations, the researcher may need to pack personal items that might not be available where they are conducting research. Finding out about these issues ahead of time can help you feel more comfortable when conducting research.

It is always best to bring the research supplies that you require. Do not take for granted that office supplies and other items will be available in the field.

Time management: When working in the field, it is easy to become immersed in work. Building in time for rest and relaxation ensures that you do not “burn out.” Fieldwork requires immense concentration and energy. You will need to manage your time well and ensure a balance between work and relaxation.

Physical and mental health: Differences in diet, exercise, water and routine can all cause stress to physical and mental health. You should be well prepared before you go and should take precautions once you are in the field, particularly if you are working in a country where there are concerns about epidemics or endemic disease. Once you have arrived in the field, learn the location of local health facilities in the event that it is necessary for you to seek medical attention. Do not take risks with food and drink, particularly if the diet is different.

Depression and loneliness can also occur during extended periods of live-in fieldwork. This is sometimes related to being away from family and friends, but can also be due to feelings of isolation and alienation, especially if you are living in a new culture. Being aware of the possibility of depression and anxiety may help you recognize the signs if they appear. Often a change in routine, talking to loved ones, being open to and spending time with new friends in the community will help ease these problems.

An additional concern is that, as a researcher in the field of tobacco control, you will have to spend time in places where smoking occurs and therefore put yourself at risk from the effects of passive smoking.

Step 3 - Conduct Fieldwork

Before you actually begin fieldwork and after arriving at the research site, there are certain steps that should be taken to set the groundwork for your research. Probably, before you have arrived, you have done the necessary work to get research clearance. However, this process of obtaining and maintaining access must continue once you have arrived in the field. What follows are some helpful tips for ensuring that relationships are built in a way that will aid research:

- ✓ Build relationships with bureaucrats, where possible, and ensure that there is official support for your research.
- ✓ Make sure that the appropriate officials have been notified about your research. Do not assume that this has been done. Realize that it will often require courtesy calls and other forms of attention.
- ✓ Ensure that the appropriate relationships with local research establishments are initiated and maintained. Create an awareness of the purpose and focus of your research.
- ✓ Consult with local research institutions as to the appropriate remuneration for research assistants, enumerators and interpreters, if you are using these services during research.
- ✓ Establish rapport with people in the communities under study while maintaining an appropriate level of detachment.

Establishing good relationships with individuals is a basic step in the development of effective research. Good relationships are developed when you are honest, open and friendly. Being considerate, interested and respectful of others will help establish and maintain these relationships. Probably one of the best things

researchers can do is to try and imagine how they would like to be treated if they were research subjects. Think about these relationships as business relationships and behave accordingly.

Other considerations include:

- ✓ Be sensitive to and aware of differences between yourself and subjects, whether in class, educational background, social status, or religion. Some of these differences may mean that you need to adjust your behaviour, language, attire, or other considerations. Researchers should show respect and take time to understand these nuances.
- ✓ Be alert to the possibility that some individuals might have personal or political agendas that could prejudice the research.
- ✓ Identify research assistants and interpreters as required, and ensure that conditions for their employment and pay are fair and clearly explained.
- ✓ Train assistants and interpreters so that they clearly understand what you are doing, why you are doing it; their role in the research; and ethical considerations.

Beginning Fieldwork

It is exciting when you finally begin to conduct qualitative research after so much time devoted to designing and planning. There are a number of things that you can do that will help ensure successful field study. These include:

- ✓ Always ask permission to tape-record, photograph and/or take notes. Respect people's wishes in regards to these matters.
- ✓ Take care in selecting informants and remember that their views are limited.
- ✓ Maintain rapport with the communities and individuals throughout the study.
- ✓ Be disciplined throughout your research. There will be times when nothing new emerges and you may subconsciously stop looking for additional insights.

Treat each day as if you are about to make a new discovery. Do not assume that you already know the answers.

- ✓ Provide feedback to the participants to verify your findings and provide them with analysis as it emerges.
- ✓ Adjust your research instruments if they are not working as well as you planned.

Field Notes

Your field notes form the core of your data. One of the biggest challenges that a qualitative researcher faces is the development of comprehensive and coherent field notes. The following are useful guidelines:

- ✓ Take detailed and thorough notes at all times during fieldwork.
- ✓ Identify notes by date, location, type of data collection method and any other relevant information.
- ✓ Record quotations that capture participant views, preferably in the subjects' own language, using local expressions.
- ✓ Make a clear distinction in your notes between description and interpretation.
- ✓ Use visual aids and drawings to describe scenes and/or group interaction.
- ✓ Include mental notes, analytical ideas and descriptions that occur to you while the observation or interview is taking place.
- ✓ Note impressions and feelings that you experience as a researcher.
- ✓ Note practical issues related to access, consent, etc.
- ✓ Note the usefulness of methods and/or problems that occur.
- ✓ Note areas that require follow-up or things to check into and do later.
- ✓ Review notes each evening to clarify and embellish.
- ✓ Flesh out these notes and make them as detailed as possible as soon as possible after the interview or method is completed. Most qualitative researchers would advise you to get these notes done as soon as you can while the material is fresh in your mind.

- ✓ Begin the analytical work while you are in the field; the patterns that you begin to see may signal you to seek additional data. This interaction between data collection and analysis is typical of *grounded theory methodology*, which will be discussed in more detail in Module 6.

Some qualitative researchers find it useful to keep a personal journal while they are in the field. This helps to bring the field “back home” when the research is completed. It also provides you with an opportunity to reflect on your experience and uncover insights for the next time you engage in fieldwork.

Step 4 - Return Home

Finishing fieldwork can leave researchers with mixed emotions. They will be back in their own environment faced with the exciting task of analyzing data and interpreting results. Often, however, researchers have built an extensive rapport with their subjects. The leave-taking can be emotional and not without complications. This is a time to clarify the expectations of the people in your study and to ensure that you can meet them. Take time to express the appropriate gratitude to those who have assisted you throughout your work. Make sure that you take with you all of the appropriate data and notes that you have acquired.

Once you have returned home, the following should be considered:

- ✓ Ensure post-fieldwork obligations are met. If you have promised photographs, video footage or other documentation, make sure these are delivered.
- ✓ Transcribe audio and videotapes as soon as possible (if you have not already done so).
- ✓ Analyze your data as quickly as possible while the experience is fresh. Often, qualitative researchers get sidetracked by other obligations and do not handle and/or review their data soon enough. If the period of time between analyzing the data and the fieldwork is too great, it is often difficult to capture and

remember key information.

- ✓ Take time to write reflections about your experience, including any technical or logistical difficulties encountered. These thoughts will be especially helpful for others who undertake similar research or research in a similar geographic area.
- ✓ Do not be surprised if you have some problems adjusting to your regular routine. Fieldwork, especially if it takes place in a different geographic location, can add excitement and new emotions. You have probably been working in a situation where you have been able to dedicate yourself fully to your research. Be realistic about what you can achieve given all the obligations that you now need to meet.
- ✓ Ensure that you meet all contractual obligations with funders and other agencies. Some funders will require an immediate post-fieldwork assessment or report. Review these obligations and meet them when required. This can influence your ability to access resources for further research.

By the end of the period of fieldwork you will be ready to move on to analyzing the data and preparing your report. This will be the focus of the next module.

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Key Terms and Definitions

Fieldwork The systematic study of real-life events, activities, and interactions, usually through personal contact with the subjects of the research.

Gatekeepers Those who decide whether the researcher can gain access to a research site or subject.

Research clearance Fieldworkers who go to countries other than their own to conduct research may need permission to carry out the research (research clearance) and/or a visa to enter the country where they plan to work.

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**MODULE SIX:
QUALITATIVE DATA ANALYSIS**

Objectives:

Upon completion of this module, you will be able to:

- ✓ Organize a category system for data analysis.
- ✓ Know how to sort and code qualitative data.
- ✓ Explain inductive and deductive analysis.
- ✓ Explain data synthesis.
- ✓ Understand how to quantify qualitative data.
- ✓ Know some of the common qualitative data analysis computer programs and software.

Analysis of Data

This module deals with how to make sense of the data collected in the form of written text. As discussed in previous modules, this text may be derived from observations, interviews, case studies or other sources. In this module we will discuss how to categorize, synthesize and analyze this data both manually and using computer software.

You should note that qualitative data “analysis” is not like the data analysis that can be accomplished by statistical software packages commonly used for quantitative data. For those reading this manual who are familiar with quantitative research and the use of computer programs like Statistical Package for Social Sciences (SPSS), you will find qualitative data software quite different. Qualitative software packages help researchers organize data and think coherently and clearly about its meaning, but they cannot do the same statistical and graphical analysis that SPSS does. This is because qualitative researchers employ an approach in which theory and investigation are interwoven in a process of induction. Explanation and meaning are derived from the data, instead of the data confirming or disconfirming a theoretical position put forward as a hypothesis to be tested. Data is evidence *for* theory construction, rather than evidence *of* a theoretical position.

Box 10: Grounded Theory Methodology

In qualitative research, grounded theory methodology is the most commonly used methodology for developing theory. With this methodology, theory development begins with the data. Data is coded and categorized as the researcher begins to see patterns emerge. Theory is developed throughout the research process as data interpretation takes place and comparison of that interpretation is made with new data that is collected. In other words, the researcher is continuously making sure that the evolving theory explaining why things occur is supported by the evidence in the data, whenever that data is collected. Of course, this does not mean to say that other existing theories and the theoretical perspective of the researcher do not also influence theory development. However, the important principle is that grounded theory tries to develop and elaborate theory by constant comparison with the data gathered during the research process. See Strauss and Corbin (1990) for more on grounded theory, and Lawn et al (2002) for an illustrative application of grounded theory.

Before qualitative software packages became available, qualitative researchers conducted their analysis manually. Many still do if their *data set* is not too big. The process is essentially the same and it is highly recommended that researchers learn how to do manual analysis first. This will allow them to understand the mechanics of the analytical process, and appreciate what software can and cannot do.

When conducting qualitative tobacco control research, you are trying to produce significant findings about this topic. Once all the data is collected, it is often a challenge to make sense of all the information. Like other aspects of qualitative research, there are no firm rules for how data should be analyzed. There are however, useful guidelines that will help you become better organized and effective. One rule that should be followed by all qualitative researchers is that they must report their analytical procedures in a detailed fashion. This is because the way data is organized, synthesized and analyzed will be unique to your style

and preferred method of working. Documenting the process is necessary in order to demonstrate the validity of your findings to your audience.

How can qualitative data be organized and categorized?

There are three steps in the organization and categorization of data:

1. Getting started
2. Reading and coding notes
3. Interpreting the data

Step 1 - Getting Started

The following steps begin data organization:

- ✓ Make sure all of your data is complete.
- ✓ Make several copies of all data.
- ✓ Organize the data into different files.

Make sure you have everything: Before you begin to organize and categorize data, make sure you have everything in front of you and that it is complete. This may seem obvious, but you would be surprised how often qualitative researchers find another pile of data after they have already begun the task of organizing.

Making copies: The next thing to do is make copies of all data and store the copies in a separate location to prevent loss due to fire or theft. Almost every qualitative researcher will have a story about precious data that gets lost. This data cannot be replicated. Even if you repeated all the fieldwork again, there is no guarantee that you would get the same data. So, whether your data is on paper or on the computer, always maintain back-up copies. This includes making copies of audiotapes. You will use the data for different purposes, so several copies are helpful.

Organizing files: Having a number of copies of your research also means that you can organize it in different files. Some researchers recommend keeping one set of data in a chronological file. This means that you can look at the data in the order in which it was collected.

The second kind of file to compile is an analytical file or “journal notes.” This file contains all of the notes and thoughts that you wrote down while you were in the field. This is probably where you first made notes about different categories and meanings, such as why you think people smoke or opinions about raised tobacco taxes. There might also be different notes about how smokers define or justify their behavior. Of course, these meanings will be dependent on the type of tobacco control research you are undertaking.

Another file should contain relevant notes about research methodology. Here is where you put all your notes about what worked and what did not. These notations will become critical in the final report writing stage or for journal articles. Those reading your research report or article will want to know the difficulties you encountered with the methodology, as well as your successes. Your detailed notes about the effectiveness of certain methodologies, and their weaknesses and limitations, will allow you to report on these accurately and effectively.

Some researchers use file systems that relate to their final reporting requirements. In other words, as they sift through all of their notes and the data they have collected, they put the information into topic files that are directly related to the topics required for their final report.

The following table outlines these different types of files and their different uses for organizing your data:

Table 4: Different types of data files

Type of file	Type of content
Chronological data file	All data organized in order of the date collected
Journal notes file	All notes made by the researcher in the field, such as preliminary ideas about the meaning of the data
Research methodology file	All notes about research methods, such as the methods used, concerns about validity or reliability, which methods worked and which did not
Files for different topics that the researcher expects to report on	Data related to particular topics of interest. For example, a study on tobacco farmers might include files such as <ul style="list-style-type: none"> • History of tobacco farming • Other crops grown/land use • Role of women in tobacco farming • Reasons for tobacco farming • Environmental consequences of tobacco farming

Step 2 - Reading and Coding

The next step in organization and coding is to read all the data files carefully. After several readings you should be able to make some sense of your data and construct a category system that allows all of the data to be categorized systematically. Patton (2002) says that coming up with these topics is like constructing an index for a book or labels for a filing system. He suggests that you look at what is there and give it a name or a label. The challenge is to ensure that the categories are *internally homogeneous* and *externally heterogeneous*. This means that everything in one category must hold together in some meaningful way and that the differences between categories need to be bold and clear.

If you have a lot of data that you cannot fit into your category system, it usually means that there is some flaw in your system. One of the guidelines for good qualitative research analysis is that there must be a category for every *data segment*. In other words, when you have finished sorting your data into the different labels, there should be nothing left.

This means that your classification system should be:

- ✓ Mutually exclusive – each segment should fit into one category only (unless you can justify placing certain segments in more than one category).
- ✓ Exhaustive – every example has to fit somewhere.
- ✓ Meaningful – to be useful, the system must have social significance, relevance, and meaning.

For example, in an unpublished study on smoking cessation conducted especially to provide material for this module, a series of semi-structured interviews with men in the 25-35 age group were conducted.

After transcribing the interviews and reading them over several times, the researcher developed the following category system:

1. The smoking period
 - 1.1.1. When started and stopped
 - 1.1.2. Reasons for starting smoking and continuing to smoke
2. Circumstances in which smoking takes place
3. Influences on smoking behaviour
 - 3.0.1. Home environment
 - 3.0.2. Peers
 - 3.0.3. Work environment
4. Reasons for stopping
 - 4.1 Health
 - 4.2 Cultural or religious
 - 4.3 Financial
 - 4.4 “Significant other” pressure
 - 4.5 Consideration for others

5. Ways to stop
 - 5.1 Based on experience of respondent
 - 5.2 Based on opinion of the respondent

Here is an example of a portion of an interview with the categories assigned to segments of the text. Each segment is enclosed by brackets.

Tobacco Cessation Interview #1

Interviewer: How did you start smoking?

Subject: (I started smoking out of peer pressure. 1.2) (Before, my father used to smoke but he stopped because he was scolded by my mom. 4.4) (In school, my classmates are smoking so they invited me to join them; I tried it out of curiosity, for the taste. 1.2)

I: Why do you smoke?

S: (Every time you drink wine or beer, it's nice to smoke. After eating you feel like smoke. 2.0) (It's very nice to smoke. The aroma is nice. 1.2)

I: Do you smoke at specific times?

S: (Walking together with a group, or when I am out drinking. 2.0) (When I'm studying and the times I have to concentrate, I smoke. I'm alone in my room. 2.0) (But I realize that it doesn't make sense because it dries my brain and it lessens my memory, my comprehension, and I'm beginning to lose weight. I don't want to eat anymore. 4.1)

I: What would help people to stop smoking?

S: (Once you smoke you have to be aware that there are passive smokers who are mostly affected. 4.5)

I: So people would stop more if they thought about the consequences to others?

S: (Yes, but also there is the cost. You can put the money instead of buying cigars into something worthwhile. If you're with a girl why don't you put it into something fun for the future? 4.3)

I: How do you get people to think about quitting?

S: (Increase the tax. Discourage buyers from buying cigarettes. And have a campaign of anti-smoking so that people are really discouraged to smoke. And tell your kids. Once you feel an obligation to the child, you stop smoking because you are conscious that it will affect her lungs. And then for the smokers, tell them to consider your "stick" as a nail to your coffin. Bring them to hospitals and let them see videos or actual operations with having lung cancers in order to get scared of the effect of smoking. 5.2)

I: Do you think that creating a challenge for people, is a way to encourage people to quit smoking? What would you say to them?

S: (You tell them this is how I started. I started smoking just like you. You'd tell them, I was able to overcome the habit and I know you can do it also. 5.1) (When you're smoking you're dirtying your temple. 4.2)

Once the data has been coded according to the category system, data belonging to each category is retrieved, assembled and viewed. This process is called the *code and retrieve* process. It allows the data to be organized and described before the researcher goes on to the next stage of analysis.

Some people prefer to code and retrieve their data using a manual system. This is a time to be creative and discover the method that works best for you.

If you are doing the organizing manually, here are some helpful tips:

- ✓ Develop a format for identifying where the data has come from. One technique is to take a coloured pencil and put a different colour through each interview with a diagonal line. This means that a particular colour will be on every comment that the interview subject made. A colour key can be used to identify each subject by a different colour.
- ✓ Cut the data using scissors and put each piece of relevant data into different files or piles for each category.

If you are sorting and organizing your data using basic word processing on the computer, here are some points to remember:

- ✓ Back up all files on a regular basis.
- ✓ By cutting and pasting, create a different computer file for each different category in your system.
- ✓ In the original file, mark each segment of data in some way so that the subject can be identified.

Step 3 – Data presentation and interpretation

The researcher must make a clear distinction between what the data says (*descriptive data*) and what the data means (*researcher interpretation*). Before you can analyse your findings, the data needs to be presented clearly in a

descriptive way, making reference to field notes and other data sources. This presentation of descriptive data is the way in which the researcher “grounds” the interpretive analysis in the actual data collected.

Interpretation means finding causal linkages, making inferences, attaching meanings, and dealing with cases that disconfirm or contradict your analysis. All of this requires careful and rigorous analytical intellectual work. It is probably the most challenging aspect of qualitative research. It is also where qualitative research is subject to the deepest scrutiny about its validity. This is also where computer software is least able to help.

Building understanding and meaning from the data is called *inductive analysis*. For example, data on smoking behaviour among 20-30 year old women may provide many examples of reasons for stopping smoking. From this data a pattern may emerge of particular types of reasons being associated with stages in the female life cycle. A reason to stop smoking at a certain stage may not, however, be the most compelling reason to stop at an earlier stage. Gradually, in the course of inductive analysis a theory may emerge of how influences on behaviour strengthen or weaken depending on the stage of the woman’s life cycle. Health concerns may, for example, play a stronger role in influencing a woman to stop when she is middle-aged than when she is younger.

Another way of understanding inductive analysis is to think of it as “working up” from the data. Working up involves building new understanding from thick descriptions, reflecting on data records and discovering patterns. All of these lead to theory emergence and construction.

Qualitative analysis can also “work down” from the theory using *deductive analysis*. This is defined as incorporating, exploring, and building on earlier theoretical input, or testing a theory. In this case, the categories used for qualitative

data analysis may be derived from theory, rather from the data itself. Suppose, for example, that qualitative research is used to test a researcher's theory that small farmers' decisions are motivated by short term economic gain rather than long term sustainability of agricultural production. The researcher might set up a category system that allows data to be placed in categories that will provide evidence of the strength or weakness of that theory. For example, categories such as "short term concerns," "long term concerns," "perceptions of short term opportunities," and "perceptions of long term opportunities," may be used. Remember, however, that when a category system is designed to test a theory, it is just as important to look for negative evidence – cases that weaken the theory – as it is to provide evidence that supports the theory.

It is crucial that both processes involve the recognition of categories in the data and the exploration of meanings that come out of the data.

How can data be presented visually?

A. Descriptive Data

The following table is an example of how to organize and display data so that it is easier to interpret. Simple matrices may be used to compile interview data so that patterns among different types of respondents (for example, males and females of different age groups) can be detected. This is an example of presenting *descriptive data* – what the data says.

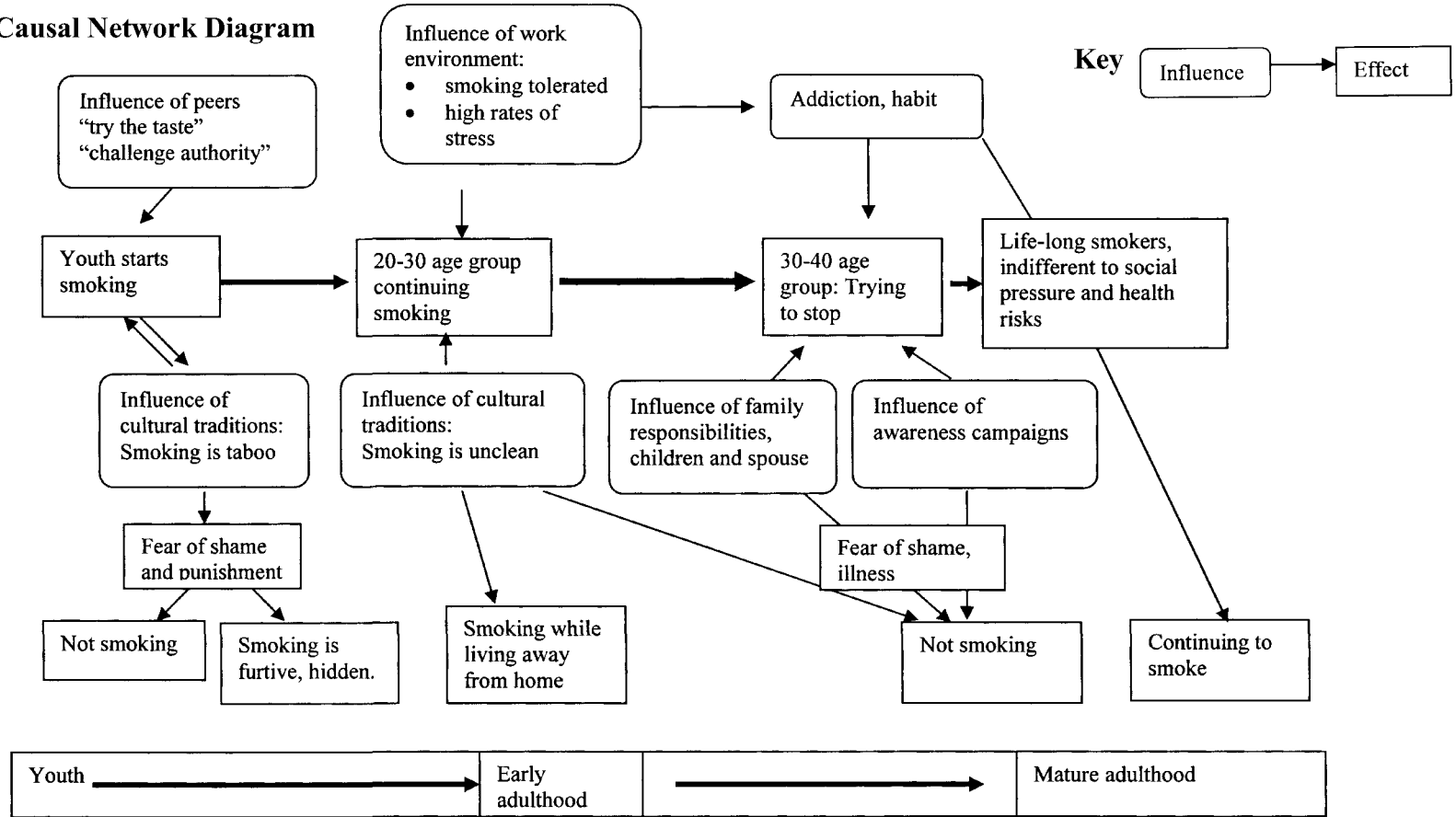
Table 5: Example of data organization and display

RESPONDENTS	INFLUENCES ON SMOKING BEHAVIOUR	CIRCUMSTANCES IN WHICH SMOKING TAKES PLACE	REASONS FOR STOPPING	WAYS OF STOPPING (personal experience)	WAYS OF STOPPING (opinion, without experience)
MALES: 20-30					
Respondent 1	- Classmates - Work pressure	- Drinking with friends - Working alone	- Mother scolds father for smoking - "It fries my brain." - Loses interest in eating - Moods are affected - Thinking about effects on others - "You are dirtying your temple."		- Increase tax - Scare people - Point out effect on children
Respondent 2	- Parents smoke	- Chain smoker (all circumstances)	- Health - Financial - "I am embarrassed that I am so dependent."	- None (Cannot stop)	- No idea - Confront effects of smoking on others
Respondent 3					
MALES: 30-40					
Respondent 4					
Respondent 5					
Respondent 6					
FEMALES: 20-30					
Respondent 7					
Respondent 8 etc.					

B. Interpretive Data

Causal network diagrams can also be constructed to help make sense of the cause and effect relationships that appear in the data. For example, the following causal network was constructed for this module to illustrate how linkages between smoking behaviour and smoking outcomes might occur at different stages of a man's life. On the following page is an example of presenting interpretive data (what the data means).

Figure 3: Causal Network Diagram



Tentative theory building. Influences on smoking behaviour, and their relative importance, change with age. At a young age, people actively rebel against traditional taboos. A youth starts smoking, influenced by peers. If the taboo against smoking is strong, this may result in either not smoking or smoking in secret, because of the fear of shame and punishment. As the smoker gets older, he or she is first more responsive to cultural norms such as “smoking is unclean.” It is only when family responsibilities are felt that appeals to health or financial considerations are effective.

How do I quantify qualitative data?

If qualitative data is in the form of responses to standardized questionnaire surveys, this data may be quantified. Simple frequencies and relationships between variables such as gender and the type of response to a particular question can be calculated either manually, or using qualitative software, such as EZ Text. For example, in his research in Sri Lanka, Mehl developed a frequency table describing smoking taking place in specific contexts. The definitions of these “contexts” were derived from interview data generated from in-depth interviews with youth.

As you will see in the next section, certain computer software programs are particularly well suited to quantifying qualitative data.

Using Computers for Data Management and Analysis

Software can help the researcher with data management and analysis at different stages in the research process, as follows:

- ✓ Word processing: writing up and editing field notes
- ✓ Coding: attaching codes to segments of the text for later retrieval
- ✓ Storing: keeping text in an organized database
- ✓ Search and retrieval: locating text segments when required
- ✓ Linking data: assembling relevant data into clusters, categories and networks
- ✓ Memoing: writing reflective comments on various segments of the data
- ✓ Analyzing content: counting frequencies, sequences, or locations of words or phrases
- ✓ Displaying data: condensing and organizing data for display
- ✓ Theory building: developing coherent explanations of findings
- ✓ Graphic mapping: creating diagrams

Table 6: Self-reported frequency of smoking by specific smoking contextual spaces

SMOKING PATTERN	SMOKING CONTEXTUAL SPACE	DETAILS (from in-depth interviews)	% reported frequency of smoking according to space (all ages (cumulative %)) (n= 389)			
			never	rarely	sometimes	frequently
<i>Jolly smoking</i>	<i>Jolly</i>	<i>jolly trips, gantze parties, funerals, bars, big matches</i>	29.4%	20.9%	23.7% (44.6%)	26.0% (70.6%)
"Functional" smoking	Cold	at night, esp. in hill station areas	56.7%	13.2%	12.7% (25.9%)	17.4% (43.3%)
	Problem	love & employment problems	61.8%	10.9%	9.4% (20.3%)	17.9% (38.2%)
	Concentration	reading, writing, thinking deep thoughts, working	--	--	--	--
	Loneliness	walking or being alone	57.2%	11.7%	11.7% (23.4%)	19.3% (42.7%)
	Showing Colours	in the presence of girls, to impress friends	--	--	--	--
Indiscriminate smoking	In Public	cinema, bus station, train, workplace – & other public venues where smoking is not normally acceptable	62.6%	10.3%	11.1% (21.4%)	16.0% (37.4%)
	At Home	home, bedroom	69%	9.9%	6.5% (16.4%)	14.6% (31%)

(Source: Garrett Mehl, 2000. Tobacco Smoking in Central Sri Lanka: an ethnographic study of male urban young adults. Ph.D Dissertation, School of Hygiene and Public Health, Johns Hopkins University, Baltimore, Maryland.)

There are many different software packages available, all of which have particular strengths and weaknesses depending on the qualitative research task required. In assessing computer software, you need to distinguish between what the software can do to organize data in the form of text, and what it can do to assist with analysis.

Textbase managers: Some qualitative researchers have used general-purpose database programs to organize and store data, such as Microsoft Access and Excel. These allow retrieval of data according to the *fields* of data specified. For the qualitative researcher, these fields might be variables under investigation, or particular categories identified in the category system. For example, each factor influencing a farmer's decision to grow tobacco could be a data field.

Code and retrieve programs: Code and retrieve programs have been developed specifically for qualitative data analysis. They allow you to code segments of text so that you can later retrieve and display text according to the codes used.

Code-based theory builders: These go beyond code-and-retrieve by helping the researcher build theory from the data. For example, they may allow you to represent relationships between codes, build higher order classifications and categories, or test a theory about the data.

Conceptual network builders: These allow the researcher to illustrate linkages and networks among concepts in the analysis.

What software is appropriate?

Making choices about software means comparing many different factors, including your level of comfort with computers, the cost of the software, and whether you need software for a particular project or for a variety of purposes.

However, the most important factors to consider are:

- ✓ The type of project you are working on
- ✓ The type of analysis you plan to do
- ✓ The amount of data you have to work with

Weitzmann (2000) suggests that answers to the following questions will help you make the right software decisions.

The type of project you are working on:

- Are there many different sources of data for each case? For example, if you were studying the marketing practices of different tobacco companies, you might have interview data from company executives, retailers, and consumers, in addition to company documents for each company or case. You will therefore want software that offers the tools to track cases through different documents. NUD*IST, for example, is software that allows this kind of tracking.
- Are the data strictly organized (for example, responses to a standard questionnaire or interview) or “free-form” (field-notes, open-ended semi-structured interviews, participant observations). Highly organized data (generated from standardized questionnaire surveys) can be analyzed by software with well-defined “records” for each case and “fields” (or variables) with data for each record. EZ-Text is an example of software that has been designed to handle qualitative responses on standardized questionnaires.
- Are the data uniform or diverse? For example, if all the data is in the form of interview transcripts, it is *uniform*. Often, however, information that you want to use in your analysis may be *diverse* in form: field observations, secondary data, questionnaires, interview data, photographs, videotapes, etc. Some programs handle diverse types of data easily, while others are more rigid in their requirements.

The type of analysis you plan to do:

- Are you planning to do interpretive analysis, building theory inductively? Or are you trying to test theory? In other words, are you working-up to theory or working down from theory? For the former, you need software that is strong on search and retrieval, code and retrieval, ease of revision, and text display. For the latter, choose software that offers tools for testing hypotheses.
- Do you want to be able to give each text segment multiple codes? Some software programs allow you to do this, while others are rigid: one segment, one code.
- How important is the context of the data? Software programs differ in how much surrounding information they are able to display when you retrieve a particular segment of text. It may be crucial to see the surrounding sentence or paragraph, or even the entire file.
- What kind of display do you want? Different programs have different output functions. For example, lists of text segments according to their codes may be required. Matrices showing the number of cases in which a particular variable appears may also be required.
- Do you want to be able to link qualitative and quantitative data? With some computer software for qualitative data analysis, it is possible to share information with quantitative analysis programs such as Statistical Package for the Social Sciences (SPSS).
- Do you want a team of researchers to be able to use the same database? Some programs support collaboration by allowing multiple users to share a database. In this way, comparisons can be made between interpretations of different researchers. Also, you can assess coding reliability by comparing the coding of different researchers.

The amount of data you have to work with:

- How much data do you have? In general, computer software is not useful when you are dealing with small data sets. This is because of the time it takes to become familiar with the software and set up the category system so that the description and analysis can be done. Some researchers suggest using software if there are more than 12 transcripts of hour-long interviews. This estimate will vary depending on the software.

Software Programs

While a detailed explanation about software options is beyond the scope of this manual, the following are two examples of types of software that can be used for qualitative data analysis: *code and retrieve* and *code-based theory builder* programs.

Other software information can be directly obtained from the manufacturer or by teaming up with a professional who is already familiar with the strengths and limitations of a particular software.

EZ-Text - Working with responses to open-ended questions in a standardized questionnaire survey

This was developed by the Centers for Disease Control and Prevention in Atlanta, Georgia. It can be downloaded free from the Internet at (<http://www.cdc.gov/>). It is characterized by a simple code and retrieve function.

EZ-Text is a useful way of analyzing the qualitative data generated by a series of open-ended questions in a standardized questionnaire survey. In other words, the same questions are asked in every interview. It is possible to use *EZ-Text* to quantify the results of this analysis, indicating the frequency of particular

responses to each question. It is particularly useful when “working down from theory.” It is also possible, consistent with the function of qualitative inquiry, to use EZ-Text as a way of assembling similar segments of text and building up an understanding of the topic by viewing all similar segments together. For example, if you have already gathered the views on increased taxation on tobacco of subjects from different socioeconomic groups, you can display all segments of data related to this on one page.

In EZ-Text, different codes have different purposes:

1. Index codes tag text for retrieval. These typically correspond to different questions in a standardized survey or a semi-structured interview.
2. Measurement codes assign values to text such as the frequency, amount, or presence or absence of information.

A coding form is displayed for each question. On the form you input the question number, the question itself and the response. All the available codes that you have already defined are displayed and you select the codes appropriate for this response.

EZ-Text is particularly well suited to data structured in brief responses to open-ended survey questions, but it can also handle longer responses to open-ended questions provided that they are broken down into multiple segments. EZ-Text is not likely to be helpful if you have collected unstructured data, where the set of discussion topics may vary with each person interviewed. This would be the case in an ethnographic study.

EZ-Text allows the researcher to generate matrices that display combinations of ID numbers, information variables, and codes. It is also possible to merge EZ-Text matrices with other quantitative data generated for the same respondents with another program such as SPSS.

NUD*IST - Working with diverse data in unstructured form

This is a commercial software package that has to be purchased. Mention of it here does not constitute a recommendation over other software programs, as all have particular advantages and disadvantages. It is only given as an example of the capability of some software.

*NUD*IST* allows the researcher to store, code, and retrieve raw data, such as transcribed interviews, and external data, such as secondary information, researcher ideas and comments, or even photographs.

Raw data is broken down into segments called *text units* that are coded according to a category system developed by the researcher after a thorough review of the data. The size of each segment may vary, but each should contain a single complete statement, idea, or thought.

This category system is made up of *nodes*. Each node is like a container of an idea about the data. For example, it might be a container for text that relates to a particular theme that seems to be emerging from the data, such as “views on smokers in closed places” or “views on smokers of water pipes.” Alternatively, it could contain all the text of a focus group interview spoken by women (with another node for text of the interview spoken by men), if gender differences of opinion were apparent. There are many different ways of using nodes and different researchers will use them for different purposes.

Nodes can then be placed in a hierarchical index tree that is generated by the researcher as patterns in the data emerge. In this way, categories and subcategories can be established and placed in the tree. By moving text around into categories and subcategories, the researcher can build an understanding of the relationships between the different elements of the data. In this way, it is used to “build theory.”

Most software programs come with tutorials and instructions. If you decide to use computer software to analyze your data, make sure you learn the program and have sufficient time to practice it in advance of when you need to use it.

As shown earlier, the coding and analysis of data in every qualitative research project is done differently, according to research design and focus, the researcher's skill and experience, and the creative and intellectual processes that are brought to the analysis. Having said that, it is still important to follow all the recommended guidelines for ensuring reliability and validity. Probably one of the most critical points to remember is to clearly document how your data was coded and how you arrived at the meanings that you have discovered.

Now that you have completed coding and analyzing your data, you are ready to write your final report and further disseminate your research findings. These will be covered in the next and final module.

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Key Terms and Definitions

Causal network diagrams Diagrams constructed to help make sense of the cause and effect of relationships that appear in the data.

Code and retrieve A term used to describe how data are coded according to a category system designed by the researcher. Data belonging to each category are retrieved from the data as a whole, assembled, and viewed. This allows the data to be organized and described before the researcher goes on to the next stage of analysis.

Code-based theory builders Computer software programs that help the researcher build theory from the data.

Conceptual network builders Computer software programs that allow the researcher to illustrate linkages and networks between concepts in the analysis.

Data segment Each different idea expressed in the data. The data is broken into segments that are categorized.

Data set A complete “set” of data from a research project.

Deductive Analysis Testing a theory during data analysis.

Descriptive data Data that describes the phenomenon under study.

Externally heterogeneous In data analysis, the term used to describe the bold and clear differences between categories.

EZ-Text A software analysis program characterized by a simple “code and retrieve” function. Most useful for analyzing data generated by a series of open-ended questions in a standardized questionnaire survey.

Fields A computer term for variables under investigation or particular categories identified in the category system.

Inductive analysis Building understanding and meaning from qualitative data.

Internally homogeneous In data analysis, the term used to indicate that everything in one category holds together in some meaningful way.

Nodes A computer container for an idea about the qualitative data.

NUD*IST A commercial software package that allows the researcher to store, code and retrieve raw qualitative data.

Researcher interpretation What the qualitative researcher interprets the data to mean.

Textbase managers General-purpose computer database programs to organize and store data, such as Microsoft Access and Excel.

Text units Segments of raw data broken down that are coded according to a category system developed by the researcher after a thorough review of the data.

Uniform All data belongs to the same form. For example, if all the data is in the form of interview transcripts, it is uniform.

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**MODULE SEVEN:
DISSEMINATION OF RESEARCH FINDINGS**

Objectives

Upon completion of this module, you will be able to:

- ✓ Write an outline for a research report.
- ✓ Plan a presentation of research findings, both written and oral.
- ✓ Understand the importance of follow-up.
- ✓ Plan different ways of disseminating results.

The Research Report

Once you have completed fieldwork and data analysis, you will have to ensure that your research findings are properly documented and disseminated. How this final report is presented (in written and/or oral form) and its structure will depend on the audience for the report and the requirements of your research. Often, funding agencies have particular requirements about the dissemination of research findings. This means that the first step in deciding the format of your reporting is to understand the responsibilities that you have to funders and others. Additionally, you may have made promises to those who were assisting you in your fieldwork. Most importantly, since our emphasis here is on research that can influence tobacco control policy, make sure that policy and program decision-makers receive a copy of the research findings, even if they are not the funders of the research. Taking all of these factors into consideration, you need to design a strategy for reporting and disseminating the results.

In order to design your reporting strategy, you should:

- Decide on the objectives of the strategy
- Identify the audience for your material
- Ascertain whether you will be preparing a written or oral report (or both)
- Identify other methods for disseminating results
- Identify timelines for each section of the reporting strategy

What are the parts of a research report?

A research report can be organized in many different ways. What follows is one outline that may be used for your tobacco control qualitative research:

- ✓ Introduction
- ✓ Research purpose

- ✓ Research design
- ✓ Research methodology
- ✓ Research findings
- ✓ Limitations
- ✓ Conclusions
- ✓ Recommendations
- ✓ References
- ✓ Appendices

Part of this final report is simply a narrative of what happened. Your report should say what you did, why you did it, and how, where, and when it took place. This narrative is woven throughout all of the above headings. Some researchers present the narrative in chronological order, with the meanings and interpretation embedded throughout. Others prefer to write the report according to a specific formula or outline such as the one illustrated above. Sometimes the organization of the report, and its length, is predetermined by the requirements of the funding or sponsoring institution or organization. If you are writing your report in a language different from the language where you conducted your fieldwork, you should have some of the work translated so that it can be disseminated locally to those who participated in the research or who might otherwise have a stake in the findings.

Even the most comprehensive report will have to omit a great deal of information collected during fieldwork and analyzed in the findings. The best research reports are focused and clear. A successful report will be one that has a balance of description and interpretation. What follows are some details about the different aspects of a report.

Introduction: The introduction provides the reader with an understanding of the conceptual, geographic, and professional context for the research. This part of the report provides important background information on how the research developed and an overview of what the report will cover.

Research purpose: In Module Two, you developed a clear and concise purpose and objectives for your research. This is the place to state these clearly. In addition, be as specific as possible about how the research will be used and who is going to use it. This will help those reading the report to understand how you made key research design decisions.

Because the researcher is the main instrument of a qualitative study, the report must include information about the researcher. Here is where you explain what experience, training, and point of view you bring to your research topic. You also need to outline what personal connections you may have to the people, program, or topic studied.

In tobacco control research, this may include your previous relevant work in this field, whether you yourself are a smoker or former smoker, or the reason underlying your commitment to the cause. Credibility is always an issue in qualitative research and the credibility of your report will be enhanced by these details. Researchers should document any personal and professional information that may have affected the data collection, analysis, and interpretation. However, be succinct and avoid excessive self-promotion.

Research design: This is where you explain how you designed your research, documenting how the relevant decisions were made and why. In particular, you should outline how the design addressed issues of reliability and ethics. Include, as well, all aspects of the research that changed in the design throughout the fieldwork.

Research methodology: This section contains details of all the procedures used throughout the research. This will include practical information, such as how long you were in the field, what methods and instruments were used to collect data, and what sampling or selection procedures were used to select participants. Also discuss how you handled ethical details such as informed consent. The report needs to include the procedures used for data analysis, to help the reader clearly understand how you worked to develop typologies, categories, or matrices in the synthesis and analysis of the data.

Research findings: This part explains to others what you have learned from the research and how it affects tobacco control issues. It will form the main body of your report. You will need to show how the data supports your analysis. This might involve using quotations from interviews or selections from field notes, or constructing diagrams and matrices that illustrate how you interpreted the data.

Some researchers provide supporting documentation woven throughout their report, while others place it in the appendices at the end of the report. If you are using quotations, make sure they are accurate and carefully selected to illustrate your findings. For example, in the South African case study, the authors use quotations effectively throughout the section on results. Here is an example:

Box 11: Using quotations

They further mentioned that people who use snuff are [those] who believe in ancestral worship such as traditional healers:

Among blacks, snuff is mostly used than in any other racial group [sic], because I have seen many blacks using snuff, men and women. Culturally it is believed that snuff is an effective mode of communicating with the ancestors. A seven-year-old can use snuff as a result of being a traditional healer – as chosen or instructed by the ancestors.

Sometimes, researchers use a composite of different subjects to characterize a particular type and illustrate the research findings. Mehl, for example, developed a fictitious, composite profile based on a number of members of an anti-smoking group in Sri Lanka. He talks about a typical member of a movement called LIFE, (Life Drug Protection Movement). His composite profile is as follows:

Box 12: Example of a composite profile

Typical LIFE Member

Sunil, 22-year-old Sinhalese Buddhist male member of LIFE

Sunil is from a middle income family: his father was an elementary school teacher and his mother a government agricultural extension worker. Sunil joined LIFE at age fifteen while he was attending a Kandyan government high school, and has been a committed participant in LIFE activities ever since. He has completed his high school education but will not be attending university, and so he is looking for full-time employment. He joined LIFE because his father is a smoker and an Arrack drinker. He strongly disapproves of his father's behaviour and has, on occasion, not participated in important family and community events (eg. community house warming) when he has known his father would attend and take liquor and tobacco. Sunil finds companionship and support within the LIFE community.

Limitations: All research reports should outline the major limitations of the study. This is where you explain methodological or analytical weaknesses that affect the quality of the findings. For example, in the case study in South Africa, the researchers were clear about the limitations of their study. They pointed out that it was a pilot study conducted with a non-representative sample. For this reason, they indicate that it would not be appropriate to generalize from their findings to a wider population, especially given the cultural and social diversity in South Africa. However, the authors also point out that, despite its limitations, the study showed the importance of understanding the role of cultural and contextual factors in substance abuse. For this reason, the study contributes to further research in this area.

Conclusion: The conclusion is a summary of the most relevant and important details in the report. It summarizes where you started, where you went and how you got there. But most importantly, it also summarizes what you discovered. You might at this stage discuss the policy implications of your research in relation to tobacco control in a particular location or country. Remember, some people will only read your introduction or conclusion.

Recommendations: Not all reports contain recommendations but if the research purpose is to guide a particular tobacco control policy or program intervention, a recommendations section in the report is required. If making recommendations, present them clearly and indicate whether they are recommendations for research, policy, or programs. Give simple, concise reasons why these recommendations are noteworthy.

Appendices: Appendices contain any important material that does not fit logically into the report. For example, many researchers put samples of research tools in the appendices, such as an interview guide or sample interview questions. Others include actual transcripts of interviews.

How long should a report be?

The length of the report depends on its purpose and intended audience. It also may depend on the type of research carried out and how much data was analyzed. Whatever the length, the critical requirement is that it is written well.

What style should be used?

The writing style will depend on whether or not the report is for an academic audience or whether it is for practitioners, advocates, or policymakers. Whatever writing style is chosen, the writing should be clear, cohesive, and coherent. Many

writers recommend leaving your work for a week or two once you have finished, before doing an edit and re-write. This helps you take a fresh look at the material: errors, omissions, and unclear writing will be easier to find when you have been away from it for awhile.

What ethical issues should be considered in the final report?

In Module Four we discussed the ethics of doing qualitative research. We talked about the principle of no harm coming to the subjects or the researchers. In your report you must ensure that you have met all the requirements relating to the ethics of your fieldwork. For example, if you promised that everything that would be said would be confidential, using the name of a person in a final report would be a clear violation. However, you can use a pseudonym as long as it does not identify the individual in any way.

Probably one of the most fundamental ethical concerns in reporting is to ensure that you are honest. If something did not go well in your research this should be reported. It is unethical to misrepresent the research process, the quality of the data, or the relationship with subjects. Because those who are reading your report will likely not have access to your field notes, it is important to represent quotations and other aspects of the research clearly and truthfully. Although it will be difficult for others to know whether or not you have been honest, an ethical researcher has a professional responsibility to maintain high standards of integrity.

Oral Presentations

Sometimes, in addition to or instead of a written report, you will be asked to provide direct, face-to-face reporting on your research. Oral briefings may be addressed to policymakers, such as the minister of health or agriculture, others in your institution, or to anyone interested in the research. Again, the nature and organization of these briefings will depend on the audience and their needs. Whatever the circumstance, here are some guidelines for presenting material orally so that it is effective and easily understood:

Organization and selection of content

- ✓ Practise your presentation, paying close attention to timing. Make sure it is the appropriate or required length.
- ✓ Organize your opening and closing carefully, as these can affect the quality of the overall presentation.
- ✓ Choose content that is appropriate to the audience and organization: for example, a group of researchers might be equally interested in your methodology and findings, while policymakers might be more interested in your findings and policy recommendations.
- ✓ Illustrate practical examples that relate well to those who are listening. Use quotes and examples to show the richness of the data and the depth of your analysis.

Presentation

- ✓ Use understandable vocabulary.
- ✓ Avoid slang and idiomatic expression unless it is important to the topic.
- ✓ Speak in a clear voice, pronouncing words carefully.

- ✓ Use expressions that are clear.
- ✓ Pause and pace your presentation, with emphasis on key points.
- ✓ Project your voice, use gestures, and maintain eye contact.
- ✓ Use humor appropriately. Be particularly sensitive when this may not be culturally appropriate.
- ✓ Be enthusiastic and show empathy with your audience.
- ✓ Convey your information with sincerity.
- ✓ Use visual aids, such as slides, overheads, and computer projections, where appropriate.
- ✓ If you used visual representation techniques in your research, show examples of flipcharts or actual mapping done by the participants.

Remember that adults understand oral presentations best when the information that is presented is relevant to their needs. Keep in mind that although people in the audience may understand the language you are speaking, it may not be their first language. This means that it is particularly important to pay attention to pacing and pronunciation. Adapt appropriately to such situations. If you use idiomatic language, take care to explain its meaning.

Whether you are writing your report or giving an oral presentation, it is always important to keep the audience in mind. Try and put yourself in the place of those who will be reading or listening to you, and design your report or presentation appropriately.

Other Follow-up Considerations

In the module on fieldwork we talked about the importance of follow-up once you have returned home. Once you have written your final report or made your presentation, there may also be other things you need to do in order to follow up

your work. These will depend on the promises you have made to others. For example, you may have told those participating in the research that you would give them a copy of your final report. Now is the time to make sure that you do this. Some researchers like to do summaries of their report to give to collaborators and others. The design of your follow-up process will depend on what you have done and on what you have promised to others. One of the reasons we emphasize keeping careful notes in the fieldwork chapter is to ensure that you note all the necessary follow-up requirements.

Funding agencies and sponsoring organizations also need follow-up in addition to a final report. Remembering to thank those who helped you and to keep them informed of the progress of your work is important. Follow-up or coalition-building with advocates in tobacco control is also very important. Advocates need the knowledge generated in research to form their advocacy and lobbying strategies, and researchers need advocates to make sure the research findings are put to use.

Dissemination of Results

Wide dissemination of research results ensures that important tobacco control research can be understood by and useful to others. Also, letting people know what has happened to the research is often helpful in obtaining resources for further research.

Ways of disseminating important information about tobacco control include:

- ✓ Journal articles, usually in scholarly or professional journals.
- ✓ Fact sheets for distribution to the public or other researchers.
- ✓ Media releases sent to print, radio, and television journalists.
- ✓ Internet listservs on special topics that are relevant to your research.

- ✓ Web pages of your organization or links to other items of importance.
- ✓ Multimedia slides or videotape presentations for use by you or others.
- ✓ Conference presentations (local, regional, national, and international).
- ✓ Lectures, seminars, and workshops for other researchers, policymakers, and practitioners.
- ✓ Presentations at community meetings as a guest speaker.
- ✓ Direct mail in the form of letters to local authorities, communities, and policymakers.
- ✓ Columns or articles in national or community newspapers.
- ✓ Articles in newsletters of organizations and associations.
- ✓ Educational activities, including visiting schools and in-service training sessions for teachers.
- ✓ Paid newspaper, radio, or television advertisements. Sometimes community bulletins and special messages will be provided free by the media.
- ✓ Use of drama, including popular theatre, puppets, and other forms.
- ✓ Exhibits in popular community venues, such as shopping malls or marketplaces.

Remember that dealing with the local community and policymakers is at the very heart of tobacco control. Speaking with others (individually and in groups) spreading the word through the media, and preparing documentation are all good ways to keep others up-to-date about your organization and research.

If you want to generate and maintain a commitment to your work in tobacco control, you need to keep the issue alive. You also need to keep in touch with advocates who have been involved in the issue in the past and those who have particular interest in what you have done.

Tobacco control research is urgently needed and qualitative research can make so many contributions to it. Researchers must share as much as they can, not

only findings but also methodological choices and design issues. Remember that it is just as important to share mistakes and problems as it is to share successes. Other researchers will be able to benefit from the insights you gained as a result of problems you struggled with. Your analysis of these events can be extremely beneficial.

Make sure that you also share your research with quantitative researchers. Very often qualitative research in tobacco control can help shape quantitative research in a new and exciting way. Categories, typologies, and narratives that you have documented can provide relevant and useful background information in the formulation of a quantitative hypothesis that can later be tested in the field.

Final Thoughts

By now you have gone from start to finish in qualitative research in tobacco control. As discussed earlier, tobacco control will have far-reaching impact on the health and well-being of present and future generations, particularly in low-income countries. Qualitative research can help inform and educate policymakers about key issues that need to be understood in order to develop effective tobacco control policies. This exciting form of research has much to offer to the field of tobacco control. We hope that this manual has inspired you to engage in qualitative research and given you the tools you need to be successful. Good luck.

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GLOSSARY OF TERMS

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(Numbers after the word indicate the module where the term is first found.)

Case data (3) All information collected during a case study.

Case record (3) A synthesis or summary of all the material in the case data.

Case study (3) A specific method of collecting data in a comprehensive and systematic format. Case studies are often done with individuals, but they can also be collected for groups, organizations, communities, or programs.

Causal network diagrams (6) Diagrams constructed to help make sense of the cause and effect of relationships that appear in the data.

Code and retrieve (6) A term used to describe how data are coded according to a category system designed by the researcher. Data belonging to each category are retrieved from the data as a whole, assembled, and viewed. This allows the data to be organized and described before the researcher goes on to the next stage of analysis.

Code-based theory builders (6) Computer software programs that help the researcher build theory from the data.

Complementarity (2) A reason for combining research methods so that the findings from one method are elaborated, illustrated, or clarified by the findings of the other method.

Conceptual development (2) One of the reasons for combining qualitative and quantitative methods, so that methods are used in sequence for different stages of the research.

Conceptual network builders (6) Computer software programs that allow the researcher to illustrate linkages and networks between concepts in the analysis.

Contractual obligations (4) The legal and ethical commitments that are made between employer and employee regarding the terms of employment.

Data segment (6) Each different idea expressed in the data. The data is broken into segments that are categorized.

Data set (6) A complete “set” of data from a research project.

Data triangulation (3) Using a variety of data sources within the same study, such as interview data and written reports, to verify findings.

Deductive Analysis (2) Testing a theory during data analysis.

Descriptive data (6) Data that describes the phenomenon under study.

Direct observation (3) A qualitative method that consists of systematically observing and documenting a subject in its natural setting.

Emergent (4) A way to describe the flexible nature of qualitative research design, which shifts, changes, or emerges as new information develops.

Expansion (2) A reason for combining qualitative and quantitative research methods to increase the scope and breadth of a study.

External validity (4) The extent to which the research findings for a particular group hold true for the general population.

Externally heterogeneous (6) In data analysis, the term used to describe the bold and clear differences between categories.

Extreme case sampling (2) A means of selecting subjects who are far from the average or mean in their behaviour, so that particular insights into extreme cases will highlight factors and patterns less visible in other cases.

EZ-Text (6) A software analysis program characterized by a simple “code and retrieve” function. Most useful for analyzing data generated by a series of open-ended questions in a standardized questionnaire survey.

Fields (6) A computer term for variables under investigation or particular categories identified in the category system.

Fieldwork (5) The systematic study of real-life events, activities, and interactions, usually through personal contact with the subjects of the research.

Focus group (3) A group of people brought together to discuss their perspective regarding a particular issue. Most often members of the group share some characteristics.

Gatekeepers (5) Those who decide whether the researcher can gain access to a research site or subject.

Grounded theory methodology (6) An approach for developing theory based on continuous comparison and interpretation of the various findings in the data that is gathered during a research process. Users of this methodology demonstrate how evidence, as a necessary requirement for any theory, can always be found in the real world patterns demonstrated in the data collected.

Homogeneous sampling (4) A qualitative research sampling approach that focuses on studying cases that share similar characteristics. The purpose is to develop an in-depth analysis of a particular category.

Inductive analysis (6) Building understanding and meaning from qualitative data.

Inductive approach (2) An examination of data from a particular population to create understanding of more general social behaviour.

Informal conversation (3) A qualitative research method whereby questions emerge from natural conversation, as opposed to responses to specific questions.

Informed consent (4) An ethical requirement that subjects understand why they are participating in the research, what will happen to the data that they contribute, and whether there are any negative or positive consequences of their participation.

Initiation (2) A fresh perspective that arises as a result of triangulating different methods and discovering that the results do not converge.

In-kind (4) Support for research provided by a donation of goods or services, but not cash.

Internal validity (4) The extent to which research findings are an accurate representation of what has been studied.

Internally homogeneous (6) In data analysis, the term used to indicate that everything in one category holds together in some meaningful way.

Investigative triangulation (3) Using different researchers to study the same research topic.

Iterative (4) A way to describe the process of knowledge development because it shifts and changes or emerges as new information develops.

Life history (3) A case study of an individual that is biographical in nature and completed over a period of time. A life history may also be a description of a person's behaviour over time, rather than a history based on data collected over time.

Maximum variation sampling (4) A qualitative sampling approach where cases are selected to give as wide a range of perspectives or experiences as possible.

Matrix ranking (3) A visual representation technique whereby matrices are used to stimulate discussion in a group setting and generate data on preferences, priorities or other ranked phenomena.

Member-check (4) Presenting findings back to the subjects of the study so they can verify their accuracy.

Methodological triangulation (3) Combining different qualitative research methods within one study to verify the accuracy of data and conclusions.

Mixed group interview (3) A group of people that reflect the diversity of the population in terms of age, gender, and race, for example, and who bring different viewpoints to the topic under discussion.

Nodes (6) A location in computer analysis software for an idea about the qualitative data.

NUD*IST (6) A commercial software package that allows the researcher to store, code and retrieve raw qualitative data.

Participant observation (3) A research method that involves the researcher studying a situation through personal experience and observation while talking informally with the subjects about what is happening.

Primary data (2) Data collected directly from the subjects of the research.

Purposeful sampling (2) In qualitative research, intentionally choosing subjects so as to ensure representation of all important groups.

Random sampling (2) Sampling that ensures that every individual in the sampling frame has an equal chance of being selected.

Research clearance (5) Fieldworkers who go to countries other than their own to conduct research may need permission to carry out the research (research clearance) and/or a visa to enter the country where they plan to work.

Researcher interpretation (6) What the researcher interprets the data to mean.

Rich description (2) Detailed descriptive data gathered in qualitative research.

Rigour (2) Thoroughness of method. Research is rigorous if the methods used have been carried out thoroughly and the results of the research can be accepted with confidence.

Saturation (4) The point during data collection when the researcher finds that no new information is being discovered.

Secondary data (2) Written material such as reports, correspondence, or other materials that are relevant to the topic under study.

Semi-structured interview (3) Research conducted using a list of questions, topics, and/or issues prepared prior to the interview or discussion (an interview guide). Interviewers are free to ask whatever questions they feel will best help them to elicit information.

Snowball sampling (4) A qualitative sampling approach where the researcher asks for names of others who can provide further information.

Standardized open-ended interview (3) Interview questions are written precisely and are asked without deviation in wording. Normally used with individuals only.

Stratified purposeful sampling (4) A sampling approach that captures the major variations between cases by assigning everyone to a particular category or stratum, and then sampling purposefully from each stratum.

Textbase managers (6) General-purpose computer database programs to organize and store data, such as Microsoft Access and Excel.

Text units (6) Segments of raw data broken down and coded according to a category system developed by the researcher after a thorough review of the data.

Theory triangulation (3) Using multiple theoretical perspectives to interpret a single set of data.

Thick description (4) The rich, detailed description of qualitative research, called “thick” because of its detailed nature.

Triangulation (2) Different research strategies are used to examine the same research question in order to verify findings or to identify biases. Examples include mixing methods, using different researchers, and collecting data from different sources. Triangulation is important for validating and improving confidence in research findings.

Typical case sampling (4) A qualitative sampling method where subjects are sampled according to what is typical, normal, or average.

Uniform (6) All data belongs to the same form. For example, if all the data is in the form of interview transcripts, it is uniform.

Unit of analysis (2) The subject(s) of the research. This may be the individual, family, group, or community, depending on the research focus.

Value neutrality (4) The absence of bias.

VIPP (visualization in participatory programs) (3) A technique using visual representation and interactive discussion to collect views and thoughts about a research topic.

APPENDICES

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Appendix I – Case Studies

Girls, Pecking Order and Smoking

Lynn Michell and Amanda Amos

Background to the study

This study arose out of concern about the failure to reduce smoking uptake among young people, particularly girls, in Britain. While quantitative studies had detected gender differences in factors associated with smoking uptake, it was becoming clear that none of these studies were able to fully unravel the complex interrelationships that led to girls becoming smokers. One hypothesis that these researchers wanted to explore more fully was that there might be a distinct gender difference in the personality characteristics of boys and girls who take up smoking. For example, initial observation suggested that boys seemed to use smoking to cope with social insecurity while girls used smoking as an expression of their independence, rebelliousness, social skill, and sexual experience. If there were indeed such differences, this would mean that different prevention strategies would have to be used with each gender group.

Design

The qualitative study reported here forms part of a larger longitudinal study of how friendships and peer influences affect smoking behaviour. This phase used a mixed-method design to gain insights into the interrelationships between smoking behaviour, peer group structure, and gender in the everyday lives of teenagers. It used quantitative analysis to identify peer group structure, and qualitative methods to explain the resulting sociogram. The quantitative study covered two entire school year groups (39 students aged 11-12 at a primary school and 150 students aged 13-14 at a secondary school). The qualitative study concentrated on 36 of the primary students, and 40 of the secondary students.

To obtain a maximum variation sample of students, a secondary school with students from diverse socioeconomic groups was selected. A primary school in the area was also selected.

For the qualitative study, the students selected were all those (36) in the primary school who would transfer to the local secondary school the following year, and students in the first two secondary school classes at the Form 2 level (40).

Prior to the study, permission was sought from both the parents and the students themselves. A letter was sent out to parents explaining the purpose of the study and offering them a reply slip to refuse permission for their child to participate. Students were also offered the option of not participating.

Methods

The first part of the study used methods to yield quantitative data on the full sample of students. A self-completed questionnaire provided information on student lifestyle, drug use, family, and self-esteem, and asked each respondent about the status and level of intimacy of their friendships. The analysis identified the patterns of friendship groups among the full sample of students.

In-depth interviews and focus groups were carried out with the smaller sample (target students embedded in the full sample) by one researcher who spent an entire term in each school. To improve the reliability of the information obtained from the interviews, she decided it was important not to be associated with research on smoking, which might negatively affect student willingness to participate in the study. She was therefore introduced as someone interested in teenage lifestyles in general. With three or four chosen friends, target students took part in small focus group discussions lasting about 45 minutes. Subsequently, each target student was interviewed individually. In each and every case, students were reassured of the confidentiality of the interviews. The interview guides

were very loosely constructed because the researcher wanted to identify what interested the group or the individual student and build her interview from that starting point. Nevertheless, the researcher ensured that she collected similar information across all cases: she found out what was important to the group, and what role smoking and other risk taking behaviours played in their lives.

The quantitative results provided a breakdown of smoking behaviour by gender. The sociometric analysis identified five distinct peer groups in the primary school sample and 17 distinct groups in the secondary school sample. The pattern of smoking behaviour in each of these groups was identified. The qualitative data provided rich detailed “insider accounts” of the social world of teenagers. Of particular significance was the finding that peer groups were hierarchical in structure. Status was associated with being popular, attractive and fashionable, with the spending power to maintain such an image. Smoking was associated with high-status girls, low-status students (mostly girls) and “troublemakers” (mostly boys). Students in the middle of this hierarchy did not smoke.

The researchers conclude that “the identification of a substantial proportion of young female smokers who have sophisticated social skills, and who accept full responsibility for their smoking behaviour, carries important implications for health education” (p.1868). They further argue that smoking prevention programs should be both gender sensitive and sensitive to peer group structure.

Smokeless Tobacco Use Among Adults in the Northern Province of South Africa: Qualitative Data from Focus Groups

Peltzer, K., Phaswana, N., Malaka, D.

Background to the study

In a South African study, focus groups were conducted to learn about the use of smokeless tobacco (“snuff”) among adults. The purpose of this study was to help design educational campaigns that had, until now, been geared to cigarette smoking only. Smokeless tobacco use had been neglected, despite its widespread use and known adverse health effects.

Design and methods

The study examined perceptions of smokeless tobacco use among adults of different socioeconomic status. The principle method used was focus group interviews. Ten groups were selected, five with middle-aged and five with elderly people. These people were randomly selected from two convenience samples. The middle-aged people were selected from among the staff of the local university, and the elderly people were selected from a nearby village.

The university and local authorities were informed of the study, and permission to conduct the interviews was requested and granted. Informed consent was also sought from the subjects.

The average number of people in each focus group was seven. Three moderators conducted each interview. One introduced the discussion, another asked the questions, while the third clarified the questions if necessary. Before the interview, each participant was asked to fill out a form providing demographic information, and permission was requested to record the discussion on audiotape. A total of 72 participants, 36 university workers and 36 villagers, took part.

After the interviews, the audiotape recordings were transcribed. The researchers read the transcriptions several times to allow them to reach a consensus on the themes that were emerging from the data and a category system for organizing the data. Different segments of the transcribed text were then coded according to the category system. An independent researcher coded the transcripts on a regular basis as a reliability measure. If there were discrepancies, the researchers discussed them and decided whether the problem arose because of miscoding or because the category system did not adequately capture the themes emerging from the data. The coding was corrected or the category system was adapted, as required.

The results of this study include insights into where smokeless tobacco is used, the type of snuff used, the type of people who use snuff, how people start using it, ways of using it, reasons for using it, effects of using it, and whether or not it is addictive.

In presenting their findings, the authors make very effective use of quotations. After summarizing their findings, they use quotes from the interviews that illustrate the findings or justify the conclusions. The authors are also clear about the limitations of their study. For example, they point out that this was a pilot study, conducted with a non-representative sample. They warn the reader that for this reason it would not be appropriate to generalize from their findings to the wider population, especially given the cultural and social diversity in South Africa. Nevertheless, the study points out the importance of understanding the role of cultural and contextual factors in substance abuse, and the way in which cultural practices combine with “modernity” and “Westernization.”

Focus Groups¹: a tool for developing better health education materials and approaches for smoking intervention

Pucci, L.G. and Haglund, B.J.A.

Background to the study

In 1988, the city of Stockholm in Sweden adopted a policy to restrict on-the-job smoking at all municipal work sites. In order to implement this policy effectively, a 2-year health education project was launched. During a review of possible materials that could be used for this project, the coordinators selected one brochure from the USA that seemed appropriate for encouraging employees who were attempting to quit smoking.

An initial reading of the first translation of this brochure was not positive and the coordinators began to think that the brochure needed to be adapted so that it was more culturally appropriate to the Swedish context. For the purpose of improving the translation of this educational material, a qualitative study was designed to determine its linguistic and cultural weaknesses.

Methods

Group interviews were the main component of the design of this study. The authors outline the many advantages of this method by emphasizing the value of group interaction for generating important insights into the opinions and values of each member. In the case of individual interviews, there is often insufficient stimulus for such rich discussion.

Five groups were arranged varying in size from four to six members each, drawing on a sample of 24 people. This sample was representative of white and blue

¹ It seems from the study that the authors used what we referred to in this manual as “mixed groups.”

collar-workers, of women and men, and of smokers and non-smokers, drawn from different work sites within the municipality.

Questions for the groups were aimed at eliciting their reaction to the translated materials. A discussion guide was developed in which questions were presented in a logical order. The moderator of the discussion used this guide after providing a general introduction about the purpose of the research and ensuring that consent was granted to tape record the discussions. The procedure included asking the group a general question, obtaining several responses, then probing further with more specific questions. Each discussion lasted approximately one and a half hours.

After the group discussions, the moderator listened to the tapes, made further notes, and arranged for their transcription. All transcribed interviews were then reviewed together with the notes in order to develop a category system for the data.

Discussion

The authors point out that the suggestions and criticisms provided in the interviews were “exactly what was needed to complete the task of adaptation [of educational materials] and were so subtle that it is doubtful they could have been obtained with traditional interviews” (p.15). They also conclude that these group interviews did more than enable data to be gathered efficiently; they also served as a catalyst for bringing about change in smoking behaviour in the municipality. This conclusion was particularly important, as it showed how the practice of qualitative research can influence the behaviour of respondents, in this case positively. While conventional research in the quantitative paradigm tries to prevent methods from influencing behaviour (because this would negatively affect the testing of a hypothesis), the qualitative research paradigm is not so constrained.

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Appendix II – Bibliography

Website sources for more information

For more information or data sources, please consult the following websites:

British Medical Journal: <http://www.bmjournals.com>

The BMJ Group offers free on-line access to electronic editions of BMJ journals to a host of developing countries.

Campaign for Tobacco Free Kids: <http://www.tobaccofreekids.org/>

This site contains an excellent page on Global Initiatives that provides global fact sheets, country case studies, a calendar of events, and extensive international web resources including organizations working in the field of tobacco control.

Centers for Disease Control and Prevention (CDC):

<http://www.cdc.gov/tobacco>

The CDC's Tobacco Information and Prevention Source web page contains extension information and resources on tobacco control.

GLOBALink: <http://www.globalink.org>

GLOBALink is an international tobacco control network that is managed by the International Union Against Cancer. This unique information and communication service provides a wealth of tobacco control resources, including news bulletins, electronic conferences, live interactive chat, and full-text searchable databases.

Membership in GLOBALink is free, but requires application/referrals.

International Non-Governmental Coalition Against Tobacco (INGCAT):

<http://www.ingcat.org/>

INGCAT is a coalition of nongovernmental organizations (NGOs) that supports tobacco control efforts worldwide.

International Network of Women Against Tobacco (INWAT):

<http://www.inwat.org/>

INWAT is a network of tobacco control leaders that supports and unites women in actions to prevent and reduce tobacco use.

Research for International Tobacco Control (RITC):

<http://www.idrc.ca/tobacco>

RITC's mission is to create a strong research, funding, and knowledge base for the development of effective tobacco control policies and programs that will minimize the threat of tobacco production and consumption to health and human development in developing countries.

Tobacco Control Journal: <http://www.tobaccocontrol.com>

This quarterly journal is devoted to tobacco control issues and free on-line access is available to developing countries.

Tobacco Free Initiative (TFI) of the World Health Organization (WHO):

<http://tobacco.who.int/>

This is a comprehensive website containing information on many aspects relating to tobacco control and tobacco control research. It also includes coverage of the Framework Convention on Tobacco Control, and databases such as Tobacco Control Country Profiles and the National Tobacco Information System Online (NATIONS).

World Bank: <http://www.worldbank.org/tobacco>

This website on the economics of tobacco control provides information, analyses, reviews, and links to help researchers and policymakers assist governments to choose and implement effective tobacco control measures.

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