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in Drug Abuse and
HIV Research**

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Qualitative Methods in Drug Abuse and HIV Research

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INTRODUCTION

*Elizabeth Y. Lambert, Rebecca S. Ashery, and
Richard H. Needle*

In July 1994 the National Institute on Drug Abuse (NIDA) sponsored a technical review entitled “Qualitative Methods in Drug Abuse and HIV Research.” It represents a continuing advancement in research methodologies for understanding and intervening in the related epidemics of drug abuse and HIV. The technical review benefits in both timing and content from earlier NIDA-sponsored technical reviews, including “The Collection and Interpretation of Data from Hidden Populations” (Lambert 1990) and “Acquired Immunodeficiency Virus (AIDS) and Intravenous Drug Use: Future Directions for Community-Based Prevention Research” (Leukefeld et al. 1990). The former addressed the application of qualitative research methods in studies of drug abuse among hard-to-reach populations, while the latter emphasized the use of qualitative methods in the study of HIV/AIDS risk behaviors at the individual, social group, and community levels. Since these technical reviews, the epidemics of drug abuse and HIV have continued as major public health threats, and the research community has been responsive to their changing nature and to the evolving science. There is now a much greater demand for creativity and resourcefulness on the part of behavioral and social science researchers to expand and integrate traditional research methods and develop new approaches to meet these challenges.

The important role of qualitative methods in understanding the dynamic nature of drug abuse and HIV has now become evident from their use in a variety of studies, including NIDA’s Cooperative Agreement for AIDS Community-Based Outreach/Intervention Research Program. In 1994, principal investigators involved in this multisite research program, all of whom have long recognized the indispensability of qualitative methods in conducting drug abuse and HIV research, proposed that NIDA sponsor a technical review entirely devoted to qualitative methods—what they are, what they are used for, their appropriateness to different settings, and their strengths and limitations.

For the technical review, participants were asked to prepare their presentations from a qualitative methodologist's perspective and to address a number of specific issues, including:

- How they define and develop the scope of qualitative research;
- Their methods for subject sampling and recruitment;
- How they handle ethical issues, including privacy and confidentiality of sensitive information;
- Their practices regarding use of remuneration and incentives;
- How they select, train, and provide for the security of their field researchers;
- The cultural and other barriers they encounter in conducting their field research;
- How they process, verify, analyze, and interpret qualitative data; and
- How they resolve issues that arise when combining qualitative and quantitative methods in their research.

The chapters in this monograph are organized by the order of papers given in the technical review. Robert Carlson's overview of qualitative methods in drug abuse and AIDS prevention research was the first presentation. Kevin O'Reilly followed with an international perspective on the role of qualitative methods in HIV/AIDS prevention research from the standpoint of the Global Programme on AIDS at the World Health Organization. The technical review then shifted its focus to specific methodologies and their applications. Robert Trotter, II discussed advanced ethnographic research methods for exploring drug use and the HIV/AIDS epidemic, Claire Sterk-Elifson addressed the value of qualitative research methods for determining drug use patterns among women, Stephen Koester described the application of participant observation to the study of injection-related HIV risks, and Charles Kaplan examined the biography of a specific methodology in exploring the daily life of heroin-addicted persons.

The second half of the technical review continued the themes of the first, with a presentation by Michael Clatts on the use of ethnographic methods in the development of sampling strategies for the evaluation of AIDS outreach programs for homeless youth in New York City. This was

in the development of sampling strategies for the evaluation of AIDS outreach programs for homeless youth in New York City. This was followed by Janet Schreiber's presentation of a paper coauthored with Michele Shedlin on the use of focus groups in drug abuse and HIV research. Michael Gorman then examined qualitative research considerations and other issues in the study of methamphetamine use among men who have sex with other men, Lawrence Ouellet described team methods for studying intranasal heroin use and its HIV risks, Ricky Bluthenthal discussed multimethod research from targeted sampling to HIV risk environments, and Merrill Singer gave a presentation on ethnography and the evaluation of needle exchange in the prevention of HIV transmission.

Each technical review presentation was wholly unique, yet each addressed the common objective of improving what is known about drug abuse and multiple risk behaviors associated with the spread of HIV. In so doing, each also demonstrated the significance of qualitative methods for preventing disease and promoting public health.

At the conclusion of the technical review meeting, participants identified several key recommendations for advancing drug abuse and HIV prevention research. Some of these are evident from the individual chapters, but they are summarized here to provide a framework and direction for future research.

The first recommendation concerns advancing the state of the art for conducting research about drug abuse and HIV prevention research among marginalized and hidden populations. Theoretical and methodological research paradigms should be expanded wherever possible to incorporate multiple quantitative and qualitative methods. Methodological choices must be based upon the research question(s) under study, but such choices can be strengthened by triangulation; that is, the sequential or concurrent use of qualitative methods will inevitably improve the validity, generalizability, and confidence in research findings and their implications for prevention.

Second, to ensure that research applications that utilize behavioral and social science theories and methodologies receive the recognition they deserve from other scientific disciplines and professions, it is the responsibility of researchers-that is, of anthropologists, psychologists, and sociologists-to communicate and disseminate their research findings

to a wide audience, in academic settings and conferences, in books, and in peer-reviewed journals.

Finally, there are currently too few social scientists with the requisite methodological expertise for the study of complex human behaviors related to drug abuse and HIV prevention. For example, the HIV epidemic disproportionately affects racial and ethnic minorities and women, yet there are comparatively few minority or women investigators in the research field. Thus, there is an immediate need to stimulate the interest, commitment, and dedication of a new generation of ethnographic and qualitative researchers to the study and prevention of drug abuse, HIV, and AIDS.

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Qualitative Research Methods in Drug Abuse and AIDS Prevention Research: An Overview

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INTRODUCTION

Almost two decades ago, at the first workshop/technical review on qualitative research methods and ethnography sponsored by the National Institute on Drug Abuse (NIDA), Siegal (1977, p. 79) remarked that despite the existence of numerous excellent qualitative studies on drug abuse, "Ethnographers have had difficulty explaining precisely what they do." In the intervening years, qualitative research methods have gained increasing importance as a systematic means of data collection and analysis that have become critical dimensions in drug abuse and AIDS research (Lambert 1990). For example, qualitative and ethnographic research are key components in NIDA's recent program announcement, "Strategies to Reduce HIV Sexual Risk Practices in Drug Users." Moreover, through the National AIDS Demonstration Research Program (Brown and Beschner 1993) and the Cooperative Agreement for AIDS Community-Based Outreach/Intervention research initiative, qualitative methodologists, or ethnographers, have worked increasingly on research teams composed of epidemiologists, statisticians, health educators, and psychologists, thereby promoting interdisciplinary cooperation. The recent publication of Denzin and Lincoln's (1994a) compendium, "Handbook of Qualitative Research," emphasizes this momentum toward interdisciplinary understanding.

Despite the increased receptivity toward qualitative research methods, however, there is still some lack of clarity in what qualitative methodologists do. This chapter presents an overview of what qualitative research methods are, how they are used, and the key features required for their successful application. The ways in which qualitative methods contribute to the goal of preventing and treating drug abuse as well as associated problems, such as HIV infection, are emphasized.

DEFINING QUALITATIVE RESEARCH METHODS

Feldman and Aldrich (1990) date the beginnings of modern qualitative research on drugs to De Quincey's "Confessions of an English Opium Eater," published in 1822, in which the author took on the role of participant observer among eminent addicts and recorded his observations. Since that time, qualitative research methods have become more systematically defined in the fields of anthropology and sociology (Agar 1980, 1986; Bernard 1988; Denzin 1970, 1989; Glaser and Strauss 1967; Naroll and Cohen 1973; Pelto and Pelto 1973, 1978; Strauss and Corbin 1990; Vidich and Stanford 1994; Werner and Schoepfle 1987a, 1987b). Appropriately applied, qualitative research methods are neither soft science nor the mere journalistic reporting of values, beliefs, and behaviors. Moreover, through their capacity to expose the hidden worlds of drug users and those close to them in their holistic contexts, qualitative and quantitative methods can complement one another.

As Denzin and Lincoln (1994b) note, the word "qualitative" implies an emphasis on process and an in-depth understanding of perceived meanings, interpretations, and behaviors, in contrast with the measurement of the quantity, frequency, or even intensity of some externally defined variables. Since qualitative methods have different meaning for different people—depending on a person's intellectual background, research problem, and theoretical interests—it is worthwhile to examine several definitions.

According to Denzin and Lincoln (1994b, p. 2):

Qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them. Qualitative research involves the studied use of a variety of empirical materials—case study, personal experience, introspective, life story, interview, observational, historical, interactional, and visual texts—that describe routine and problematic moments and meanings in individuals' lives.

The keys here are emphasis on deriving an understanding of how people perceive and construct their lives as meaningful processes, how people interact with one another and interpret those interactions in the context of the social and natural worlds, and the importance of observation in

natural settings. As such, the central methods of qualitative research include interviewing people through various techniques and recording what they say, observing people in the course of their daily routines, and recording their behaviors.

Strauss and Corbin (1990, pp. 17-18) offer an even broader definition of qualitative methods in the course of developing the methodology of grounded theory: “By *qualitative research* we mean any kind of research that produces findings not arrived at by means of statistical procedures or other means of quantification.” Strauss and Corbin (1990) note, however, that some researchers employ qualitative interviewing techniques to gather textual data that are subsequently coded and analyzed statistically; in effect, they quantify qualitative data. Other qualitative methodologists (Bernard 1988; Trotter and Potter 1993; Weller and Romney 1988) employ systematic interviewing techniques, such as triad sorting, to produce data that are analyzed quantitatively. The results of such analyses generate an understanding of cognitive categories, or how people perceive the relationship among categories in some domain, such as HIV risk behaviors.

Traditionally, the process of describing and analyzing how people perceive the world and their behaviors has been the goal of professional ethnographers trained in anthropology and sociology. While ethnography is often equated with the practice of qualitative methodologies (Brooks 1994; Werner and Schoepfle 1987a), this chapter returns to the distinction between the two (below).

Wiebel (1990) identifies two reasons why qualitative methods are significant for drug abuse research. First, the construction of meaningful, structured questionnaires amenable to statistical analysis requires that a researcher possess significant familiarity with the way targeted respondents perceive their world. Implicit, then, is the importance of conducting qualitative research in the early phases of a research project. Second, Wiebel (1990, p. 5) suggests that “Qualitative research is often the only means available for gathering sensitive and valid data from otherwise elusive populations of substance abusers.” By contrast, Werner and Schoepfle (1987a) emphasize that qualitative research is necessary not only to design questionnaires but also to formulate meaningful research questions, conduct appropriate statistical analyses, and interpret the results. By way of analogy, a biologist would not design an experiment without first having an extensive knowledge of the physiology, life cycle, and ecology of some species he or she was

interested in learning something more about. This background knowledge, as well as more specific knowledge at different levels (e.g., biochemical processes), is often available to a scientist in previously published research. The crucial problem in drug abuse and AIDS prevention research is that such background knowledge is often not sufficiently available to conduct meaningful research, especially given the ever-changing drug scene, as recently manifested in the rapid uptake in crack cocaine use among injection drug users (IDUs) and the significance of contextual or geographic variability (e.g., Siegal et al. 1994; Singer et al. 1992).

Few people would argue with the assertion that drug abuse, and the increased frequency of HIV risk behaviors sometimes associated with it, are deeply enmeshed in peoples' daily routines. Qualitative methodologists assume that there are systematic patterns to the way drug abusers create meaning in their lives, perceive their place within society, and behave. They also assume that such knowledge may be patterned by gender, ethnicity, class, geographic context, and so on. Through qualitative methods, it is possible to gain an understanding of the meanings people attribute to their actions as well as delineate the wider sociopolitical and ecological context in which drug use and HIV risk behaviors take place. Such an understanding is crucial not only for designing and evaluating questionnaires but also for designing locally and culturally sensitive intervention and prevention programs as well as for formulating meaningful research questions (Carlson et al. 1994a)

Critical to qualitative methods, then, is actively *listening* to people and recording what they say about their lives as well as *observing* and recording what they actually do. Of course, what people say they do and their actual behaviors may not always be consistent. Qualitative methods may reveal these inconsistencies through the combination of participant observation research and interviewing (Page 1990).

At least in the initial phases of most qualitatively oriented research, description and interpretation take precedence over measurement and prediction (Agar 1980; Brooks 1994). For some research problems, qualitative methods and analyses can be ends in themselves; for others, qualitative research is a necessary precursor to the construction of alternative systematic means of testing hypothesized patterned relationships among concepts that emerge during the course of data analysis (Agar 1980). Whatever the case, there are several requirements to be met if qualitative methods are to be appropriately applied.

REQUIREMENTS FOR A QUALITATIVE RESEARCH PERSPECTIVE

Qualitative research methods are not techniques that can be deployed haphazardly, nor are they techniques to be assigned secondary significance compared to alternative methodological approaches. A total commitment of time and energy is required of the qualitative researcher, at least initially, to develop and maintain relationships with as large and diverse a number of people as possible. In the words of Sterk-Elifson (1993, p. 163), “Qualitative research requires the investigator to spend considerable time with the group under study, to develop contacts with key respondents, to learn the language, norms, values, and attitudes of this group, and to build trust relationships.” The authors would add that an amount of time equal to that devoted to data collection must be devoted to data processing and analysis.

Beyond the requirements of time, Ruckdeschel (1985) identifies several assumptions that underlie the “qualitative research perspective.” First, it is assumed that people are symbol constructing and spend a great deal of time consciously and unconsciously interpreting what the symbols and behaviors created by themselves and others mean. Second, qualitative methodologists gain knowledge of how people think and behave through involvement in their daily social milieus. Finally, it is assumed that people’s perceptions and behaviors are related in some way to context at varying levels of specificity (e.g., the family, the community, cultural or ethnic tradition, history, political economy).

Agar (1977) adds further specificity to a qualitative research perspective through a closer examination of the kind of relationships that qualitative researchers need to create with the people under study. Referring to Bateson’s (1972a) distinction between symmetrical and complementary relationships, Agar (1977) argues that qualitative research must be based on creating complementary relationships with informants.’ In Agar’s (1977, p. 147) words:

Rather than beginning with a systematic deductive framework, the researcher sets out to learn the framework of a group. Rather than entering into communication with group members with a list of variables and hypothetical relationships, he enters to learn what the group members themselves define as

significant “variables” and “relationships” among the variables.

As such, the researcher surrenders control of the relationship to a degree; in order to learn, he or she must assume a position of subordination or complementarity (Agar 1977, 1980). A complementary relationship contrasts with a symmetrical relationship in several ways. In a symmetrical relationship, often associated with deductive logic and received science (Agar 1986), the conditions of the interaction between the researcher and participant, as well as the response categories of the questionnaire, are controlled by the researcher. As Agar (1977, 1980) clarifies, a qualitative researcher may take on symmetric relations with respondents in the later phases of a research project through conducting systematic tests of hypotheses, after an initial period of learning what makes sense to people from their perspectives.

The application of qualitative methods signifies the attribution of value to the meaningful, patterned ways in which other people behave and interpret their lives. Qualitative methods can, therefore, appear disorienting to those who are unfamiliar with their use, because they require stepping out of one’s usual framework for making sense of daily life and stepping into the unfamiliar world of others. In some cases, peoples’ behaviors and interpretations about why they do or do not do certain things may be inconsistent with what might be called mainstream norms and values or even the scientific perspective about another group’s culture or worldview. Consequently, the results of qualitative research may require reconceptualization of mainstream values and perspectives or the examination of the underlying reasons for those perspectives.

Qualitative methodologists are mediators who attempt to demonstrate how a particular way of life makes sense in reference to another way of understanding and creating social reality (Agar 1986). Newman and colleagues (1991), for example, discuss the ways in which the qualitative understanding of the meaning of HIV risk behaviors from various people’s own perspectives may be integrated with the epidemiologic assessment of the transmission patterns of sexually transmitted diseases. Alperin and Needle (1991) and Williams and Johnson (1993) focus on the value of obtaining a qualitative understanding of social networks both for designing interventions and for epidemiologic understanding of the natural history of HIV seroprevalence rates in various locales (Carlson et al. 1994a; Siegal 1990). As Clatts observed (1991, p. 232, note 6), “It is precisely the process of traversing socially derived boundaries that

becomes the primary task of the ethnographer” or qualitative methodologist. Preconceived notions of the worldview of drug users must be cast aside when conducting qualitative research, or at least the ways that these may bias the elicitation of data must be acknowledged. In other words, qualitative methodologists must take care to let people speak for themselves and not impose their beliefs or values on the data.

In summary, the formal application of qualitative methods implies a set of assumptions about the nature of human behavior, the meanings created through it, and how to learn more about such phenomena. The design of structured questionnaires, interventions, and prevention initiatives can be improved and made locally effective through such detailed, descriptive, contextual, and relational knowledge about peoples’ daily lives. Several key components of qualitative research are reviewed below.

ETHICS AND INFORMED CONSENT

Because appropriately conducted qualitative methods are highly invasive of intimate aspects of peoples’ lives, great care must be taken in the protection of research participants. Most qualitative researchers are committed to abide by a set of guidelines of professional ethics (Agar 1980; American Anthropological Association 1990; Bernard 1988; Punch 1994; Society for Applied Anthropology 1991; Soloway and Walters 1977; Weppner 1977a). Three points are basic to these guidelines. First, the purposes of the research and potential risks to the subjects must be made explicit to them; in addition, people must have the right to choose whether or not to participate. Second, the researcher must determine that no harm can come to the individual study subjects as a result of their participation in the research. Third, the researcher must ensure that the resulting research and publications cannot be used in such a way that they may bring harm to the participants as a group.

Central to achieving these goals is the use of an informed consent form in which the guidelines of the research and the person’s role in it are described. Particularly in cases where illegal and highly personal behaviors are the subject of research, a Federal grant of confidentiality is of crucial value for protecting highly sensitive data. In the case of fairly controlled interview situations, the use of a signed informed consent form is recommended. In the case of participant observation situations in which the qualitative methodologist is interacting with people in more public settings, it is incumbent upon the researcher to make the objectives

clear, to respect an individual's wish not to participate, and to leave the scene if necessary. Compensating participants for the time devoted to answering research questions is an important consideration (Weppner 1977a; Wiebel 1990). Once ethical issues are considered and a guideline for informed consent decided upon, data collection may begin in one of two general forms, either separately or in combination: participant observation and interviewing.

PARTICIPANT OBSERVATION AND FIELDWORK

Participant observation is a qualitative research technique that usually guides ethnographic fieldwork (Adler and Adler 1994; Agar 1980; Bernard 1988; Pelto and Pelto 1973, 1978). It means becoming a part of peoples' lives to the extent that it is practically, legally, and ethically possible and, while interacting with them, observing their behaviors and conversations. Participant observation, then, is a dialectic process that cycles back and forth between assuming the role of a participant and the role of an observer. Data from observations and conversations are usually recorded in fieldnotes from recall after the researcher has left the social situation. These may include sketches or maps of activity areas.

Although participant observation is generally considered a qualitative research method, observations of IDUs frequenting a shooting gallery, for example, can be quite systematic by randomizing time of day and day of the week when observations are made (Carlson et al. 1994a). The significance of participant observation for revealing unrecognized pathways for HIV transmission among IDUs and documenting needle circulation and bleach-cleaning patterns stands as a recent example of the value of this method (Jose et al. 1993; Koester and Hoffer 1994; Price 1993).

It is important to emphasize that appropriately conducted participant observation techniques require professional training and the allocation of the lead time necessary to develop rapport with the people being studied. Developing rapport means creating and maintaining complementary relationships with people. Building relationships can contribute to the execution of qualitative interviews in more controlled settings.

QUALITATIVE INTERVIEWS

A number of qualitative interviewing techniques exist, ranging from informal interviews to semistructured interviews and life histories (Agar 1980; Bernard 1988; Clatts 1991; Denzin 1970, 1989; Fontana and Frey 1994; Glaser and Strauss 1967; Peltó and Peltó 1978). With the possible exception of various systematic, cognitive elicitation techniques mentioned above (Weller and Romney 1988), their unifying feature is the collection of textual data through audiotape recording or note taking (Ives 1980). In the open-ended interview format, conversation is allowed to flow freely in reference to a particular topic. By contrast, in a more structured interview, a set of predesigned discussion topics are offered for a person's response. In general, open-ended interviewing serves as a means of determining how people talk about or perceive various aspects of their lives and how they categorize things. After preliminary analysis, these data may be employed to create a more focused set of questions that pertain to a particular research problem or topic (Agar 1980).

For those unfamiliar with qualitative research methods, interviewing may suggest something less than science, such as mere conversation or even journalistic reporting. But free-flowing conversation, or informal interviewing, plays an important role in gaining familiarity with the way people perceive and express various dimensions of their lives. They must be listened to carefully and assimilated, either in the context of participant observation or individual interview sessions. At the same time, more formal interviewing techniques require substantial preparation on the part of the qualitative methodologist. As Agar (1977, 1980) emphasizes repeatedly, the researcher must carefully encourage individuals to talk about themselves; to do so, respondents must believe in the sincerity of the interviewer's learning role and that the interviewer attributes significance to their beliefs, behaviors, and patterns of perception. The skills required to draw an individual's interpretations, values, and beliefs out into the open require professional training and practice (Sitton et al. 1983; Survey Research Center 1966).

In some cases, focus groups, or group discussions of three to six or more respondents, can take the place of individual open-ended interviews. Both interviewing techniques allow for the general discussion of research questions. Focus groups can be used to refine interventions, to explore research topics, to guide the refinement of more structured interviews, to obtain feedback on the design and evaluation of quantitative survey instruments, and even to obtain feedback on preliminary analyses

(Ashery et al. 1995; Kruger 1988; Merton 1946; Morgan 1988; O'Brien 1993; Stewart and Shamdasani 1988).

ANALYZING TEXTUAL DATA

Although the conduct of qualitative interviews may appear scattered, unsystematic, or even daunting to professionals unfamiliar with the techniques, what the researcher does with the textual data once they are collected may appear even more so. It was mentioned above that textual data are sometimes quantified,' but the analysis of texts usually differs significantly from quantitative or statistical analyses. In general, what is required for the analysis of texts and observational data is some means of discovering systematic patterns or relationships among categories (Agar 1980).

The most important initial means of discovering patterns is to gain familiarity with the texts by reading and re-reading the documents. There is no substitute for this time-consuming, intensive dimension of data analysis. It is often facilitated in part by the laborious task of transcribing audiotapes or verifying initial transcriptions. Further examination of patterns is usually performed by some method of indexing or coding of categories. In most instances, the categories emerge from the data in the form of patterns or relationships that are repeated across a range of respondents. In other instances, categories may be employed because they are relevant to a particular research problem or theoretical interest. Indexing and coding may include taking notes on a specific topic from the texts, actually cutting out sequences of text and then filing them by category (Agar 1980), and using computer software specifically designed for indexing and text retrieval (Boone and Wood 1992; Fielding and Lee 1991; Fritz 1990; Pfaffenberger 1988; Richards and Richards 1994).

The next problem to resolve is what to do with the patterns and relationships once they are recognized. In the case of the methodology of grounded theory, for example, the patterned relationships among conceptual categories assigned to the data by the analyst are articulated in a more formal statement or theory (Glaser and Strauss 1967; Strauss and Corbin 1990, 1994). In other cases, patterns and relationships may be analyzed with respect to a specific theoretical perspective. Several additional strategies raise the issues of validity, sampling, and the complementary relationship between qualitative and quantitative methodologies. The criteria for evaluating the results of qualitative

research are quite different from, but no less systematic or scientific than, statistical hypothesis testing.

To begin, a hunch that a meaningful pattern has been discovered is just an initial step in the qualitative research process. Systematic patterns and relationships are continuously formulated, tested, and modified as qualitative data are collected (Agar 1980; Glaser and Strauss 1967). Moreover, the researcher must always be conscious of the nature of the developing sample in relation to the known and emerging conceptions of the characteristics of the general population (Biemacki and Waldorf 1981).

For example, a researcher is interested in needle transfer patterns among IDUs. After conducting semistructured interviews with 10 African-American women and 10 African-American men who inject heroin, the researcher repeatedly hears similar explanations regarding why the respondents generally do not value using needles that have been used repeatedly by others. To further test and perhaps generalize this emergent pattern, the researcher seeks out 10 African-American men and 10 African-American women who inject cocaine to interview using the same interview guidelines. Later, the researcher might shift attention to other ethnic groups in the research location to further explore and modify the initial findings.

Glaser and Strauss (1967) refer to the process of moving among groups as “theoretical sampling,” or, using Denzin’s (1970) term, “data triangulation.” When a qualitative researcher has worked among a sufficient number of individuals generally thought to reflect the known diversity of the population and similar instances of a pattern are found repeatedly, Glaser and Strauss (1967) refer to this as “theoretical saturation.” Both procedures complement one another.

At some point in the research process, perhaps at the point of the theoretical saturation of some category or topic, a qualitative methodologist may attempt to increase confidence in the validity and generalizability of the findings by employing different methodological techniques. Denzin (1970) describes this procedure as methodological triangulation.³ In the case mentioned above, the researcher might formulate questions about why IDUs transfer used needles and about their attitudes toward this behavior as a set of structured questions for administration to a larger sample (Carlson et al., under review). The results, of course, would suggest whether there is increased support for a

hypothesized pattern to the values IDUs attribute to needle sharing or whether it should be modified or rejected. The experienced qualitative researcher is continuously seeking data from different sources to support, modify, or reject emergent patterns and relationships. This leads the discussion to the relationship between qualitative methods and ethnography.

QUALITATIVE RESEARCH METHODS AND ETHNOGRAPHY

As mentioned in the introduction, qualitative methods are often equated with ethnographic research. This is not surprising, since the people having the necessary professional training to adequately conduct qualitative research are most often ethnographers having a background in anthropology or sociology.⁴ Ethnographers are trained to conduct participant observation fieldwork, to conduct qualitative interviews, and to analyze their data to produce systematic descriptions of a people's lifeway or culture. According to James (1977, p. 180), "Ethnography is the study of culture from within, the attempt through field observation to record how individuals perceive, construct, and interact within their social and economic environment."

Conducting ethnographic research may be characterized as a life journey writ small—an intense, yet extended, immersion in the collection of texts and the recording of observations and experiences in fieldnotes. According to Agar (1986, p. 12), "Such work requires an intensive personal involvement, an abandonment of traditional scientific control, an improvisational style to meet situations not of the researcher's making, and an ability to learn from a long series of mistakes." This process is interactively influenced by the ethnographer's constant thinking and rethinking of incoming data and a deepening familiarity with previously published research, secondary data sources, research problems, and theory. As Fritz (1990, p. 61) phrased this process:

The ethnographer is always "working with the data;" that is, thinking and wondering about meanings, relationships, and explanations. By continually constructing and testing working hypotheses, the ethnographic analyst maintains an intimate familiarity with the data, generates new interpretations of field evidence, and plots new directions for further field exploration.

The process of conducting ethnographic research involves all of this. Ideally, its end result is the production of an ethnography, a monograph-length systematic description and analysis of a people's culture (symbolic meanings, beliefs, attitudes, and behaviors) that is oriented by a particular research problem and theory.

It was also mentioned in the introduction that the conduct of qualitative research requires a significant investment of time that is essential for developing the kinds of relationships with participants that are needed. As such, with the possible exception of focus groups in certain situations, the conduct of qualitative methods in the absence of an extended background period of ethnographic research would contradict the essence of the qualitative research perspective as formulated here.

CONCLUSION

To conclude, the key features of qualitative methods as outlined above are summarized. First, qualitative research is largely an inductive process by which a scientist attempts to gain an understanding of the patterned meanings, perceptions, beliefs, values, and behaviors of a particular group of human beings in relation to a research problem. Although not always the case, a qualitative methodologist is unlikely to begin and end a research effort with a deductive theory, construct a questionnaire, and test hypotheses (Agar 1980). Because qualitative methods are designed to capture a people's way of conceptualizing their lives, strategies for living, and argot in relationship to contexts at varying levels of specificity, these data are crucial for the design and evaluation of meaningful (both to the respondents and the scientist) questionnaires, drug abuse and HIV risk-reduction interventions, and prevention initiatives (Brooks 1994). In short, qualitative research is necessary to make public health goals culturally meaningful and effective at the local level (Singer 1991).

Second, in their most generic form, qualitative methods include participant observation and the collection of texts through interviews. Both of these methods require that the ethnographer adopt the role of one who has something to learn from the way other people perceive the world and behave—that is, the role of one who attempts to create complementary rather than strictly symmetric relations with the people whom one is interested in knowing more about. In addition, the analysis of qualitative data is systematic and rigorous when conducted appropriately.

Third, in relation to drug use and HIV risk behaviors in particular, qualitative research implies a progressive, phased research design (Agar 1980) in which a research team ideally moves from gaining indepth knowledge of a particular phenomenon or target group to the construction of meaningful, culturally sensitive, quantitative questionnaires (Serrano et al. 1993). Given the adequate lead time required, hypothesized patterns or relationships discovered through the analysis of textual and observational data may be further evaluated through quantitative methods as well (Booth et al. 1993). On the other hand, the process of formulating questions related to broader theories of human behavior, such as addiction, also can be enhanced by qualitative or ethnographic background knowledge.

Fourth, ethnographic research is necessary to monitor rapidly changing drug-use patterns and HIV risk behaviors (Carlson and Siegal 1991). Such data are crucial for providing a rapid response to changing interactions among different people at risk.

Finally, it was mentioned that the inductive nature of qualitative research means that some of the specifics of the research process cannot be formulated in advance. It is precisely the creative discovery process inherent in qualitative research that makes it both exciting and of tremendous scientific value. Ideally, qualitative researchers, or ethnographers, are skilled in discovering connections or relationships within and among different domains. Through gaining holistic knowledge in different domains, they are able to specify what contextual features are relevant to understanding a particular research problem. This requires them to mediate not only social and cultural boundaries in the field but also disciplinary boundaries in the course of their work (Agar 1986; Clatts 1991; Carlson et al. 1992; Carlson et al. 1994b). To the extent that one can gain knowledge of drug use in the field, the basic principles of statistics, a working knowledge of theories of addiction, drug treatment, and the epidemiology of the HIV disease, the ethnographer will be highly capable of designing and conducting meaningful and practical research.

NOTES

1. Agar (1977) refers to a contrast between symmetrical and asymmetrical relations in referring to Bateson's (1972b) more general work. This chapter refers to the contrast Bateson (1972a) made

between complementary and symmetrical relations. Consequently, complementary relations refer to Agar's (1977) symmetrical relations, and the use of the term symmetrical relations in this chapter refers to Agar's (1977) conception of asymmetrical relations. Interested readers should consult Bateson (1972a, 1972b).

2. The authors are not familiar with any published research in the field of drug abuse or AIDS that employs statistics to manipulate textual data.
3. See Denzin (1989) for a detailed, updated discussion of methodological triangulation and the issue of validity.
4. See Akins and Beschner (1980); Feldman and Aldrich (1990); Hughes (1977); and Weppner (1977) for discussions of ethnography and drug abuse research.

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The Role of Qualitative Research in the Global Programme on AIDS at the World Health Organization

Kevin R. O'Reilly

INTRODUCTION

All good science begins with description. In the study of human behavior, much of the initial description takes the form of observations and information documented qualitatively, not quantitatively. The use of qualitative data has become more common and has recently grown in acceptance within the scientific community, particularly in the area of public health. Some of this recent change is due to the increasing sophistication of qualitative research methods and data processing techniques. However, a large part of this change is due to new questions about relationships between human behaviors and the public health problems of HIV, AIDS, and drug abuse. With the emergence of these public health problems, traditional quantitative data collection methods have become recognized as insufficient to meet informational requirements about human health and behavior. The increased use of qualitative methods thus reflects an urgency to understand HIV/AIDS risk behaviors and their contexts and to develop effective prevention interventions for curbing the epidemic.

This chapter addresses the use of qualitative research in international HIV/AIDS prevention research. Using examples from the World Health Organization (WHO), the chapter will show how specific descriptions of a phenomenon, arrived at through qualitative research, can be an important first step in the development of intervention trials, behavior change, and prevention interventions. These applications of qualitative methods build on the more customary uses of qualitative methods for behavioral descriptions and hypothesis generation because they also facilitate the development of public health interventions that have improved likelihoods of success.

WHO AND QUALITATIVE RESEARCH

An intergovernmental organization within the United Nations, WHO addresses public health and disease prevention throughout the world with the goal of attaining the best possible level of health for all people. WHO has two main constitutional functions: to act as the directing and coordinating authority on international health and to encourage technical cooperation for health promotion and disease prevention among its 166 member states. The challenge of assisting these member states in their public health efforts is both complex and large. One way WHO helps is through technical assistance, provided primarily to developing nations. Equally important, however, is the role WHO plays as an international norms-setting institution for public health. In this regard, the influence of WHO extends to all nations of the world.

Setting international norms for public health and applying those norms to specific public health problems are difficult tasks. One difficulty stems from the large number of member states in WHO. Throughout the world, great disparities exist at the national, regional, and community levels in skills, abilities, and commitment to undertake sustained technical solutions to public health problems. For example, highly technical solutions to certain public health problems, such as those that depend on a developed primary health care system, are not feasible in some nations or in every region of some nations. Cost is also an issue in selecting feasible and sustainable public health solutions. Even the least costly public health interventions must compete with other priorities for scarce resources in constrained national budgets. In addition, significant cultural differences have a major role. The behaviors that contribute to public health problems like HIV/AIDS and drug abuse and proposed solutions to those problems are profoundly influenced by culture. What seems straightforward and acceptable as a means of HIV/AIDS prevention in some countries, such as minimizing the risk of HIV/AIDS transmission through widespread promotion of condom use for risky sexual encounters, may threaten the norms, traditions, and cultural practices of other countries. Such countries may prefer to minimize the frequency of risky sexual encounters and may fear that the promotion and distribution of condoms will have the opposite effect of increasing the frequency of such behaviors because users will feel completely protected from any consequences.

Similar philosophical differences exist for HIV/AIDS prevention among drug abusers. Harm-reduction efforts have been effectively implemented

in a number of places (Brettelle 1991), but they have also been rejected out of hand in others for fear that such efforts facilitate drug abuse. Even in areas where harm reduction has been accepted, it has often been narrowly applied, as in the acceptance of bleach distribution but not needle distribution. That HIV/AIDS prevention interventions represent major challenges to many societies and cultures has only recently been highlighted (Bayer 1994). But it is clear that a balanced approach is needed between the technical merit of public health solutions and cultural practices and concerns. The task of setting international norms for public health under these conditions means consideration of more than just the technical merit of a proposed solution. An understanding of the cultures, beliefs, and behaviors of the people involved is essential if public health prevention interventions are to be successful.

Within the context of these complexities and parameters, WHO sponsors and guides qualitative research projects through many of its divisions. One example is its Programme on the Control of Acute Respiratory Infections (Gove and Pelto 1994). As is true with most qualitative research, these varied research efforts tend to share a body of methods, although the studies may differ in purpose or expected results. Examples from the Global Programme on AIDS (GPA) will help to illustrate the types of qualitative research currently underway throughout this international health setting.

QUALITATIVE RESEARCH IN THE GPA AT WHO: SOCIAL AND BEHAVIORAL STUDIES

There are two distinctly different efforts in qualitative research that are ongoing in the GPA at WHO. The Social and Behavioral Studies and Support Unit, mandated to conduct basic social and behavioral research, is currently exploring four key lines of research.

- Young people and sexual meaning. These studies are being conducted to describe more fully sexual risk behaviors among young people in order to provide form and context to statistical data from population surveys.
- Sexual negotiation and female condom use. This research effort seeks to describe the sexual decisionmaking process and its determinants among sexually active women; its focus is describing how, in what situations, and to what extent women influence how

sexual intercourse takes place. The aim of this research is to determine whether and how to provide women with the female condom and with skills to negotiate safe sex.

- Household and community responses to HIV/AIDS. This research aims to describe responses to HIV/AIDS at the household and community level and to interpret those responses relative to prevailing sociocultural views of sexuality, health, and illness.
- Discrimination and stigma. These studies will explore discrimination and stigmatization, factors that contribute to them, and the contexts in which they occur.

Each of these research areas utilizes qualitative research methods, including the use of key informants (cultural liaisons), in-depth interviews, focus group discussions, and in some cases, participant observation. The common objective of the research areas is to increase knowledge about the motives and meanings of sexual behaviors within given cultures and societies so that effective interventions (i.e., those that are meaningful, credible, and capable of effecting sustained behavioral change) can be developed.

QUALITATIVE RESEARCH IN THE GPA AT WHO: PREVENTION RESEARCH

The Prevention Research Unit (PRS) in the GPA is mandated to develop and implement targeted HIV/AIDS prevention interventions for high-risk behaviors. In doing so, PRS focuses on two general approaches to intervention: motivating people to reduce their risk behaviors and changing the social and physical environments in which the behaviors occur. The first is known as the persuasive approach and consists of empirically based health education practices and methods that are tailored to specific localities. The second is called the enabling approach. Its focus is on changing the context of high-risk behaviors either by removing barriers to change or by facilitating the development of protective factors that promote and reinforce safe behaviors.

PRS conducts qualitative research to develop specific intervention trials. The objective of this research is to collect requisite data and information for the formulation, implementation, and evaluation of behavioral interventions. The focus of this research is on hypothesis specification

(i.e., developing detailed information on a range of relevant topics for intervention planning) rather than on hypothesis generation (i.e., attempting to describe new situations or to develop new explanations for observed behaviors). Thus, qualitative research at PRS aims not to identify new correlates of risk behaviors so much as to assist intervention planners in the application of behavioral, social, and psychological theories to particular settings. Through qualitative research, it is also possible to evaluate specific components of a particular intervention, such as alternate ways to deliver intervention messages. Qualitative research is uniquely designed for these functions because its methods permit focused but flexible inquiry that can be implemented relatively quickly and inexpensively. These attributes are appealing in and of themselves, but are even more so because they often yield useful results that have credibility or validity with the localities and communities in which they are applied.

Qualitative research at PRS also addresses relationships between various theories of behavior and risk behavior for HIV/AIDS. For example, the Health Belief Model (Rosenstock 1974), the Theory of Reasoned Action (Fishbein and Azjen 1975), and Social Learning Theory (Bandura 1977) have influenced the development and implementation of HIV/AIDS prevention interventions in the United States, Europe, and, in a more limited way, the developing world. These theories are conceptually more similar than dissimilar, which strengthens their joint contributions to public health (Cleat-y 1987). There have been numerous efforts to increase the utility of theories of human behavior to HIV/AIDS prevention in the United States (O'Reilly and Higgins 1991) and in developing countries (Aggleton et al. 1994), largely through a synthesis of their unifying principles (Fishbein et al. 1991).

This unified theoretical approach is comprised of the following key determinants of human behavior:

- The perception of being at risk for HIV/AIDS, the perception of having the capability to avoid or reduce such risks;
- The perception that significant others endorse risk avoidance and behave similarly;
- The perception that the benefits of behavioral change for the sake of HIV/AIDS risk avoidance will outweigh any costs or other risks; and

- The perception of having or being able to acquire the requisite social and physical skills to perform risk-avoidance behaviors consistently and effectively.

Interventions derived from a synthesis of these behavioral principles provide the greatest likelihood of sustained behavioral change because they foster realistic perceptions about one's own vulnerability to HIV/AIDS and about one's capacity to engage in self-protecting behaviors.

The uniform application of interventions for sustained behavioral change is an enormous challenge. An immediate issue concerns whether a set of interventions can be applied cross-culturally or must first be tailored to accommodate the traditions, customs, mores, and norms of a given population or population subgroup. The approach described above reflects influences of Western cultures, as suggested by its intrinsic assumption that people are capable of self-determination and control. However, that premise does not hold true in many areas of the world where societal communal, familial, and gender-specific expectations can essentially predetermine an individual's behaviors and choices.

Mindful of these issues, and of the limitations of persuasive (i.e., health education) approaches generally, PRS has explored the use of enabling approaches to address the challenge of HIV/AIDS prevention in the developing world. Enabling approaches refer to interventions that attempt to alter the social or physical environments in which risky behaviors occur so that the overall risk of HIV/AIDS is reduced regardless of whether specific individuals change their behaviors. Such approaches have proven utility in the public health field, as in the use of taxation to prevent tobacco smoking (Sweanor 1993) or in the use of policy and regulation to reduce and prevent injuries (Gielen 1992). PRS is also exploring ways by which economic, social, and cultural factors and service delivery and availability can be used to reduce HIV/AIDS risks. For instance, PRS is currently implementing and evaluating harm-reduction efforts that incorporate needle distribution and exchange for injecting drug users. Thailand's new law requiring condom use in commercial sex establishments is another example of a policy intervention to control the risks and spread of HIV/AIDS (Rojanapithayakom 1994). These approaches all involve persuasion to some extent, in addition to enabling elements. At this time, the PRS research agenda is primarily concerned with developing the most effective combination of both enabling and persuasive approaches.

The importance of qualitative information for the development of health interventions is evident from a 6-month research project on prostitution in a large Asian city (Oostvogels 1992). The principal investigator and a team of local researchers found that women involved in prostitution were typically bought and sold into the industry with little if any choice about their role. In this culture, women rarely have decisionmaking roles in sexual matters; in the case of prostitution, they have even less control or authority. They receive little or no support from the madams who control the brothels, and they are indebted to the brothel owners, who take portions of their wages as payment on their debts. The prostitutes are often girls in early adolescence, and many come from a neighboring country where women are considered to be particularly beautiful. They provide sexual services for older men who are nationals, and they rarely speak the same language as their customers, who are often drunk. The area of the city where they work is densely populated, with an estimated 40,000 customers coming for sex each night. The women are rarely allowed out of the sight of the brothel owners, for fear they will flee. Their world is the brothel and the small rooms they rent in it. Clearly, approaches for HIV/AIDS prevention used for sex work in Western settings (i.e., peer-based approaches, outreach, and other mechanisms to teach negotiation skills and to provide condoms to prostitutes) will have limited use and will not be easy to implement in this setting. Qualitative research has had a fundamental role in elucidating the complex behavioral, economic, and cultural factors that influence risks for HIV/AIDS in this environment and that must be considered in crafting appropriate interventions.

Similarly, qualitative research in rural Africa (Musingeh et al. 1991) has found that, although urban women were exposed to HIV/AIDS prevention campaigns, they nevertheless engaged in risky sexual behaviors during trips to rural areas. The women travel to rural areas for fish, which they take back to the city to trade. The fish are caught by fishermen operating large boats based in rural fishing camps along lake shores. Demand for fish is not met by the limited supply, especially in the off-seasons, yet the prices the fishermen charge cannot rise too high or the women's profit will disappear. In exchange for their fish, then, the fishermen have come to expect sex as well as money. Women who refuse are likely to miss their opportunity for trading and the profit that comes from it. As this practice has evolved over the years, relationships have also developed between some of the fishermen and urban women. An HIV/AIDS campaign like that implemented in the city would have

little effect in rural areas. Rather, to be effective, it would require strategies to disrupt the deep-rooted practice-nearly a tradition-that has developed.

Thus, HIV/AIDS interventions must be informed by a fundamental understanding of the targeted population, including the population's social and cultural environment. With qualitative research, it is possible to understand behaviors in their context and thereby to identify barriers and potential facilitators of behavior change. Focused qualitative research is useful for such study because it can be completed in 3 to 4 months and yield sufficient information for planning interventions.

A specific research package to guide new researchers in conducting focused, short-term qualitative studies for purposes of intervention development and implementation, called the HIV Local Situation Assessment, is now being tested by PRS. It includes recommendations on methods and processes of data collection similar to those used in the AIDS Rapid Anthropological Assessment (Scrimshaw et al. 1991), the Rapid Ethnographic Assessment (Bentley et al. 1988), or the Focused Ethnographic Study (Gove and Peltó 1994). The HIV Local Situation Assessment involves reviews of existing records and data sources; interviews with key informants, gatekeepers, and key community leaders; observations of the target population or population subgroup; mapping of the community; and the use of focus groups. Information is also collected to develop HIV/AIDS interventions, such as information on existing and preferred channels of communication, available health and other social services, and perceived barriers to and facilitators of change in the community. Other possibly relevant information is recorded to ensure that there is a clear recognition of the importance of collecting data to assess the efficacy of specific interventions before expending further resources on them.

The HIV Local Situation Assessment is designed for use in conjunction with the Intervention Planning Manual, a step-by-step guide for developing interventions to influence behavioral change and to address barriers to and facilitators of change. Together, these guides provide local intervention planners with the information they need to make decisions about interventions that have the greatest likelihood of being effective.

Qualitative research is key to this process. Its contribution to intervention development underscores the attributes of qualitative research in serving

the public health field. First, there is the advantage of speed. Since a qualitative study can be designed for rapid completion (i.e., 3 to 4 months), it inherently serves to facilitate rapid action rather than to impede progress. Second, qualitative research as described in this chapter capitalizes on focused interventions based on clearly specified objectives and outcomes. This also helps to ensure that all data collected will be integrated in a meaningful way in intervention development. In this sense, qualitative research can be geared toward a circumscribed set of questions, with readily interpretable results.

There are important limitations to the use of qualitative research as well. Paradoxically, some of these represent its greatest strength—namely, that the domain of inquiry of this use of qualitative research can be so narrowly described. Thus, while there are opportunities to apply qualitative research methods broadly and over the long term, as ethnographers and anthropologists do when conducting indepth studies of entire social systems and cultures, these projects often exceed the informational requirements, time, resources, and manpower capacities of those who are responsible for planning and implementing immediate and targeted HIV/AIDS prevention interventions. A further limitation is related to the scarcity of knowledgeable practitioners of qualitative research in general. As a consequence, it is often difficult to obtain high-caliber assistance from traditional ethnographers. However, the research process described in this chapter is not so much ethnography as practiced by traditional ethnographers as it is the tailored use of ethnographic tools by public health professionals to address HIV/AIDS and develop effective approaches for its prevention.

CONCLUSION

The HIV/AIDS epidemic is challenging the behavioral and social sciences as they have never been challenged before. There is an urgency and an opportunity for practitioners in these disciplines to apply their expertise in qualitative research to identify and elucidate strategies that effect sustained behavioral change and reduce risk factors associated with the spread of this disease. The focus of public health is on action—immediate, effective action to prevent and treat diseases. With the spread of HIV/AIDS into new regions and diverse cultures, there will continue to be, as there is now, an ongoing need for public health action to check the spread of HIV/AIDS through behavioral change.

What are the attributes of qualitative research that make it so useful to HIV/AIDS prevention? One is that its methods permit the researcher to access the social and cultural inner circles that tend to be otherwise impenetrable to quantitative research. The qualitative researcher is less concerned with sample sizes and standardized instrumentation as with discovering the underlying motives, linkages, processes, and customs that influence human behaviors, and with describing both their content and context. Such description frames behaviors within the perspective of their causes and correlates and is key to developing prevention interventions that work. In sum, the tools of qualitative data collection and ethnography assist in the development of specific interventions to prevent the spread of disease. For HIV/AIDS, the benefits of qualitative research are clear: it facilitates collection of timely and focused information about risk behaviors in different cultures and circumstances and permits the rapid translation of that information into public health prevention.

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Drug Use, AIDS, and Ethnography: Advanced Ethnographic Research Methods Exploring the HIV Epidemic

Robert T. Trotter, II

INTRODUCTION

The AIDS epidemic in drug-using populations has heightened the necessity for researchers to acquire accurate, indepth, and intimate information about hidden and hard-to-reach populations. The spread of HIV infection has created an urgent need to focus on types of behaviors that are not readily accessible through survey, quasi-experimental, or experimental research designs, especially during the early exploration of these behaviors. Critical information about HIV risk-taking behaviors commonly includes issues that people do not feel comfortable discussing with strangers, such as intimate relationships and culturally unacceptable behaviors that may reflect subcultural values, actions, beliefs, and norms that are unfamiliar to individuals who only participate in the dominant culture.

Most of these hidden beliefs and behaviors can be investigated using ethnographic research approaches. Ethnographic research methods comprise the processes, procedures, and techniques that allow an anthropologist to select, collect, record, manage, and analyze qualitative data within the framework of anthropological theory. The classic configuration of ethnographic methods is participant observation. These data collection processes constitute a set of semiformal and formal techniques for direct observation of behavior, research participation in life experiences, and key informant interviewing. These approaches result in the collection of large volumes of descriptive data about peoples' lives. Historically, they make up the basic ethnographic toolkit. Now, in addition to classic ethnography, newly developed methodological advances are available that improve the ability to understand and predict human behavior.

BACKGROUND

Both basic and advanced ethnographic research methods allow researchers to explore key health and behavioral conditions related to HIV transmission across cultural, social, gender, and other critical boundaries. While the classic approach to ethnographic design has been in existence for more than 75 years, the newer methods evolved out of an intense discussion on research design in anthropology, beginning with the publication of two works that systematically described ethnographic field methods: Kroeber's (1953) seminal text, "Anthropology Today," and a book of recommended fieldwork questions published by the Royal Anthropological Institute (1951), called "Notes and Queries on Anthropology." Subsequently, there has been a steady dialog about ethnographic design, field entry, informant relationships, and the personal effects of field studies on the researcher.

The current works that characterize modern approaches to classic ethnographic studies as well as advanced ethnographic data collection techniques include Bernard's (1988) "Research Methods in Cultural Anthropology," the two-volume series by Werner and Schoepfle (1987) titled "Systematic Fieldwork," Strauss' (1985) "Qualitative Analysis for Social Scientists," Weller and Romney's (1988) "Systematic Data Collection," and a growing series of methodological monographs from Sage Publications. These works provide the methodological backdrop for the use of classic and current ethnographic techniques within the context of the AIDS epidemic.

ADVANCED METHODS AND RAPID ASSESSMENT TECHNIQUES

There has been a significant expansion of targeted ethnographic research techniques in the recent past. These approaches are predominantly focused on three areas of cultural analysis. There are new methods that improve the ability to analyze culturally defined cognitive systems, that assist in the exploration of social relationships and social structure, and that improve the ability to identify the conditions that affect human decisions, based on culturally defined decisionmaking processes.

These new methods must be supported by a solid ethnographic foundation and do not replace the need for baseline ethnographic data collection. However, they significantly enhance the ability to confirm

ethnographic and other social science findings from multiple directions. Referred to as “triangulation,” this process is essential to high-quality qualitative research. These techniques permit ethnographers to produce greater analytical breadth and depth of detail. They also contribute to the potential for rapid assessment processes. They are focused techniques that allow ethnographers to explore narrowly defined areas of a culture more rapidly than is possible with classic ethnographic techniques. The following sections of this chapter provide examples of cognitive techniques and network analysis techniques drawn from the overall cadre of advanced ethnographic methods that have been used in AIDS research.

THE ANALYSIS OF CULTURALLY DEFINED COGNITIVE SYSTEMS

Efforts to prevent the spread of HIV require an indepth understanding and documentation of the cultural beliefs that determine the ranges and the variability in risk-taking behaviors. Cognitive anthropologists have been prolific in creating new methods to thoroughly explore the cultural dimensions of medical and other behavioral domains. These techniques can be divided into those that (1) assist in determining the content and limits of health care domains, (2) help in the analyses of structural elements of cultural domains, and (3) allow a more accurate portrayal of a domain from a consensual framework.

Determining the Content and Limits of Health Domains

The free-listing technique is the most common process that is used to begin the exploration of cognitive domains (consensual cultural beliefs) such as those associated with behavioral risks and HIV transmission. In one form or another, the technique has been used by every ethnographer who discovers an important cultural area and wants to explore the limits of that domain of knowledge, belief, or behavior.

The most basic free-listing approach is to systematically ask a set of “cultural experts” (articulate individuals with indepth knowledge about an aspect of their culture) to list and describe all of the elements that are part of a particular cultural domain. For example, the investigator has asked informants to list all of the risks that might increase someone’s exposure to HIV. As other examples, the investigator has asked individuals to name all of the different ways that someone can catch AIDS, asked them to identify the different ways someone can find out they are HIV positive,

and asked about ways to beat drug urine screens using folk medical approaches.

Free lists provide natural language information that can be used in questionnaire construction or in educational materials that are culturally appropriate for a specific group. They also allow the differentiation between key subdivisions in the populations, since the domains can differ significantly by gender, ethnicity, age, and sexual orientation. Some of the more sophisticated uses of free-listing data allow the treatment of the listed domain elements as nominal or categorical data that can be statistically explored to identify the relationships among informants that connect the free-listing data to risk-taking behavior. The free-listing exercises, along with the techniques described below, become bridge techniques that tie together purely qualitative and general quantitative findings in the research.

As an example, the data in table 1 were collected by giving a piece of paper to 16 active drug users recruited for a National Institute on Drug Abuse (NIDA) HIV prevention program and asking them to “list all of the positive aspects of drug use.” They were then given a second piece of paper and asked to “list all of the negative aspects of drug use.” Part of the purpose of this exercise was to identify the barriers and potential positive reinforcement points for reducing HIV risks by reducing drug use. The investigator also wanted to determine if there were differences between injecting and noninjecting drug users, based on their free listings. The first free-listing exercise is presented in table 1.

The information from this and other free listings allows the investigator to more sensitively target prevention programs and more carefully educate prevention workers. For example, in working with out-of-treatment drug users, it is valuable to discuss drugs using the same terms they use and to not waste time on drugs that are uncommon to the region. This leads to greater credibility and trust in the intervention staff and to greater efficacy in preventing HIV transmission through drug use. This is an example of cultural competency in HIV prevention, rather than simple cultural sensitivity, since it can lead to more effective communication using the drug users’ own model of reality.

Using free listing as a rapid scanning technique is useful in groups; it also can be used as a one-on-one interview exercise. The data enable a project to incorporate familiar terminology into written materials or behavioral

TABLE 1. *Free listing of positive aspects of drug use: Out-of-treatment drug users (N= 16).*

	Item	Frequency	Response Percentage
1.	Escape reality	6	38
2.	Relaxation	5	31
3.	None	3	19
4.	Feel good	2	13
5.	Gives you energy	2	13
6.	Get high	1	6
7.	Make you peed	1	6
8.	Escape problems	1	6
9.	Weight loss	1	6
10.	No worries	1	6
11.	More open	1	6
12.	Better thinker	1	6
13.	Calm	1	6
14.	Headgame with police	1	6
15.	Mind expanding	1	6
16.	Not in real world	1	6
17.	Feed disease and keep it quiet	1	6
18.	Recreation	1	6
19.	Medicinal	1	6
20.	Social	1	6
21.	Educational	1	6
22.	Spiritual	1	6
23.	Popularity	1	6
24.	Make friends	1	6
25.	Friends	1	6
26.	Impress opposite sex	1	6
27.	Something to do	1	6
Total mentions; mentions per respondent		40	2.500

exercises constructed to meet intervention or health education goals. The free lists generated by one group or subgroup in the population (e.g., differentiated by ethnicity, gender, socioeconomic status) can also be compared with other targeted groups by using simple qualitative descriptions of the lists or cluster analysis and multiple dimensional scaling comparisons segmented by gender, ethnicity, or other demarcations. This provides researchers with the ability to describe both intracultural and intercultural variation across the nation or within the same geographical region.

The investigator uses the information collected on the demographic characteristics of the informants, in conjunction with the free-listing data, to analyze relationships between drug or HIV cultural domains and cultural orientation, intracultural variation, gender differences in knowledge, or economic and educational differences. Commonly, the answers to free-listing questions differ based on the sex, age, income, educational level, and other culturally significant factors of the respondents. In recent studies, the investigator has found statistically significant cultural differences in the knowledge of both drugs and the causes of HIV infection between cultural groups and between different types of drug users or nonusers (e.g., injection versus noninjection users). The comparisons use matched sets of 30 informants who vary on a single key social variable. The computer program creates distance matrices for each free-listing population and then systematically compares the answers using a set of statistical routines embedded in the program. The comparisons provide a measure of both the similarities and the differences for a single cultural domain, within and between the populations.

The investigator also uses free-listings to generate ethnographic questions and to suggest the wording for questions in quantitative survey instruments. The investigator commonly records responses in the free-listing exercises that are unexpected by the researchers. This technique identifies words and phrases that need to be explored and described in greater detail. These are often cultural labels that provide a window into behaviors that are unfamiliar to the researcher.

Free-listing data are open to several types of statistical analysis. These analyses include not only comparing nominal responses, but comparing rank orders of those responses based on frequency of mention. The advanced techniques for analyzing free-listings are described by Weller and Romney (1988).

Finally, there are techniques similar to free-listings, such as exploratory open-ended questions, Spradley's domain analysis techniques (Spradley 1979) or sentence completion processes that also can be analyzed using the approaches described for free-listings.

Techniques to Define and Analyze the Structural Relationships Among Elements in a Cultural Domain

Research methods in cognitive anthropology allow the exploration of relationships among all of the constituent elements of a cultural domain. They include pile sorts (Boster 1986; Weller and Romney 1988), triad tests (Lieberman and Dressler 1977; Weller and Romney 1988), and sentence frame techniques (Weller and Romney 1988). Each of these techniques begins where free-listings leave off. They start with the elements of a well-defined cultural domain and then allow the researcher to explore the relationships among the key elements of that domain. The basic approach common to each method involves asking informants to make judgments about the similarities and differences of the domain elements to one another.

A pile sort is a rapid assessment technique that uses visual aids to allow informants to create unconstrained classifications of elements within a cultural domain. The most common method is to place pictures, real objects, written labels, or combinations of the three, such as descriptors of risks for HIV infection, on cards. Each card represents one element in the domain being studied. The informant is asked to classify all of the elements by stacking the cards into piles and may form as many or as few piles as he or she wants. The final groupings of the cards represent the informant's individual topology of the domain.

This information then can be analyzed by one of several ethnographic computer programs to compare the variables in a distance matrix. Statistical analysis of the distance matrices can be used to transform the numbers into a visual representation of the relationships of informants to other informants, or of variables to other variables. The visual representations can include hierarchical clusters, graphic representations in N-dimensional space, or other common visual display techniques. The two most common statistical techniques associated with the use of these methods are cluster analysis (Aldenderfer and Blashfield 1984) and multidimensional scaling (MDS) (Kruskal and Wish 1978).

Cluster analysis can be used to create and explore cultural typologies by identifying hierarchical structural relationships in a complex data set. MDS is a related analytical technique for uncovering the underlying structure in complex databases (Kruskal and Wish 1978). MDS allows a researcher to analyze a complex database to find its organizational conditions, principles, or associations.

As an example, the investigator conducted an HIV risk pile sort with Navajo teenagers using a list of risks that had been generated from focus groups and ethnographic interviews with Navajo people. The purpose of the research was to identify ways that the teenagers related the HIV risks in their lives to other risks (including alcohol-, drug-, and sex-related risks). The investigator believed a more effective intervention and education program could be created if the program was informed by the structural relationships that the students used in thinking about the risks.

A list of 43 risks was used, which included risks related to school, family violence, alcohol, drug, and sex. Two of the risks were taken from Navajo traditional beliefs, including the belief in the supernatural effects of being exposed to lightning and the belief in walking home late at night when one might encounter ghosts. The resulting pile sorts were analyzed using both cluster analysis and MDS. The cluster analysis results are presented in figure 1 *a*.

The cluster analysis results indicate that the teenagers link risks within bounded risk areas and that the linkages between areas are only weakly associated, if at all. An MDS analysis of the data was used to explore the underlying dimensions that the students used to organize their thinking about these risks. Figure 1 *b* provides a representation on two of the dimensions present in the data, including the tendency of the students to organize the risks in terms of their perceptions of personal threat as opposed to a threat to the community as a whole.

The dashed and solid lines in the plot indicate two risk areas that remained distinct (weakly connected) to the other risks analyzed by this method: the sexually related risks (e.g., getting pregnant, STDs) and school-related risks (e.g., dropping out, flunking). This information indicates a need to integrate school and sexual risks in the prevention program to help the teenagers recognize the behaviors that place them at risk across multiple categories of behavior. A more complete description of this technique is available (Trotter and Potter 1993).

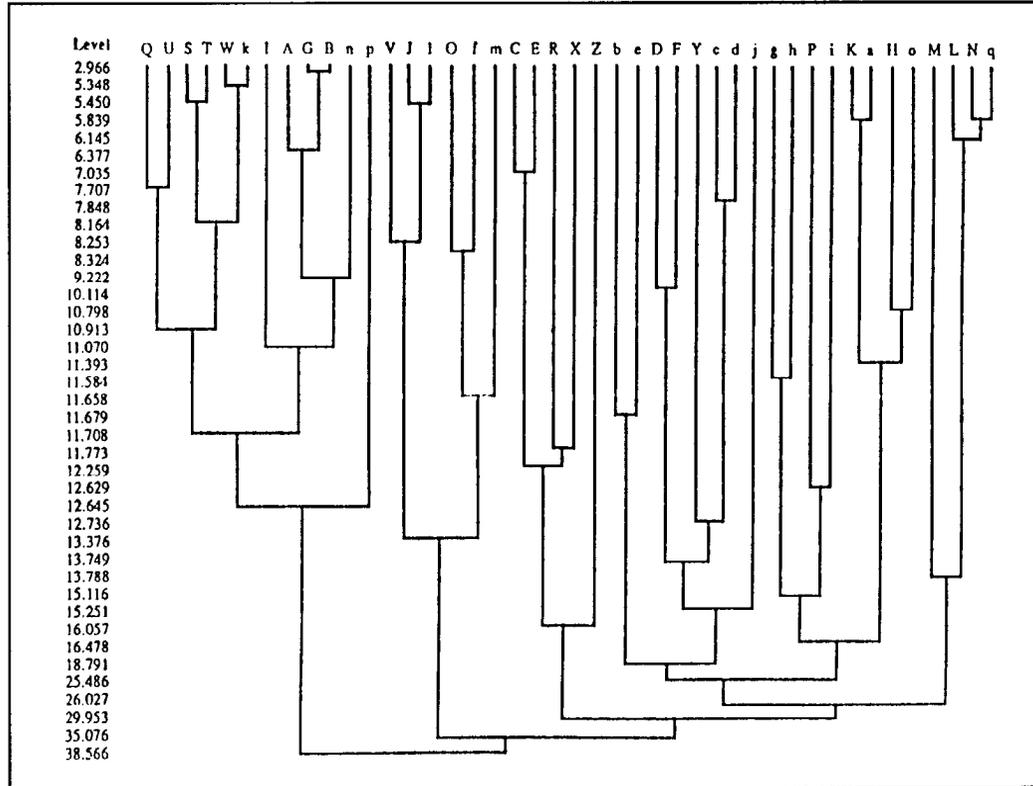


FIGURE 1a. Cluster analysis dendrogram of Navajo teenagers' perception of risks.

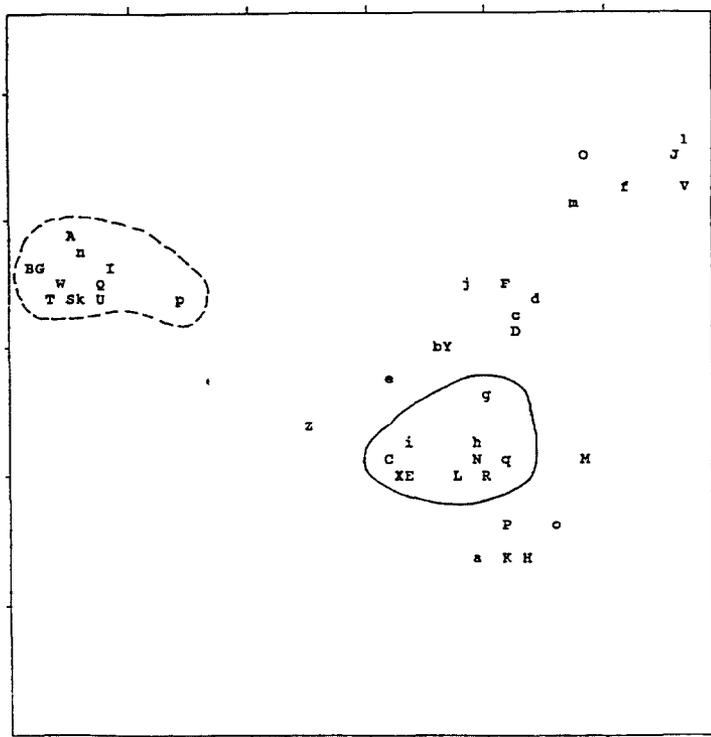


FIGURE 1b. *MDS plot of risk pile sort data for Navajo teenagers.*

KEY: A = unprotected sex; B = having sex frequently; C = using more than one drug at the same time; D = hurting yourself; E = sniffing something to get high; F = family violence; G = having lots of sex partners; H = drinking hard liquor (e.g., whiskey, vodka, gin, tequila); I = raping someone; J = poor grades or flunking out of school; K = drinking; L = cruising around in a car and drinking; M = driving fast; N = riding with someone who is driving dangerously; O = dropping out of school; P = passing out; Q = AIDS; R = getting high; S = having sex without birth control; T = getting pregnant; U = sexually transmitted diseases (STDs); V = ditching school; W = getting someone pregnant; X = marijuana; Y = beating someone up; Z = using intravenous (IV) drugs (needle drugs); a = drinking wine; b = walking around in a lightning storm; c = getting in fights; d = harassing people; e = suicide attempts; f = doing something that gets you suspended from school; g = smoking cigarettes; h = you can't remember what happened while you were high or drunk; i = someone getting you drunk when you don't want to; j = walking home alone at night; k = having unwanted sex or intercourse; l = not doing your homework; m = showing disrespect for parents or teachers; n = getting raped; o = drinking beer; p = having sex with someone you don't know; q = car accidents.

In addition to MDS and cluster analysis, there are multivariate and univariate analytical techniques that can be useful in analyzing traditional ethnographic data sets. Two works, Weller and Romney (1988) and Bernard (1988), provide details about these techniques and how they can be effective in ethnographic research.

Consensus Theory

Consensus theory is a method used to produce a consensual description of a cultural domain, while simultaneously assessing individual informants' expertise (consensual knowledge) in that domain. The creators of the technique describe its theoretical foundation as follows.

The central idea in our theory is the use of the pattern of agreement or consensus among informants to make inferences about their differential competence in knowledge of the shared information pool constituting culture. We assume that the correspondence between the answers of any two informants is a function of the extent to which each is correlated with the truth. Suppose, for example, that we had a "perfect set" of interview questions (cultural information test) concerning the game of tennis. Suppose further that we had two sets of informants: tennis players and non-tennis players. We would expect that the tennis players would agree more among themselves as to the answers to questions than would the non-tennis players. Players with complete knowledge about the game would answer questions correctly with identical answers or maximal consensus, while players with little knowledge of the game would not (Romney et al. 1986, p. 316).

The theory's assumptions are that cultural truth and informant accuracy can be derived from a model of culture that is probabilistic in nature. Behavioral research requires basic knowledge about the accuracy of information from self-reports of informants. Consensus theory provides one way to address these questions. The following statement on the nature of consensual cultural models flows from the above premises:

We suggest that informants' statements should be treated as probabilistic in character. When, for example, an informant states that the name of an object is "X," we should assume that there is some probability (that we can

estimate) that the statement is correct. This probability may be close to 1 in the case of a very knowledgeable informant and close to 0 in the case of an uninformed informant. The more informants there are who agree (when questioned independently) on an answer the more likely it is to be the correct cultural response (Romney et al. 1986, p. 314).

Consensus theory models of culture are developed through a formalized set of questions that explore cultural similarities and differences in shared experience and knowledge on the part of informants. The consensus theory technique melds ethnographic survey questions with a formal mathematical algorithm influenced by approaches used by psychometricians in test constructions, by signal detection theory, and by latent structural analysis procedures (Romney et al. 1986). The result is a model for deriving cultural truths from informants' statements about their beliefs and knowledge. Culturally correct answers are those that the most informed people believe to be true. They comprise a normative or consensual framework of a cultural worldview.

The consensus theory technique is designed to work with a common condition in ethnography: the situation where researchers know the correct questions to ask but do not know which are the correct, or the most culturally agreed upon, answers. Consensus modeling can be accomplished through the use of true/false, fill-in-the-blank, and multiple-choice question formats, and it is now being tested for use with rank order formats.

Uses of consensus theory include examining intracultural variation in perceptions of diseases judged on concepts of contagion and severity (Weller 1984), consensus about the existence of a subculture of corporal punishment (Weller et al. 1986), and a study of hypertension beliefs among Ojibwa Indians in Canada (Garro 1986). In the past year, a group has applied consensus theory modeling to four illnesses, including HIV, in four cultures: Mexican Americans in the Lower Rio Grande Valley of Texas; rural Guatemalans; Puerto Ricans in Hartford, Connecticut; and Mexican residents in Guadalajara, Mexico'.

The HIV consensus model questionnaire used in these locations was constructed from free-listings and key informant interviews at each site. These techniques identified the indigenous beliefs about HIV infection (who is susceptible or vulnerable to this illness), its causes, treatments,

bodily effects, treatment modalities (who can treat it and where should it be treated), and consequences of the disease to both individuals and their society.

This preliminary ethnographic work led to the construction of an HIV consensus questionnaire that was translated and back translated. This is a process of translating a questionnaire into the locally appropriate Spanish from English, testing it in Spanish to make certain it is comprehensible, then translating it back to English from the Spanish version by someone who has not seen the original to determine if any meanings have been significantly changed in the translation and testing process. A randomly chosen set of cultural informants (40 individuals per site) was contacted in their homes and asked to respond to the questionnaire. The common questionnaire used at each site was constructed to accommodate the known variation in beliefs between the sites.

The final AIDS consensus questionnaire contained 135 true/false questions on susceptibility to the disease as well as on its causes, treatments, symptoms, and bodily effects. The susceptibility questions resulted in cross-cultural consensus about the people thought to be most susceptible to HIV infection and AIDS: homosexuals, persons engaging in extramarital affairs, injection drug users, prostitutes, persons who have unprotected sex, and unborn children. The consensual causes included having unprotected sex, receiving transfusions, using infected needles, having sex with prostitutes, and any blood contact. The lowest level of consensus across the cultures was in the area of symptom recognition. Only three symptoms (loss of weight, weakness, and susceptibility to other illnesses) were identified as consensual symptoms of AIDS. On the other hand, there were a number of symptoms (e.g., frequent urination, bloated stomach, wheezing, constipation, and swollen ankles) that were clearly seen as symptoms of other illnesses but not symptoms of AIDS. The answers to the treatment questions demonstrated that there is consensus that there is no cure for AIDS, that physicians are the best people to treat AIDS, and that death is inevitable.

Table 2 identifies some of the beliefs where there is consensus within specific cultures as well as matching or conflicting views between the four cultural groups. In the illustrations, a “Y” or an “N” indicate that there was consensus ($p < 0.001$) that the question was either true (Y) or false (N) within each culture (arranged in the order of Guatemalan, Puerto Rican, Mexican, and Mexican American). Where all of the answers

TABLE 2. *Consensus of beliefs.*

Selected consensual beliefs about AIDS from four cultures: Examples of validity check questions

G	PR	M	MA	
N	N	N	N	Does lying cause AIDS?
N	N	N	N	Does eating spoiled food cause AIDS?
N	N	N	N	Does air pollution cause AIDS?

Examples of cross-cultural consensus on public education information on AIDS

G	PR	M	MA	
N	N	N	N	Can you get AIDS from being near someone who has it?
Y	Y	Y	Y	Should you avoid using an injection needle used by another person?
Y	Y	Y	Y	Should you avoid contact with blood?
N	N	N	N	Can you get AIDS from drinking unboiled water?

Examples of conflicting consensus about AIDS in different cultures

G	PR	M	MA	
Y	N	N	N	Is AIDS inherited?
N	Y	N	N	Do people with AIDS often have TB?
N	Y	N	Y	Is a rash a sign of AIDS?
N	Y	N	”	Are night sweats a symptom of AIDS?

NOTE: The symbol “*” indicates a lack of consensus on the item within a particular group.

KEY: G = Guatemalan; PR = Puerto Rican; M = Mexican; MA = Mexican American.

match (e.g., Y Y Y Y), consensual agreement was found among all four cultures.

The results from this type of survey have a number of practical uses. First, there was a series of questions built into the questionnaire that were validity checks. These were symptoms and treatments that were patently false or were specific to other illnesses, but could be thought to pertain to HIV infection if there was a lack of knowledge about the disease. For these items, each cultural group correctly identified the absence of a relationship between the action and contracting AIDS. The consensus model supports the belief that educational diffusion programs about HIV transmission have increased people's knowledge about HIV infection on an international scale. The primary transmission routes (e.g., unprotected sex, prostitution, sharing infected injection equipment) were identified as causes of the illnesses, even where these behaviors are extremely rare. The nature of the disease, need for medical care, and lack of a traditional or folk medical component to the disease (although many said that prayer was at least an option in treatment) were common beliefs within each culture and between them.

There was also a strong indication that one of the major factors for early identification of the onset of illness (knowledge about symptoms and physical progress of HIV infection) was missing or reduced in those areas that had few HIV or AIDS victims. The investigator included the major known symptoms of the onset of HIV infection and AIDS in the consensus interviews. Only three of the symptoms were recognized by all four groups as symptoms of the illness. These were loss of weight, susceptibility to other diseases, and weakness. Thrush, night sweats, skin conditions, and other common symptoms of at least most of the HIV strains were not a part of the cross-cultural consensual model of the illness. On the other hand, these symptoms were part of the cultural model of HIV and AIDS for the Puerto Rican sample. That sample resides in the highest HIV prevalence area of the four groups. They have more direct contact with HIV- and AIDS-infected individuals. Some of the consensus about both symptoms and consequences appears to follow a seroprevalance gradient and a public education gradient (amount, frequency, and intensity of information disseminated through public media). This suggests that the technique provides one method for measuring the impact of social diffusion theory approaches to HIV/AIDS public education programs within a group or across cultural boundaries. It also provides a mechanism for the impact evaluation (i.e., small-group and community-level effects) of local prevention programs.

Consensus theory approaches are valuable in taking a step beyond simple knowledge tests about HIV/AIDS risks, since they measure the strength of belief in a population in addition to true/false answers to knowledge questions. In this specific case, the information from the consensus theory models identifies areas of lack of knowledge about HIV/AIDS, identifies the strength of both correct and incorrect information held within the community, and identifies the areas of belief that must be specifically targeted for change, as opposed to the ones that should be specifically targeted for reinforcement by both individual and community intervention processes.

NETWORK ANALYSIS

Anthropologists and other social scientists have been interested in the effects of social structure and organization on human survival and social interaction for a long time. Conklin's (1964) ethnogeneological method is an example of an early formal research method in anthropology to create kinship-based models of social relationships in a culture where the formal structure of the kinship system is unknown. More recently, anthropological research has involved increasingly sophisticated examinations of both informal and formal human networks. Modern network analysis provides a technique for expanding the knowledge of the effects and dynamics of human social organization in both kinship and nonkinship networks.

The investigator is currently using network analysis theory and practices in a Multicultural AIDS Prevention Project (MAPP). The MAPP prevention efforts focus on the combined use of network and individually based interventions in four cultural groups: African Americans, Anglo Americans, Hispanics, and Native Americans. More than 550 active, out-of-treatment, injection drug and crack cocaine users have been enrolled in the project. These individuals can be identified as members of more than 40 drug networks, plus some isolated individuals with no known network membership. The networks range in size from 2 to 70 people, and the serostatus of the networks ranges from zero to 50 percent HIV. The investigator has identified both the intra- and the internetwork connections of these individuals and has created a composite data set that allows the testing of prevention and intervention models combining social network considerations with psychosocial approaches to HIV risk reduction (Klovhdahl 1985).

The MAPP network approach has been constructed from three types of analytical processes used in a complementary fashion. These include an ethnographic exploration of drug networks, an ego-centered (single-person-oriented) quantitative data collection process, and a full relational network analytical approach that includes both qualitative and quantitative elements for analysis and interpretation of interactive network data.

Ethnographic Network Data

Ethnographic interviewing at the community level has identified numerous small drug networks that form the primary focal points for drug use in the study community. These networks represent the primary locus for purchasing, distributing, and the joint use of drugs. Most of the networks are interlinked by one or two people. Multiple network membership exists, but for some networks is rare. The composite ethnographic characteristics of the networks have been used to create a drug network typology or classification system.

The networks have characteristics that either increase or decrease the risk for HIV infection over time, including three major variables: the open versus closed nature of the network in terms of recruitment of new members, the type of social relationships (kin or peer), and the type of activities (drug use, work, or play). The interplay of the three variables has been used to produce a typology of four drug network types (Trotter et al. 1995).

Type A networks are closed groups based on long-term associations, with virtually no other social interaction beyond obtaining drugs. Members of this network type tend to use drugs in isolation and not engage in drug-related social activities. Type B networks are semiclosed, with membership based on kinship ties. Family activities and drug use are generally shared within the group. Type C networks are semiopen and are based on long-term friendships and sexual partnerships. It can take a year or more to be invited to join one. Recreational drug use is central to the group, as are social and work-related connections and activities. Type D networks are open and have loosely defined boundaries. Membership is based on acquaintance or willingness to purchase drugs (especially for others).

This network typology has been cross-validated using quantitative data about drug use and HIV risk patterns of the members. Each network was first classified using the qualitative criteria described above. One-way analysis of variance (ANOVA) was used to compare selected drug and

HIV risk variables across the four network types and isolated individuals. Significant differences in IV drug use among the categories were seen in the last 30 days ($F(4,171) = 9.16, p = 0.0000$), with the type A network reporting the most use in the last 30 days compared to the remaining four groups (isolated individuals were treated as an analytical category, in addition to the four network types). Sexual risk and HIV testing were also examined. Frequency of unprotected sex was expected to differ among them. This hypothesis was supported for males ($F(4,90) = 3.93, p = 0.006$), but not females ($F(4,49) = 0.16, p = 0.95$), with the kinship network and the isolated individuals engaging in the most frequent unprotected sex, followed, in order of decreasing frequency, by type A, type C, and type D (the youngest group) ($M = 0.51, SD = 0.46$). The isolated individuals may have less choice or less motivation in relation to using protection, and the family-based network members have many socially negative connotations associated with using condoms with regular partners. These results agree with the ethnographic data, including the lack of differences among females. The rate of unprotected sex was uniformly high across all five groups for females. Intercourse with IV drug users was also expected to vary across the groups, with type B networks engaging in the least amount of safe sex (intercourse with non-IV drug users). This hypothesis was supported ($F(4,139) = 3.06, p < 0.02$), with the members of type A networks engaging in significantly less safe sex (condom use) than the type D network members. The remaining three groups were between these two in frequency of safe sex. The frequency of HIV testing was not significantly different ($F(4,172) = 1.96, p = 0.10$) across the five groups, but there was a greater likelihood for members of network type B to be tested more often. The finding that type B network members have been tested most frequently may be related to social norms about the need to protect other family members, which was a consistent theme in the ethnographic interviews conducted with these individuals. The low rate of testing for isolated individuals may reflect the social ecology of nonaffiliation, including a limited access to resources, or other psychosocial and economic conditions.

These data have been useful to the MAPP initiative for targeting intervention and education activities for the highest risk groups, based on multiple risk criteria. They also contain important information about the subepidemics that are likely to be part of HIV transmission linked to drug use in rural areas, with transmission more likely within and between some types of networks than others.

Ego-Centered Network Data

Ego-centered network analysis describes an index individual (ego) and all of the individuals that he or she recognizes as being connected to him or her in terms of specified social relationships. The attributional data associated with ego-nominated networks (e.g., size, gender and ethnic composition, retrospective conditions) can be identified and described as a typical network profile and can be statistically analyzed in association with other psychosocial variables.

The ego-centered network questionnaire was developed cooperatively as part of NIDA's Cooperative Agreement Project and has been tested at five sites (Trotter et al. 1995; Williams et al., in press). The purpose of the instrument was to describe the ego-centered networks of out-of-treatment drug users and their risk behavior in relation to possible HIV infection. Respondents had to be at least 18 years old, could not have been in treatment for at least the past 12 months, and had to have a positive urine test for either cocaine or heroin use (or have fresh needle tracks and test positive for other injection drugs) at the time of the interview. The nonclient alters (other people named by the index individual) often included individuals younger than 19, since no age restrictions were placed on naming people in this category.

The number of people each index individual (N = 52) reported "spending time" with (i.e., the alters) ranged from between zero to more than 25, with 76.3 percent responding that they spent time with zero to 10 people; this included between 1 and 10 family members for all but 16 of the respondents. Only 25 percent responded that all of the people they spent time with used drugs and 13 percent reported that none of the people they spent time with used drugs. Of those alters who used drugs, 25 percent injected drugs, 69 percent smoked crack, and the rest used some other drug (mostly marijuana and alcohol). Respondents reported the size of drug-using networks as follows: 25 percent denied injecting drugs or smoking crack with anyone else, 17 percent identified one person, 11 percent identified two people, 13 percent identified three people, 11 percent identified four people, 9 percent identified five people, and 11 percent identified six people (maximum allowed). Examination of the ethnic composition of these 52 networks showed that 48.8 percent were confined to a single ethnic group, 46.5 percent included representatives from two ethnic groups, and two networks (3.8 percent) included three ethnic groups. The risk factors assessed by the ego-centered questionnaire included needle sharing and sexual relations with network members.

Sexual activity was reported with 20 of the possible 127 alters (15 percent). All of the sexual relationships included sex during drug use. The following risks were listed by at least one individual as occurring in the past 30 days: not cleaning shared needles with bleach, using the same cooker as someone else, using the same rinse water, and individuals having sex during drug use. A larger sample (stratified and sized according to a power analysis) would be needed to determine how these risks were distributed throughout the various local drug networks, but the confirmed presence of the risks indicates that the networks are at risk for HIV infection from drug use or sexual activities associated with drug use.

These preliminary data from the ego-centered network analysis and the ethnographic network identification process identify both ethnically homogeneous and heterogeneous networks. Homogeneous networks are hypothesized to represent the closed (e.g., marked by slow or minimal recruitment) types in the network typology. Heterogeneous networks that include members from more than one cultural background tend to be marked by more rapid recruitment and may be the higher risk networks. The homogeneity or heterogeneity of the networks is a potential analytical variable for measuring both risk and risk reduction at baseline and during the project. It should be possible to determine if there are different levels of risk-taking behaviors among the homogeneous groups and between the heterogeneous groups and each of the homogeneous groups. This will assist in targeting and defining the emphasis given to specific risk-reduction strategies in each of the targeted interventions.

In summary, the data indicate that the majority of networks are small (2 to 10 individuals), are based on close friendship or kinship ties, and are relatively stable in their composition. The networks are also at high risk for both needle sharing and sexual activity. The responses indicated that the majority of needle-sharing activities occur with the first three people named by the index individual as members of their network and that sexual activities occur predominantly with the first person named by the index individual, or one of the individuals named in the fifth or sixth position (casual partners). A smaller portion of the needle sharing and sexual encounters occur outside of the index individual's network, but these encounters, called "weak ties," are often the highest risk contacts for the majority of drug users and can significantly affect the serostatus of the network, if it is free of HIV. Based on this data, part of the HIV prevention and education effort has been directed at making recommendations that would help these individuals break, reduce, or decrease the risks

associated with weak-tie types of relationships. Breaking or reducing high-risk ties within the networks is a much more difficult proposition.

Full Network (Relational) Data

Ethnographic and ego-centered network approaches yield valuable baseline data for intervention strategies (Trotter et al. 1994), but they do not provide all of the information needed about the type, strength, or direction of the relationships within drug networks. They do not allow the comparison of differences in relationships based on specific interactions, such as drug use, social activities, or other intimate topics.

Members of 10 networks were asked to rate their relationship to each other based on a structured set of questions about their drug-use patterns and communications about intimate subjects such as sex. This full network questionnaire was a matrix of 27 questions that allowed each individual to define his or her relationship to each other member of their network. The questions include social relationship questions (e.g., how much do you hang out with _____?), drug relationship questions (e.g., how willing are you to share needles with _____?), and HIV- or intimacy-related questions (e.g., how willing would you be to tell _____ you have AIDS?). The responses were aggregated and analyzed to depict the social, drug, and intimate communication relationships in the network.

Figure 2 presents two types of full network data collected on one of the identified drug networks. The left half of the figure contains two classic kinship charts, since everyone in this particular drug network is a member of one of two associated kinship groups. The other diagram is a sociogram that presents a composite view of their answers to the drug items on the network questionnaire. The diagrams allow the illustration of the relationships in the group from two different perspectives: classic role analysis using kinship as the basis for interaction and views of the group on the basis of influence, and communication flow models derived from network analytical procedures.

This drug network is predominantly Hispanic and involves two generations of two associated family groups. The ages of members range from 18 to 38 years, and the group is only accessible to family, including relatives by marriage. The solid lines between individuals represent strong (or close) ties or influences. The arrows indicate the direction of

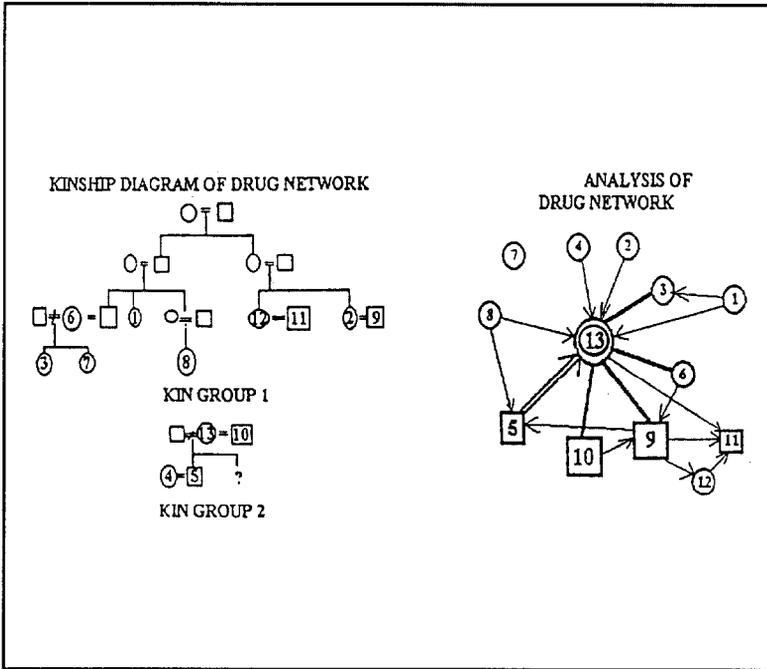


FIGURE 2. *Anthropological network analysis information.*

KEY: — = two-directional strong ties; ⊙ = centrality and flow betweenness; → = one-directional ties and direction; ⇒ = influence/direction.

that influence, and two arrows indicate a reciprocal relationship. For example, the central individual in the clique network diagram, number 13, is the primary communication node for both the social and the drug network relationships. Her son, number 5, exerts the primary influence in the group on drug-related issues and is the primary source of drugs for the group. She is the primary social influence in the group and one of the reasons why the group remains coherent.

In the early stages of this analysis, the first concern has been to demonstrate whether or not active drug groups are amenable to this type of research process. As can be seen from the examples above, the process works in this situation. Following that demonstration, the network data is being used in several creative ways. One is to determine the primary sources of influence and communication in the networks and target those individuals for interventions that will influence the behavior of the remainder of the network. Another is to use the network itself, and its

concomitant social influence processes, to set group goals and either reinforce or change group norms in relation to HIV risk-taking behaviors. This may help to overcome both the logistical and cost factors of doing HIV prevention work one person at a time.

The majority of drug-using networks tend to depend on kinship and long-term friendship for entry, tight communication, and reinforcement of the group's norms. This suggests that if the network is free of HIV infection, the group can become an excellent focal point for developing or reinforcing social norms that promote behaviors that will allow the network to remain free of HIV infection. These norms can be used to eliminate risky behaviors, such as needle sharing with strangers or unprotected sex with casual partners. The group boundaries can be reinforced and the members encouraged to make an assessment of HIV risk from potential new members. New recruits would then be sought only from lower risk individuals engaged in drug abuse or sexual behavior with the group.

There are numerous advantages to using a multiple-method network approach in HIV and drug risk-reduction programs: (1) network-based outreach can be an effective mechanism for establishing the contacts and relationships necessary to conduct effective HIV-related research with hard-to-reach populations; (2) recruiting can be accomplished within the context of the social groups that will also reinforce program objectives; (3) since tracking network members is a natural function of the gatekeepers of the network, use of the gatekeepers can greatly assist the followup phase of any project; (4) networks that exhibit strong group norms can be approached differently from those with predominantly weak ties and variable norms and can be encouraged to adopt or maintain norms that reduce HIV risks and reinforce protective behavior (e.g., needle cleaning, safe sex) as appropriate behaviors within the group; (5) network interventions can foster increased communications between members of these groups; and (6) using network techniques to identify interactions that constitute incomplete or poor communications can lead to more clearly targeted interventions. Network analysis provides opportunities for targeted intervention, education, and prevention of HIV risks beyond individually based risk-reduction efforts and promises to have direct applicability for out-of-treatment alcohol abusers as well.

SUMMARY AND CONCLUSIONS

This chapter identifies and explores a small number of recently developed advanced ethnographic research methods. There are other techniques that provide an excellent adjunct to standard prevention research efforts, as well. These include the cultural models approach (Price 1987; Quinn and Holland 1987), anthropological decision modeling (Gladwin 1980, 1989; Plattner 1984; Young 1980), the advances in focus group techniques (Morgan 1989), the processes for using ethnographic interviews to create culturally competent survey questionnaires (Converse and Presser 1986), and the uses of systematic direct observations of public behavior. Some of these issues are explored in the references cited above, as well as in other recent articles (e.g., Trotter 1991; Trotter et al. 1995). The number of tools available to ethnographers is growing rapidly, and they promise to greatly increase the capacity to make important contributions to reducing the spread of HIV in human populations.

NOTES

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Determining Drug Use Patterns Among Women: The Value of Qualitative Research Methods

Claire Sterk-Elifson

INTRODUCTION

The use of illicit drugs such as cocaine and heroin continues to be a social problem in society. Despite numerous studies addressing potential reasons for initiation and continuation of drug use and possible links between drug use, crime, and violence; the health consequences of drug use; and the impact of drug use on the individual user as well as on the community and society at large, many questions have remained unanswered. Drug use is a complex behavior that can be understood only when studied in the larger sociocultural context in which it occurs.

Much of the current knowledge regarding drug use is derived from large-scale quantitative studies. The two most well-known population-based surveys are the National Household Survey on Drug Abuse (NHSDA), a cross-sectional survey including multistage probability samples, and the Monitoring the Future Project, which includes sequential cohorts of high-school students and young adults (Johnston et al. 1991; NIDA 1994). Additional survey data are derived from institutionally based studies. Two examples of such studies are the Drug Abuse Warning Network (DAWN), which shows weighted estimates of the number of drug mentions among emergency room admissions in a nationwide sample of hospitals, and the Drug Use Forecasting (DUF) Survey, which yields drug use estimates derived from urine screening for drugs among arrestees. These and other epidemiological data sets provide information on drug use prevalence and incidence, however, explanations for trends are not available. To provide such answers requires insight into drug-using behaviors and related norms and practices guiding these behaviors (Des Jarlais et al. 1986; Sterk-Elifson 1993).

Furthermore, the various survey data are not necessarily congruent. Recently, the population-based surveys showed declining rates of drug use, whereas the institutionally based survey revealed an increase in morbidity and mortality rates (National Institute of Justice 1993; NIDA

1994). Studies involving a qualitative research paradigm may explain these contradicting findings through an indepth exploration of drug use.

Due to its illegal nature, reliable and valid information on drug use is difficult to collect. The underlying nature of qualitative research may make this method the most appropriate for studying hidden populations (Abramson 1992; Herdt et al. 1991; Spradley 1979). Qualitative methods require the investigator to spend considerable time with the group under study; to develop contacts with key respondents and build trust relations; and to learn the language, norms, values, attitudes, and behaviors of the group. Qualitative research does not seek to test existing theoretical frameworks; rather, it is deductive and aims to gain an indepth understanding of the group under study and to derive a theoretical framework from the qualitative data.

Studies utilizing a qualitative approach are not new to the substance abuse field. Studies have focused on issues such as the structure of drug users' daily lives (Preble and Casey 1969), drug-using careers among heroin users (Waldorf 1973), the use of language among heroin users (Agar 1973), the social roles among drug users (Stephens 1991), and drug dealing among cocaine and crack users (Adler 1985; Williams 1989).

The majority of the available studies involve male drug users, and sometimes include a subsample of female users as a comparison group (Chein et al. 1964; Hser et al. 1987). The use of illicit substances such as heroin and cocaine has traditionally been associated with males; however, since the 1970s drug use by females has become more prevalent and received more attention in drug use studies.

Initially, female drug users primarily were studied in the context of involvement in prostitution activities. Findings from several studies indicated that drug use functioned as a strategy to cope with the stresses related to prostitution (Goldstein 1979; James 1976). It has also been suggested that prostitution mainly serves as a means to support a drug habit (Cushman 1972). More recently, the link between prostitution and drug use has been shown to be highly complex (Sterk 1990; Sterk and Elifson 1990).

Other qualitative studies involving women focused on the impact of heroin use on their lives and described how the women's heroin use narrowed their options in life (Rosenbaum 1981; Taylor 1993). Since the emergence of crack cocaine on the drug market in the 1980s, females'

drug use increasingly received attention as the male-female ratio was more equal than among users of other drugs. In addition, the exchange of sex for crack by female users received substantial attention (Inciardi et al. 1993; Ratner 1993).

Female drug users increasingly are acknowledged as a group worth studying in itself as opposed to serving simply as comparison groups in studies of male drug users. Drug use among women differs from that among men due to factors such as the reproductive role of women and the societal expectation of women to conform to a traditional role as opposed to engaging in deviant behaviors. From a methodological viewpoint, female drug users are more “hidden” than their male counterparts. This is partly due to their limited numbers and their largely subordinate position in the drug subculture.

The main data collection strategies utilized in the existing qualitative studies involve participant observation (Adler 1985; Williams 1989) and indepth interviewing (Goldstein 1979; Rosenbaum 1981; Waldorf 1973). Participant observation requires firsthand involvement by the researcher in order to observe behaviors in the natural setting, to identify patterns, and to discover “rich points” or “cues” (Adler 1993; Agar 1993; Becker 1963). IndePTH interviewing involves guided but open-ended interviews in which the respondent identifies the salient issues within the context of the topic under study. As the researcher learns more about the topic, the interviews with subsequent respondents will include this knowledge. In other words, the content of each interview becomes a sounding board for information collected in previous interviews. The ultimate product is an indepth cultural model of the social reality from the respondents’ point of view, the so-called emic perspective (Pike 1990).

Quantitative and qualitative research paradigms supplement each other. Quantitative methods are an excellent research tool to collect trend data, to identify risk behaviors and markers, and to develop predictor models for drug use or certain drug use patterns. On the other hand, qualitative methods are relevant when seeking to understand the sociocultural context of drug use.

This chapter focuses on the use of qualitative methods in the Female Atlanta Study (Project FAST), a qualitative study of female drug users. First, a brief overview of Project FAST is presented. This is followed by a discussion of the main data collection strategies: ethnographic mapping and participant observation, indepth interviewing, and focus groups and

consensus building. A separate section focuses on safety issues in qualitative research.

A BRIEF OVERVIEW OF PROJECT FAST

The main purpose of Project FAST was to identify the impact of drug use patterns on the lives of female drug users. The two main drugs and routes of administration included are injected heroin and/or cocaine and crack cocaine use. The study sought to explain changes in drug use patterns among women and the impact of the drug use pattern on the women's lives and on related issues such as the support of the drug habit and the set and setting of use. The set and setting of use refer to the sociocultural context of use (e.g., the people present and the type of drugs used).

When the principal investigator started approaching key respondents who had assisted in previous research projects, one of their first questions was the name of the study. The first step in the working relationship with the community consultants was thus to select a name for the project. They pointed out that the name needed to be short, catchy, and not directly refer to drug use. "Project FAST" was the chosen name.

Data collection for Project FAST occurred between June 1992 and June 1994. The overall research design was collaborative, meaning that female drug users were involved in all stages of the research process ranging from identifying initial research questions and procedures for data collection and data analysis. The main data collection strategy was indepth interviewing, supplemented by ethnographic or social mapping including participant observation. Where appropriate, quantitative measures were included (e.g., demographic characteristics, self-esteem, and knowledge of HIV and AIDS).

A total of 14 community consultants was involved in the data collection process. One-half of the community consultants were female, 10 were African American, 2 Caucasian, and 2 Hispanic (1 Mexican-American woman and 1 Puerto Rican woman). All but two community consultants had been drug users (N = 8) or currently used drugs (N = 4). The community consultants assisted in the recruitment of women for indepth interviews and collected data for the ethnographic mapping.

Potential respondents identified through ethnographic mapping were asked to participate in a brief street interview to further determine

eligibility and, if eligible, were invited for a longer indepth interview. The brief street interview included topics such as first name, date of birth, main community consultant, drug use during the last 4 weeks, and treatment history during the last year. The main purpose of the brief street interview was a final screen for eligibility to participate in the study. Participation was voluntary, respondents were paid, and no personal identifiers were recorded.

To be eligible for an indepth interview, a woman had to live in the Atlanta metropolitan area, be 18 years of age or older, and be an active drug user. For injecting drug users (IDUs), being an active drug user was defined as injecting at least 4 days per week during the last year; crack cocaine users had to use at least 3 grams of cocaine per week or use daily during the last year.

A total of 164 female drug users participated in the study and were interviewed about topics such as family background, reproductive history, drug use and drug treatment experiences, violence and abuse, health history including HIV and AIDS, and social support. Interviews were conducted at a variety of locations ranging from a downtown university office to various community settings. Prior to the interview, women were asked to sign an informed consent form and were briefed extensively about the reporting requirements for child abuse. The interviews were tape recorded and transcribed. The length of the interviews ranged between 1½ hours to 4 hours, depending on the respondent.

The majority of the women (73 percent) were between 21 and 40 years old, were African American (58.5 percent), graduated from high school or had a graduate equivalency diploma (GED) (60.9 percent), had never been married (51.2 percent), and had at least one child (76.8 percent). Approximately two-thirds of the women were primarily crack cocaine smokers, while the remaining one-third were primarily heroin and/or cocaine injectors. Slightly over four-fifths of the women were polydrug users and combined their primary drug of use with other drugs such as marijuana and alcohol.

DATA COLLECTION STRATEGIES

Ethnographic Mapping and Participant Observation

The main goals of the ethnographic mapping were to identify geographical areas where drug use occurred, to explore the dominant drug use patterns, and to identify female drug users in each selected geographic area. Ethnographic mapping involves recording the physical as well as the social infrastructure by geographic area; mapping data were collected through participant observation and informal conversations.

The first decision in the ethnographic mapping process involved selecting geographical areas appropriate for the study. An initial list of 25 geographical areas (ZIP Code areas) was compiled based on epidemiological indicators such as data from local law enforcement agencies, emergency rooms, and drug treatment centers. This list was presented to the community consultants who assisted in the selection of neighborhoods within the ZIP Code areas, added neighborhoods known for drug use but not included based on the epidemiological indicators, and shared their knowledge about the drug scene in each neighborhood. Based on these discussions and some initial mapping and observations, 15 neighborhoods were selected for ethnographic mapping.

Members of the research team, including the community consultants, started the mapping process by conducting a walkthrough observational survey of the neighborhood and noting drug copping areas and buildings. In addition, information was collected through informal conversations with local drug experts, local nonusing residents, and local drug users. A total of 15 individuals participated in the ethnographic mapping. This effort allowed development of basic knowledge of drug use in the neighborhoods and establishment of initial contact with drug users. Based on the ethnographic mapping, neighborhoods were divided according to key characteristics. For example, neighborhoods were characterized as primarily crack areas or shooting (heroin and/or cocaine) areas, residential versus transient drug use areas, and public versus hidden drug use areas. Specific attention was paid to the presence and the varying roles of female drug users. Distinctions were made between and within neighborhoods (e.g., female drug-using street prostitutes versus crack-house prostitutes, women in the drug business, and women who use drugs but depend on a partner for drugs and/or money and never profile themselves as users in public settings).

Sampling in qualitative studies strives to represent a wide range of experiences. Generally, the sampling frame emerges as the investigation progresses. In other words, the researchers work with a sampling process as opposed to the predetermined sampling frame and procedures typically used in quantitative studies. The ethnographic mapping provided baseline data for the identification of a range of neighborhoods from which a wide variety of female drug users could be recruited, while at the same time permitting flexibility and openness to inclusion of new neighborhoods.

Participant observation—the observation of human behaviors and actions—is a major component of ethnographic mapping and becomes more important as the research progresses. As knowledge and understanding increase, the observations become more focused. In addition, the observation information is verified by having multiple observers in the neighborhood across time periods. For example, several observers in a neighborhood reported that women were actively involved in drug dealing, while other observers in the same neighborhood reported the female drug users were primarily involved in prostitution. These conflicting reports were further explored to determine if they were due to observation bias or differences within the neighborhood. In this example, the contradictory reports stemmed from differences within the neighborhood. While one observer had gained access to the drug-using street prostitutes, another established contact with women involved in the drug business. However, there was no direct overlap between the networks of women who were prostitutes and those who participated in the drug business.

Further exploration of this issue revealed that one of the observers felt uncomfortable observing drug transactions but not street prostitution. Similarly, community consultants familiar with injection drug use had difficulty conducting participant observation among crack users. Each participant observer brings personal biases into the study, which may lead to biased observations and reporting as well as role conflict for the observers (e.g., when the observer feels uncomfortable reporting certain findings) (see Sterk-Elifson 1993 for further discussion). The potential for biased data collection and reporting in Project FAST was reduced through strategies such as having several people conduct participant observation in the same neighborhood, discussing findings in staff meetings, and exploring differences in findings through detailed and focused participant observation.

Bias also occurred due to responses from the field. For example, Hispanic female drug users, primarily Mexican-American and Puerto Rican women, were more open about their drug-using and sexual behaviors to the Hispanic female community consultant than to the Caucasian, African-American, and male community consultants. The Hispanic women shared the same cultural background, including language. In this case, the shared background enhanced the relationship between researcher and subjects. One has to be careful, however, when assuming that a shared background is required. One of the Caucasian community consultants was rejected by Caucasian female drug users who were much more open to African-American consultants. The key factor in the success of the community consultants is a combination of feeling comfortable with the women and being accepted by them.

Conducting ethnographic mapping targeted at female drug users differs from this process with males in a number of ways due to the number of female drug users relative to that of men, the ways in which women support their habit, the women's relationships with male users, and the stigmatization of female drug users as failures. For example, the researchers experienced difficulty in approaching female IDUs who had a relationship with a male user. On several occasions researchers were only able to establish contact after having sought approval from the male partner. Similar difficulties occurred when approaching female drug-using prostitutes who worked for a pimp.

In summary, the information from the ethnographic mapping was used to gain access to and increase knowledge of female drug users, to make sampling decisions, and to create initial contacts with female drug users for the indepth interview component of the study. As the study progressed, the ethnographic mapping information was compared with the interview information. While it took time to gain entrance into the drug-using communities and to develop trust, this period was also used to collect basic information. The time needed to "get in" varied by and within neighborhoods and depended on numerous factors in addition to those mentioned previously; these include the weather, police actions in the neighborhood, and drug availability. For example, everyone on Project FAST remembers the feeling of frustration when the police opened a storefront "miniprecinct" in a community where project members had just gained access.

Indepth interviews

Indepth interviews were conducted with 164 women, all of whom resided in the areas targeted in the ethnographic mapping effort. These women were not a convenience sample; rather, they represented a cross-section of female drug users in the neighborhoods included in the study.

Theoretical sampling was employed to ensure the inclusion of such a sample. As the investigators learned more about female drug users in the selected neighborhoods, relevant distinctions between the various types of female drug users emerged (e.g., through differences between women from different racial/ethnic backgrounds, length of drug use, means of support of the drug habit, way of introduction into drug use, and reproductive status). Based on this theoretical knowledge regarding important differences, sampling decisions were made to ensure the inclusion of a broad representation of female drug users.

Indepth interviews were conducted with each woman selected through theoretical sampling. These interviews differ from survey-based interviews in that the researcher does not use an instrument with standardized questions and response categories, but instead employs an interview guide with open-ended responses. By focusing on the salient issues as identified from the female drug users' point of view, the interviewer is able to develop an insider's perspective of females' drug use. This approach required that the interviewer be a careful listener, constantly integrate the information, probe for elaborations when necessary, and verify throughout the interview if the interviewer's interpretations are correct. The following is an example of such an interaction.

Respondent: When I get high I just lose it...I mean, I can't stop 'til all my rock is gone and then I'll start bugging other folks for a hit.

Interviewer: Tell me about that, how do you bug people and how do you know who to bug?

Respondent: There's too many tricks. You can stare at them and the person may give you some just to get rid of you. Sometimes, I start messing with my pipe, like

making a lot of noise and cussing, or I'll pace around a person who is just about to take a hit...I mean, you tell me. There's a million ways.

Interviewer: But what if you try to bug the wrong person?

Respondent: You see, that what the trick is. You have to know; you just have to know. It's having the smarts. I can't tell you, a person knows. I myself won't go to a sucker who I know wants sex. I'll look for someone who owes me.

Interviewer: Let me see if I get this right. You bug people who owe you first, you stay away from guys who want sex, and what else?

Respondent: To tell you the truth, I'll do anything to get high. I mean, I don't want to and I'll try to forget it as soon as I can.

Interviewer: So, you may do something but you will not tell me about it because it is something you want to forget and you may not acknowledge it to yourself because it makes you feel bad about yourself?

This example indicates the importance of asking the respondent to elaborate on issues such as bugging, sharing drugs, and selecting individuals for a hit of crack. It also shows how in-depth interviewing allows the interviewer to capture the complexities of the women's stories and to explain contradictions in a woman's story. Women, like the respondent in the interview, will not address certain issues out of fear for negative labeling by themselves and by others (Klein 1983; Waterston 1993).

Almost all women contended that female drug users are seen as "bad women," while male users "can get away with much more." The women

frequently introduced topics that appeared to be linked to the image of bad women. The two most salient areas identified were the junction of the drug use and the mother role and the ways in which women support their drug habit. Many women revealed everyday tensions between their drug use and their mother role. In terms of the support of the drug habit, the women discussed how prostitution or sex-for-drug exchanges were an easy route for women to take, and how this made them vulnerable to abuse. The interviews with the women revealed relevant issues that are not discussed in the literature on male drug users. Female drug users need to be asked different questions than those traditionally raised in studies among male users.

Some components of the interview were more structured and included cognitive techniques such as free listing and pile sort. These techniques provided insight into individual practices and perceptions of the relationship between beliefs, norms, and events. It was not uncommon for women to respond to exercises using these techniques by referring to and elaborating on statements made earlier in the interview. Several women mentioned physical and sexual abuse when free listing about female drug use, which in turn facilitated discussions about abuse. While the interviewers initially focused on the women's experiences as victims, the free listing and pile sorting indicated that women were also perpetrators in abusive situations.

The nature of in-depth interviewing assumes that the interviewer and the respondent engage in a dialog in which both partners are coequals (Oakley 1986). Female drug users are not accustomed to being asked about their opinions, their behaviors, and the meaning of their actions. While this also may be true for male drug users, the situation for women is more extreme as they generally are seen as "secondary citizens" by male users and often are not taken seriously by male drug users.

In-depth interviewing, as opposed to questionnaire-based interviewing, implies that the interviewer is an important research tool as well. The content of the in-depth interview depends on the relationship between the researcher and the respondent. For example, while some interviewers felt comfortable asking about sex for crack, others would probe less often and, as a consequence, get less detailed information. Similar differences may have occurred depending on how comfortable the respondent felt with the interviewer. In several interviews involving an African-American interviewer and respondent, respondents made reference to both women having the same racial background and a shared

understanding of the world, while they ignored any differences in socioeconomic status (see Collins 1990 and Hooks 1989 for further discussion). Overall, however, no major differences were identified within Project FAST based on the racial composition of the interviewer-respondent dyad.

Data analysis of indepth interviews occurs both sequentially and concurrently. After the completion of live interviews, the interviewers began to analyze the data by identifying salient issues across interviews and contradictions between interviews. Based on this preliminary data analysis, topics were added to or deleted from the interview guide. Thus, the breadth and depth of the questions grew as the study progressed. If a woman did not voluntarily address issues identified as salient in previous interviews, the interviewer made a special effort to collect data on these topics.

Focus Groups

Several focus groups were conducted with women who were interviewed as well as women who were not. The main reason for conducting focus groups was to verify data interpretations. During a focus group individuals participate in a guided discussion with each other about the meanings of the findings in the presence of staff members. Focus groups provide the researchers with another level of analysis and consensus building, this time between participants in the focus group.

An example was a focus group in which drug use among pregnant women was discussed. Some members of the group emphasized harm reduction among pregnant users, while others stated that pregnancy did not affect drug use. The discussion led the focus group members to distinguish between heavy crack users who exchange sex for crack and those users who do not engage in sex-for-crack exchanges. When the focus group leader introduced findings from the participant observation and the interviews regarding drug use during pregnancy, it appeared that it was almost impossible to distinguish between the two types of crack users. However, apparently all the pregnant crack users engaged in harm reduction, but the extent of behavioral change varied between women and for each woman (Sterk-Elifson et al. 1994). The women who were heavy users and exchanged sex for crack were not a homogenous group, nor did the same woman respond uniformly all the time. While a woman may not use crack but instead drink alcohol in the company of a friend, she may smoke in a crack house. Several women also reported that they

would quit using once they felt the baby move, which was a clear reminder of their pregnancy.

Focus groups were used as a consensus-building strategy regarding the data interpretations of the one-to-one indepth interviews and of the participant observation information from the ethnographic mapping. Qualitative data often are analyzed from the researcher's perspective, creating a situation in which the emphasis is on the insider's perspective of females' drug use during data collection but not during data analysis. Focus groups provide qualitative researchers with an additional tool in the data analysis and theory development process, which is common in grounded theory (Glaser 1978; Glaser and Strauss 1967; Strauss and Corbin 1990). Constantly comparing information from different data collection sources is referred to as "triangulation of the data" (Fielding and Fielding 1986). Triangulation increased the validity of the data and allowed identification and exploration of various cultural models of drug use among female drug users.

SAFETY

Due to the nature of ethnographic mapping, specifically the direct and intense involvement of the researchers with the drug-using communities, the safety of the researchers becomes an important aspect of the research process. During the initial stages of the ethnographic mapping in Project FAST, researchers always entered the field in teams of two. The exceptions involved four community consultants who had extensive drug contacts in the neighborhoods where they were working. As the research proceeded, the project field workers, including the community consultants, were viewed less as "professional strangers" (Agar 1980). As the researchers established rapport in the field and developed personal contacts, it became more common for an individual to work alone. Each time researchers were in the field, they were instructed to call in their location, the expected time of arrival and departure, and, if available, the name of a street contact.

It is almost impossible to anticipate difficulties in the field, but clear safety guidelines reduce the potential for trouble. Furthermore, anybody who felt uncomfortable during the ethnographic mapping process was encouraged to leave the field immediately.

Ethnographic mapping and participant observation may also present frustrations for the research staff as is illustrated in the following excerpt from a researcher's field notes.

For weeks now we have been hearing about a get-off house down the street. No one seems to know exactly what is going on. Melissa has promised me for the fifth time that she will get us in, but today she backed out again...(the first two times she did not show up, the third time she said that her connection was not there; the fourth time she had something else to do) and this time she said that her connection has changed his mind and was not about to let a white girl come in...She said that he had been watching me in the neighborhood and someone even told him I was cool...He told Melissa that he didn't see what he was going to get out of this...Just as I was about to leave, a guy walked up and Melissa kicked me while whispering, "that's him." I am pissed and not about to have him play more games with me; however, as soon as he walks up I force a smile on my face and become very friendly...I never would take these kind of sexist comments (such as "oh, there is another pussy on the block") if it wasn't for my crazy desire to get into Mr. Big T's house.

These field notes indicate that the researcher was faced with the same sexism and disrespect experienced by female drug users and that the researcher needed to react in a way that would not escalate the situation.

Similar safety guidelines were applied to the indepth interviews, specifically those conducted in the community setting. The challenge during the interviews was to ensure privacy and confidentiality while at the same time ensuring the interviewers' safety. As is common in qualitative research among drug users, all project members have their war stories. However, no one associated with Project FAST has been seriously injured, partly due to the established relationships with female drug users and their associates.

Another dimension is the safety of the respondents. Women were stopped by the police because they were observed talking with a researcher, which was viewed as confirmation of their drug use. Others

were challenged by boyfriends or relatives for sharing their stories with the researchers. Developing safety guidelines is an important component of conducting qualitative research. For Project FAST the guidelines were continuously modified as new insights were developed and new relationships in the field were established.

CONCLUDING REMARKS

Qualitative and quantitative research paradigms answer different questions but operate in a complementary fashion. The findings from qualitative research can be used in quantitative research to identify salient content areas, to develop response categories for close-ended questions, and to phrase the questions and answers in culturally appropriate language. At the same time, findings from quantitative studies can identify areas for further qualitative explorations.

Both methodologies have their strengths and weaknesses. Quantitative surveys and epidemiological research currently dominate the drug abuse research field, but recently health concerns (particularly the onset of the AIDS epidemic) have underscored the need for studies based on qualitative approaches (Herdt and Lindenbaum 1992). For example, drug users who may have admitted to needle sharing may be less likely to do so now that needle sharing has been identified as a risk behavior for HIV transmission. However, the qualitative nature of Project FAST made it more difficult deceive the investigators. If needle sharing was observed in certain neighborhoods or shooting galleries and users from these sites reported not engaging in needle sharing, the researchers were in a position to challenge this report. Furthermore, due to the dialog between interviewer and respondent during indepth interviews, it also was more difficult for the respondent to distort the information. Frequently findings from the participant observation were used to challenge respondents during indepth interviews and appeared to encourage respondents to divulge more accurate information.

Research on substance abuse is critical to identifying ways to prevent drug use initiation and to develop intervention strategies to reduce any potential harm from drug use to the user, the user's community, and society at large. Successful prevention and intervention programs require a clear understanding of risk behaviors. In other words, effective programs and policies must be based on a valid theoretical understanding of drug use and abuse. Drug use and abuse can be addressed effectively

with knowledge of underlying norms, values, and attitudes of drug users. This approach has been validated in drug abuse treatment, where programs specifically targeting women and their children appear more successful in attracting women than male-oriented programs.

At the same time qualitative research has its weaknesses, including limited samples, difficulties in replication, and the use of nonstandardized instruments. Replication of such studies is problematic for a number of reasons such as changes in the research setting and researcher bias.

In many ways qualitative research among female drug users is not different from that among male drug users. However, studying female users differs from studying male users. Female drug use is less common than use among men, which increases the difficulty of reaching women. Female drug users tend to occupy a subordinate position in the drug world, which frequently causes their lives to be controlled by males; researchers may need to establish a relationship with the male partner prior to being able to reach the women. Women fear legal repercussions such as the loss of custody of their children. Participant observation revealed that it was not uncommon for community members, relatives, and other drug users to view female users as worthless. This negative perception caused a number of women to deny their drug use, which made it more difficult to interview them.

A quantitative study of female drug users could have included a larger sample of women; however, it would have lacked the depth of information derived from the qualitative study. A good example of the way that qualitative and quantitative data complemented each other involved drug use during pregnancy. Pregnancy and drug use are viewed as incompatible, even among female users. However, many respondents reported continued drug use during pregnancy, largely related to the sociocultural context in which they live. While a survey would have shown that a substantial number of female drug users continued to use drugs, the in-depth interviews revealed various harm reduction strategies among pregnant female drug users. These included using drugs less frequently or in smaller amounts and shifting to alcohol use, which because of its legality was viewed as less harmful. These findings were further confirmed in the participant observation and the focus group information.

For many of the female drug users who participated in Project FAST, drug use was one of many problems in their lives. Several women

indicated that they used drugs to temporarily forget the stress of everyday life. Uncovering the complexities of subjects' lives is one of the main strengths of qualitative research, especially when studying oppressed individuals who engage in illegal behaviors.

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Applying the Methodology of Participant Observation to the Study of Injection-Related HIV Risks

Stephen Koester

INTRODUCTION

Estroff, author of “Making It Crazy” (1981, p. 20), an ethnography of discharged mentally ill patients, explains participant observation as an attempt by an anthropologist “[T]o learn and reach understanding through asking, doing, watching, testing, and experiencing for herself the same activities, rituals, rules and meanings as the subjects. Our subjects become the experts, the instructors, and we become the students.” However, the author concludes that “We are restricted in reaching optimal levels of experience and participation in the subjects’ world if we are to remain sane” (Ibid.).

A recent story in the “New York Times” business section gave another definition of participant observation. According to the reporter:

Anthropologists do research using a method known as participant observation, meaning they go someplace where people are doing things and ask them why before offering an interpretation. Many anthropologists would not see a problem with stopping short of flinging themselves into space to see how it felt. Ms. Martin [the anthropologist featured in the story] believes *more involvement means more insight*” (Nobel 1994) (emphasis added).

Investigators conducting ethnographic research as members of applied research projects are often constrained from achieving Estroff’s optimal level of participant observation or the opportunity of flinging themselves into space because of time and resource constraints. In many cases, research is only one of many responsibilities, and ethnographic investigations are often short-term studies about specific questions or problems conducted within a more quantitatively driven research design.

Under these circumstances, it is often difficult to gain and maintain a membership role that, according to Adler (1990, p. 99), permits the researcher “[T]o participate in the routine practices of members and, as one of them, to experience the members’ world.”

In spite of these constraints, a number of anthropologists and sociologists have applied the methodology and perspective of participant observation to the study of drug use and HIV transmission. Although the time spent observing, talking, and interacting with drug users in their environment may be too intermittent for the researcher to approach Estroff’s optimal level of experience, it has, nevertheless, enabled researchers to make important contributions to understanding drug users’ lives and the behaviors that place them at risk of HIV infection.

This chapter will discuss how the author’s current work and that of colleagues is based on this methodological tradition. First, however, the terms “qualitative research,” “ethnography,” “participant observation,” “ethnographic methods,” and “qualitative methods” must be differentiated, and some tenets of participant observation will be highlighted.

The term “qualitative” is often used as both a general term for nonquantitative behavioral research and as a term for describing specific research techniques. Qualitative research tends to be exploratory and to emphasize depth over breadth in understanding a given research topic. It is:

[M]ultimethod in focus, involving an interpretive, naturalistic approach to its subject matter. . . .
[Qualitative] researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them. [It] involves the studied use and collection of a variety of empirical materials—case study, personal experience, introspective, life story, interview, observational, historical, interactional and visual texts that describe routine and problematic moments and meanings in individuals’ lives. Accordingly, qualitative researchers deploy a wide range of interconnected methods, hoping always to get a better fix on the subject matter at hand (Denzin and Lincoln 1994, p. 2).

Ethnography is a particular qualitative research tradition aimed at describing a human group. The term refers to both the methodology used to achieve that description as well as the description itself. “Participant observation” is another term for the methodology used to accomplish an ethnography. Participant observation is at the heart of ethnography; it implies that researchers immerse themselves in the daily lives of the people being studied, so that, as the above quote by Adler makes clear, the researcher can gain an insider’s or emic perspective of their subjects’ lives. To accomplish this takes time: participant observation and the ethnography that results often involve several months or even years of fieldwork.

Ethnographic methods refer to the various research techniques that accompany participant observation, including fieldwork, observation, and a variety of interviewing approaches aimed at promoting discussion and eliciting information. Combining different methods to examine a phenomenon (triangulation) enables ethnographers to increase their understanding and confirm their interpretations (cross-validation). It should be noted that while these methods are integral components of ethnographic research, they are not the only source of data used to produce an ethnography. A variety of other research methods are frequently employed, including survey instruments and archival research. Ethnographers are comprehensive in the methods and sources they use to understand their subject.

Qualitative research methods include these ethnographic methods but refer as well to additional research methods not necessarily used in conducting participant observation. Some qualitative methods do not demand the kind of ongoing relationship between the researcher and the people being studied that is implied by participant observation, and they are not always conducted in the natural setting. For example, open-ended interviews and focus groups can be conducted without any preexisting relationship between the researcher and the subject and without any intention of establishing a research relationship beyond one or two interviews. In such cases, these qualitative methods are rarely conducted in the natural setting of the interviewee. Nonetheless, these techniques are valuable components of the research strategies employed by many qualitative researchers, including those conducting ethnographic research.

Qualitative research methods like open-ended interviews and focus groups have been used extensively by anthropologists and sociologists examining drug use, HIV transmission, and HIV prevention strategies.

These methods have proved invaluable for providing researchers with the perspectives of drug users, for helping to explain high-risk behaviors, for informing the design of interventions, and for aiding the design of quantitative instruments and the analysis of quantitative data (Booth et al. 1993). However, as the examples described below suggest, these methods have been particularly useful in uncovering significant information about drug use and HIV transmission when they have been deployed as part of an ongoing and more comprehensive research strategy based on participant observation.

Tenets of participant observation that make this methodological approach so useful in understanding disease transmission among a hidden population and in designing methods to slow the spread of disease include:

1. Participant observation implies not only that the researcher participates directly in the everyday lives of people, but also that the research is itself a participatory process. The comment by Estroff that the subjects under study are the experts and the researchers are their students captures this notion. It suggests the dialogic character of fieldwork, the ongoing interaction between researcher and subject. In ideal circumstances—those in which the researcher has sufficient time—this implies the establishment of in-depth relationships, but this principle underlies the successful use of all qualitative methods, from open-ended interviews and focus groups to long-term ethnographic studies.
2. Participant observation occurs in the natural setting. The ethnographer learns by being there, by seeing what people do, by listening to what they say, and by experiencing firsthand the factors that influence their lives (Adler 1994). The utility of this aspect of participant observation should be obvious to those committed to halting the spread of a behaviorally transmitted disease like AIDS; it enables the identification of behaviors that facilitate disease transmission, the discovery of the meaning of those behaviors to the people engaging in them, and the understanding of how contextual factors influence their occurrence.

3. Conducting participant observation is a *process* of discovery. As Moore (1993, pp. 11-12) explains in paraphrasing Spradley (1980) and Glaser and Strauss (1967):

There is no rigid separation of analysis from data collection but rather a constant feedback in which interpretations are developed from observed behaviors and then ploughed back into the research process to investigate their explanatory power and to guide the collection of further data. Any theory which arises from the research is thus grounded in the collected data.

Ethnographers are continuously questioning and seeking to validate their data and their interpretations, as well as looking for new leads, emerging questions, and answers. Through this process ethnographers discover the “rich points,” what Agar (1994) describes as a gap, or distance, between two worlds and Adler (1994) describes as situations or events that provide clues to the social world of the people under study. These rich points are the stuff that makes participant observation so intriguing for the researcher and so important as a means of deciphering human behavior. Inevitably, sooner or later, someone is going to do or say something that raises new questions, provides the catalyst for new insights, or casts doubt on something the researcher was sure of 5 minutes earlier.

These aspects of participant observation enable ethnographers to address critical questions concerning the transmission of HIV among drug users, including:

- What behaviors are associated with HIV transmission?
- How do these behaviors occur and under what circumstances?
- Who engages in these behaviors?
- Why do they engage in them?
- How can these behaviors be reduced or rendered less harmful?!

To illustrate how research based on an ethnographic tradition of participant observation can help answer these questions, this chapter will describe recent research examining the process of drug injection and injection-related HIV risks. The purpose of this illustration is to demonstrate the utility of this methodological approach; as a result, the author has taken the liberty of combining his ongoing study of this topic

with the recent work of the multisite Needle Hygiene Study funded by the National Institute on Drug Abuse (NIDA).

The author began examining drug injection and its relationship to HIV transmission among injectors in Denver in 1988 as part of research connected with a NIDA-funded intervention project.¹ The project attempted to learn about the daily lives of injecting drug users (IDUs) by conducting participant observation in the neighborhoods where they lived and where they bought and used drugs. This research included observations of injectors in their natural settings engaging in a number of everyday activities, including drug copping (buying) and drug injection. On some of these occasions, IDUs were observed sharing a container of water for mixing their drugs and rinsing syringes, as well as a drug-mixing container (cooker) and the cotton filter through which the drug is drawn (Koester 1989; Koester et al. 1990). These previously unreported potential avenues for HIV transmission were reported in the “New York Times” (Kolata 1989) and “Science” (Holden 1989). Since then the author has continued to investigate injection-associated behaviors that may facilitate HIV transmission. In February 1993 the author developed a protocol to study these behaviors in detail and that summer participated in the NIDA-funded, multisite, ethnographic Needle Hygiene Study.²

APPLYING PARTICIPANT OBSERVATION TO EXAMINE INJECTION-ASSOCIATED RISKS

Until recently, few researchers or public health professionals questioned the view that direct sharing or common use of a contaminated syringe between two or more drug injectors was *the* injection behavior that leads to HIV transmission. Survey instruments have been administered to IDUs in a number of cities to determine whether and with whom they engage in this activity, and intervention programs have made it the primary focus of their risk-reduction messages. “Don’t share a syringe, but if you do, make sure you bleach it” has been the primary prevention message directed at drug injectors. Quantitative studies suggest that, as a result, the transfer and sharing of previously used syringes are decreasing among many IDUs (Booth and Watters, in press; Booth and Wiebel 1992).

For the past several years, a small number of ethnographic studies have reported additional injection-associated practices that may contribute to the transmission of the HIV virus among drug injectors (Gnmd et al.

1989, 1991; Inciardi and Page 1991; Jose et al. 1993; Koester 1989, 1992; Koester et al. 1990; Page et al. 1990; Zule 1992). These practices occur as intermediate steps in the process of drug preparation and injection rather than at the point of injection, and they often occur as a consequence of the arrangements injectors make to obtain drugs (Koester and Hoffer 1994). Thus, they are not as readily apparent or as easy to conceptualize as the direct sharing of a syringe.

Indirect sharing includes the common use of injection-associated paraphernalia (water, cookers, and cottons) as well as several other practices. These include frontloading, which is the transfer of drugs from one syringe into another by removing the needle from the receiving syringe and squirting the drug solution into its hub; backloading, which is the transfer of the drug solution from one syringe to another by removing the plunger from the receiving syringe and squirting the mixture from the donor syringe directly into its barrel; and the transfer of drugs from one syringe to another by squirting part of the drug solution back into the drug-mixing container and then drawing the solution into another syringe. These practices have been collectively labeled examples of indirect sharing to distinguish them from syringe sharing, which is the direct transfer of a previously used syringe between two or more injectors. In these practices, the syringe's contents, but not the syringe, are shared (Koester and Hoffer 1994).

Although several of these practices were first reported more than 5 years ago, they continue to be underreported, and prevention messages aimed at warning drug users about them remain incomplete. In most cases, IDUs are simply warned not to share or reuse water, cotton, filters, and cookers. However, this warning does not adequately address the variety and complexity of the behaviors in which these items are used. It focuses on the drug paraphernalia instead of the process and context in which the sharing of these items occurs. Indirect sharing practices in which paraphernalia (water, cookers, and cottons) are used in the process of sharing drugs are not distinguished from those situations in which these items, particularly water and cookers, are shared by injectors who separately prepare their own individual drug dose.

This distinction is extremely important. Although virological studies have yet to verify the HIV risk associated with these various indirect sharing practices, it would appear that when paraphernalia are shared as a consequence of drug sharing, the HIV risk may be equivalent to the direct sharing of needles. In these cases a potentially contaminated syringe's

contents, including bioburden, are transferred from one syringe to another. This may be significantly more dangerous than using a common container of water or a previously used cooker. Developing public health messages that distinguish the multiple ways these items can be shared is an important challenge for HIV prevention.

Current prevention messages regarding these behaviors are incomplete because few researchers have actually observed them. As a result, these potentially risky practices often go unrecognized and are sometimes dismissed as the behavioral quirks of a minority of drug injectors. By conducting participant observation and systematic observations of injection episodes, ethnographers have begun to change this perception.

As mentioned above, over the past several years a small number of researchers have been identifying and describing injection-related practices that may lead to the transfer of HIV (Grund et al. 1991; Jose et al. 1993; Koester 1994; Koester and Hoffer 1994; Page et al. 1990; Zule 1992). Their findings emerged as a result of the exploratory nature of participant observation. The author's understanding of drug injection as a process came about as a result of general interest in observing drug users' daily lives. Occasionally, observations of IDUs' activities included injection episodes. These episodes prompted informal discussions and open-ended interviews with IDUs about injecting. These discussions helped to frame the observations by increasing understanding of the events. The rich points that resulted led to the realization that injection was a complex of practices, several of which seemed to include potential HIV risk. This finding led to more focused research emphasizing systematic observations, semistructured interviews, and the development of a survey instrument that was administered to subjects of the intervention efficacy study. This research focus has continued with the NIDA-funded Needle Hygiene Study.

Although initially the Needle Hygiene Study was designed to compare IDUs' actual needle-cleaning practices with the "HIV/AIDS Prevention Bulletin" (CDC/CSAT/NIDA 1993) revised guidelines for disinfecting used syringes by bleaching for a minimum of 30 seconds, it was broadened on the advice of a subcommittee of the participating ethnographers to include an examination of the entire process of drug preparation and injection. This recommendation was based on the ethnographers' collective experience conducting participant observation among IDUs. Those who had witnessed injection episodes realized that drug injection is a multistep process with a large number of possible

variations, and that these variations may involve different degrees of HIV risk. It was also apparent that the drug injection process is directly influenced by a wide range of contextual factors. As such, the ethnographers recognized the opportunity this project represented to explore these issues comparatively and in greater detail, and they used this information to design a field methodology based upon participant observation. The study that resulted relied on the interplay of two methods to examine the injection process and needle hygiene: direct observation in the natural setting and open-ended interviews.

The Needle Hygiene Study was the most recent of the NIDA-supported, multisite, ethnographic studies. Like the PCP (phencyclidine) study (Feldman et al. 1979) and the study of HIV risks associated with crack cocaine (Ratner 1993), it involved ethnographers at several sites. To ensure comparability, research questions, methods, and analysis were coordinated across sites. The ethnographers followed common protocols developed by the subcommittee of participating ethnographers. Methods included observations of actual injection episodes and focused, open-ended interviews with the participants of those episodes. The minimum number of episode observations for the Needle Hygiene Study was five per site. In several sites, including Denver, more observations were conducted.

The ethnographers agreed to record certain information about observed episodes and to maintain detailed field notes. In addition, a common question guide was developed to further ensure comparability across sites. This guide ensured that certain research areas would be explored in every interview at every site. However, ethnographers were not limited to these areas of investigation. Each researcher was free to examine additional areas of interest as well. At various stages of the study, the ethnographers discussed emerging research questions and issues through conference calls and at occasional meetings. Field notes of each episode and the audio tapes of all interviews were transcribed. The ethnographers agreed to common definitions for the behaviors they described. They analyzed their own data and agreed to a coding scheme for the indirect sharing practices they observed. This step allowed for the measurement of the frequency with which various risk behaviors were observed (Needle et al. 1994).

For the purposes of this study, the ethnographers deliberately selected injectors who represented the demographic differences present in the larger, NIDA-funded intervention studies being conducted in these same

communities. In addition, the ethnographers attempted to observe injecting behavior in settings typical for that site. For example, in Denver, ethnographers attempted to observe both heroin and cocaine injections among white, African-American, and Latino IDUs. They observed episodes that involved both men and women and episodes that included sex partners. Finally, they observed injections in settings that IDUs described as typical: motel rooms, apartments, and automobiles.

Although the fieldwork phase of the project was limited in time (4 months), the ethnographers were able to access drug injectors and gain access to injection scenes because of their ongoing qualitative studies and previous participant observation in these same neighborhoods. In cases where the ethnographer did not know a group of IDUs, access was brokered by community health outreach workers. Their assistance was particularly helpful for ensuring the demographic range and different settings described above, as well as for providing IDUs with an initial explanation of the study's purpose. The ethnographers followed standard procedures for assuring subject confidentiality and obtaining informed consent. The author met with IDUs prior to the actual observation and interview. These meetings were used to explain the study's purpose and to lessen the possibility of any misunderstanding during the observation. Upon arrival for the observation, their informed consent was obtained again.

As the above preobservation precautions imply, ethnographers are well aware of the influence their presence has on the individuals and social scene they are observing. Ideally, ethnographers attempt to lessen this influence by acquiring some degree of membership within the group. However, to achieve this usually requires a level of commitment and continuity that may elude those involved in problem-focused applied research. This does not invalidate the ethnographer's efforts, however. On the contrary, ethnographers accept the fact that theirs is a reflexive, interactive enterprise; they use their involvement and probable influence as a means of data collection and analysis. For example, in the interviews following an observation the author always asked subjects if the episode was typical or if the author's presence had changed the episode and their behavior in any way. To encourage a thoughtful response, the author would ask them to discuss the last time they had injected before the observation. In their responses, IDUs would compare the two episodes and explain any differences in their behavior.

Findings from this study demonstrate the importance of a methodology based on participant observation as well as the benefits of multisite ethnographic investigations. The ethnographic methods used—systematic observations of injection episodes coupled with open-ended interviews—enabled these researchers to confirm the findings independently reported by a few other ethnographers.

Ethnographers at every site observed at least some indirect sharing practices in some injection episodes, and they uncovered explanations for their occurrence. These explanations developed out of the dialogic nature of participant observation, the interplay between observation and interviews. Observations led to insights and questions that were then explored through open-ended interviews. Combining these two methods was essential to this project's success. Data from observations alone would have provided descriptions of drug injection with only limited explanation, and these would have been limited to the ethnographer's interpretation. On the other hand, open-ended interviews alone would not have led to the findings reported here, because the ethnographers would not have known enough to ask about these phenomena. By observing and then asking about them, the ethnographers were able to gain indepth detail about these practices, including IDUs' explanations for their occurrence.

Even though, as Page and colleagues (1990) note, there are an infinite variety of ways that drug users inject drugs, the ethnographers discovered that these practices are not the independent quirks of individuals but rather deliberate steps in the process of preparing drugs. By observing these practices the ethnographers saw how they were connected, and they learned how the practices were often related to the means injectors employ to obtain drugs. Open-ended interviews enabled the ethnographers to check observations and interpretations with the actors. The ethnographers found that many of these practices are most likely to occur when injectors share drugs, and that drug sharing is a consequence of their need to pool resources to buy even small quantities of drugs (Koester and Hoffer 1994). It was also discovered that although the injectors were aware of the risk from sharing needles, very few were cognizant of the possible HIV risk associated with indirect sharing practices.

A variety of rich points and additional research questions emerged from the observations and open-ended interviews. For example, the ethnographers noted a relationship between an individual's role or position

within an injection group and their degree of risk regarding HIV infection from syringe sharing and indirect sharing practices. It became apparent that certain norms or rules determined who prepared the shared drugs for injection. This is significant because the individual preparing the drugs is in a pivotal position regarding potential HIV transmission. Since this individual is most likely to use a personal syringe to prepare the drugs, the individual is at least risk of becoming infected during the drug preparation and injection process. At the same time, this individual is the greatest potential source of infection for those who subsequently inject the prepared drug solution. In episodes where syringes were shared, the ethnographers noticed that there seemed to be an unspoken agreement regarding the order in which participants used the syringe. This appeared to be related directly to differences in power between the participants. For example, in the four episodes in Denver that included both men and women, women were always the last to inject.

Another finding that requires additional research is whether the occurrence of these practices and their arrangement in the injection process varies according to the drug being injected. In the observations conducted in Denver, the use of a common source of water and a common cooker (mixing container) did not seem to be related to the drug being injected. Heroin, cocaine, and speedball injectors all shared these items. However, dividing a shared drug by first mixing it into a liquid was most common among heroin and speedball injectors.

This study represents a successful attempt at operationalizing the basic tenets of participant observation in a multisite, short-term study. It emphasized observation as a critical methodological component, and it depended upon the participants for explanation. Although somewhat limited by its timeframe, there was feedback between data collection and analysis. As previously mentioned, there is no strict separation between these two aspects of ethnographic research. Ethnographic research is a process that involves ongoing interpretation and analysis. Findings are analyzed as they emerge. This analysis leads to new questions, which are then integrated into the research. This dialogic process was common in the studies reported here. During the Needle Hygiene Study, ethnographers discussed new findings and suggested additional avenues of inquiry.

The author has continued to study the issues and questions raised by the Needle Hygiene Study. In addition to continuing to observe injection episodes and conduct open-ended interviews, the author has conducted

focus groups and given drafts of the analysis to several active injectors for review. These latter two methods are an attempt to make the research more participatory. Using focus groups and asking individual injectors to critique the analysis provide feedback that confirms or challenges the analyses, ensures that the perspectives of the actors have been included, and helps to clarify findings that seem ambiguous.

CONCLUSION

As Adler (1985) has noted, to acquire accurate knowledge about deviant behavior requires investigative field research emphasizing direct personal observation, interaction, and experience. This is especially critical for identifying and understanding intricate and often complex human behaviors associated with disease transmission. As the recent work of ethnographers involved in the Needle Hygiene Study demonstrated, it was possible to use a methodology based on participant observation to collect accurate information about the process of drug injection and the circumstances and conditions under which injection occurs. To accomplish this, the ethnographers attempted to understand the perspectives of drug injectors, observed the range of their activities, and participated in and experienced their daily lives; in short, the ethnographers brought participant observation to the forefront of their research. As noted in the “New York Times” article quoted at the beginning of this chapter, “more involvement means more insight” when participant observation is used to study drug users. This approach has led to the identification and description of injection-related risks, it has helped to explain the reasons these behaviors occur, and it has facilitated new and targeted preventive interventions.

NOTES

1. From 1988 to 1991, this project took place at one of three sites participating in a larger demonstration project of the Indigenous Leader Model for HIV Intervention, developed by Wiebel(1988). Wiebel’s model called for an intervention team made up of indigenous outreach workers and an ethnographer. The ethnographer’s role was to supervise the outreach staff and conduct research to develop effective HIV preventive interventions. In 1991, the Needle Hygiene Study was funded by NIDA as a cooperative

agreement, and the author continued to conduct ethnographic research on injection behaviors and HIV risks.

2. This project was funded as a contract by the Community Research Branch of NIDA. Ethnographers involved in this project included Michael Clatts, Laurie Price, Ricky Bluthenthal, Ann Finlinson, Todd Pierce, Jay Johnson, and the author. Carol Anglin coordinated the project.

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The Daily Life of Heroin-Addicted Persons: The Biography of Specific Methodology

Charles D. Kaplan and Elizabeth Y. Lambert

INTRODUCTION

In a classic book on urban ethnography, Whyte (1949) included an appendix entitled “On the Evolution of Street Corner Society.” Whyte begins with a critical remark on the methodologies of community field studies of the day. His words seem to hold greater urgency almost a half century later. Fascination with today’s technologies has often obscured the true goals of qualitative research. Whyte (1949, pp. 279-280) says:

There have been some useful statements on methods, but, with a few exceptions, they place discussion entirely on a logical-intellectual basis. They fail to note that the researcher, like his informants, is a social animal. A real explanation of how the research was done necessarily involves a rather personal account of how the researcher lived during the period of study. Logic plays an important part. But I am convinced that the actual evolution of research ideas does not take place in accord with the formal statements we read on research methods. The ideas grow up in part out of our immersion in the data and out of the whole process of living.

The relevant issue Whyte raised is that the researcher’s qualitative data analysis and interpretation is tied to the daily lives of the social animals involved in that research. All qualitative research efforts are social experiments of some sort. In keeping with Whyte, this chapter describes a specific methodology based upon the daily lives of heroin-addicted persons. The “growing up” of this methodology, which has reached relative maturity in Europe, has initiated a necessary parallel process of “growing down.” That is, in principle: the more refined research technology becomes, the more researchers must prepare to get back down to the personal dimension of social animals and daily lives. Even a favorite research tool, the computer, evolved from the growing down of

fully matured mainframe computers to personal computers that fit the daily lives of users.

In the drug abuse treatment and prevention field, the bona fide object of qualitative analysis is often the personal, daily lives of drug users. For example, the Heroin Lifestyle Study (HLS) employed a modified ethnographic research approach to study the daily lives of black heroin-addicted males in Chicago, Philadelphia, New York City, and Washington, DC (Hanson et al. 1985). The HLS focused on the ways in which these addicted persons “think and talk about their day-to-day activities and their lives” (Ibid., p. 11). The methodology used for the study was developed to ensure a faithful and genuine representation of the perspectives and lives of heroin-addicted men. This chapter describes a study of heroin users in Europe conducted by a group of researchers known as the Maastricht research group. The study employed a methodology similar to the HLS, including the use of indigenous heroin-addicted persons as part of the research team.

The study’s approach to qualitative analysis has been greatly influenced by several streams developed in sociology over the past 40 years. The tradition of Strauss’ (1987) grounded theory has had a significant influence on the analytic techniques and strategies. Objective hermeneutics and narrative interview analysis, developed in Germany, have added rigor to data interpretation practices (Oevermann et al. 1979). Most important has been the body of research that Rose (1962a, 1962b) has termed “ethnoinquiries,” including ethnomethodology, conversation analysis, and ethnomony. By their very nature, ethnoinquiries are reflexive (Mehan and Wood 1975; Steier 1991). The daily life of heroin-addicted persons is often truly knowable to both the researcher and the addict, who are both participants in the ethnographic study. Special methodologies that have as much to do with the shared experience of both as with formal logic are required (Garfinkel 1967; Mehan and Wood 1975; Rose 1962a, 1962b). Thus, work in the qualitative tradition will often include a qualifying statement by the researcher, like Whyte’s appendix, as a way to control bias; that is, the researcher will include his or her views and expectations as a critical part of the ethnographic study.

Daily life data, such as those provided by studies like the HLS, represent the gold standard for judging the validity of research findings, treatment regimens, prevention interventions, or drug control policies. Simply stated, daily life data about heroin-addicted persons provide a basis for answering a number of questions that pertain to the quality of their lives.

The Maastricht research group refers to this as “member validity.” It represents a tenet of ethnomethodology: study participants bring to the research situation their own set of methods as a function of their membership in the targeted research group (deVries and Kaplan 1994; Mehan and Wood 1975); this set can serve as both a research topic and a resource.

EXPERIENCE SAMPLING, THE RESEARCH ALLIANCE, AND EXPERIMENTAL ETHNOGRAPHY

The Maastricht research group has used the Experience Sampling Method (ESM) to focus on personal biographical data and time budgets of psychiatric patients (deVries 1992). This method is designed to collect data on random moments in the daily lives of patients and provide systematic samples of personal biographical experiences. The research group has also applied ESM to study the daily lives of 40 active heroin-addicted persons in clinical and community settings (deVos et al. 1993; Kaplan 1992).

ESM was first developed by the University of Chicago Department of Psychology as an application of systematic phenomenology (Cziksizentmihalyi and Larson 1987). Phenomenology, a European philosophy comprised of both existentialism and mathematics, had a profound influence on American qualitative sociology. However, in the work of University of Chicago psychologists it became a specific methodology that focused on two essential phenomenological elements: experience and mathematics. Data from research with ESM, whether in the form of Likert scales, diary entries, or field notes of fieldworkers, provided a comprehensive profile of the daily lives of heroin-addicted persons. In addition, research participants often said they enjoyed ESM and found that it added to the quality of their lives. This experience exemplifies another important feature of ESM: the formation of a research alliance between the researchers and the research participants.

The Maastricht group’s ESM studies of heroin-addicted persons found that more time was spent by addicted persons in self-care and caring for the symptoms of others than in actually using or procuring drugs (Kaplan et al. 1990). A lack of caring for themselves or others, “getting off,” and other activities associated with the heroin high have been emphasized by numerous American studies (Agar 1973; Irwin 1977). However, in The Netherlands, where health care services are widely provided to them,

heroin-addicted persons devote a considerable part of their daily lives to self-care and the use of existing care services. Thus, heroin-addicted persons are not craving or taking drugs most of the time. Instead they are engaged in rational activities such as self-help, selecting a dealer, or socializing. These circumstances again reference the importance of the research alliance, which is based on a negotiated consensus between the researcher and the research participant to work together toward a common objective—the accomplishment of the field experiment.

The practical basis of the research alliance is in work with community fieldworkers, many of whom may be active heroin-addicted persons, and with clinicians and social service providers who work with heroin-addicted persons and have significance in their daily social networks. Another level of the research alliance is represented by the effects of urbanity on heroin use and addiction, such that multiple cities, communities, and neighborhoods have to be involved as research sites. Still another level of the alliance is in the multiple qualitative methods that are used, including ESM, narrative and focused interviews, participant observation, ethnomethodologies, and focus groups. Together, these methods are triangulated or applied sequentially or concurrently to a problem, and their results are then examined for consistency (Denzin 1970).

Thus, the research alliance actually involves a multilevel, multisite, multimethod research design, referred to as “experimental ethnography.” Experimental ethnography aims at fitting qualitative data in a structure that makes it possible to replicate, generalize, and compare results from a variety of different field laboratories or sites. Experimental ethnography may seem a contradiction in terms because ethnographic research is often viewed as uncontrolled and difficult to validate, as are case studies. However, there have been important approaches that have contributed to the integration of ethnography with experimental science. For instance, Campbell, Stanley, and Cook developed quasi-experimental designs, which provide a strong basis for socially and scientifically valid evaluation research (Campbell and Stanley 1963; Cook and Campbell 1979). They demonstrated that many of the assumptions of experimental research may be modified and still produce robust and valid results. In essence, causality can be examined with multisite and multimethod designs (e.g., the use of triangulation). Patton (1980, 1987) has also contributed to this approach through extensive writings on the use of qualitative research for evaluation. In addition, a new generation of exploratory statistical techniques using categorical (i.e., qualitative) data

has been introduced (Kennedy 1992). Ethnographers and qualitative sociologists have also developed techniques to make their procedures more compatible with experimental designs. In this regard, the work of Strauss and others in the grounded theory tradition stand out (Glaser and Strauss 1967; Strauss 1987; Van Maanen et al. 1986).

The research recommendations in the National Institute on Drug Abuse monograph “AIDS and Intravenous Drug Use: Future Directions for Community-Based Prevention” provide a guide for designing research that is both field intensive and experimental (Leukefeld et al. 1990). These recommendations reflect the design canon of triangulation. Through triangulated designs, for example, the use of multiple sites provides for data comparability and offsets intrasite weaknesses. The generalizability of research results can be further improved by designing multisite studies that include multiple participant subgroups.

DEFINING AND DEVELOPING THE SCOPE OF QUALITATIVE RESEARCH

Qualitative research and analysis have been described as procedures of “learning to count to one” (Van Maanen et al. 1986, p. 5). Deciding what units to count is more fundamental than organizing the resulting counts into frequency distributions. Learning to count to one translates into the research question, What is a heroin addict? To answer this question, it is necessary to determine how one becomes self-identified as a heroin user or heroin addict and how one’s daily life is perceived and evolves. The symptoms of addiction (or substance abuse and dependency disorders) are highly variable. Diagnostic instruments that are not sensitive to the relationships of symptoms to their social contexts are rarely capable of capturing this variation. Sensitive and specific diagnoses require a fundamental appreciation of the value of case identification and description (i.e., procedures of learning to count to one).

Agar’s (1973) earlier work in formal ethnography had a powerful influence on the Maastricht group’s research on craving and ritualization among heroin-addicted persons, specifically in the development of highly differentiated protocols to guide participant observations and lead to improved understandings of needle-sharing behaviors (Grund et al. 1991a, 1991b). But the scope of qualitative analysis also requires attention to fieldwork organization and, in some respects, to politics. That is, the research alliance is inevitably confronted by the issue of

responsibility and the need to empower heroin-addicted persons to be responsible for their own lives. Becker (1970) addresses this in a formulation of whose side is the researcher on. The answer is not simple; it is one that requires a great deal of delicacy and sensitivity. On the one hand, it is necessary to take a client-oriented approach that is accepting and supportive of the heroin addict. But the researcher also must maintain an objective detachment to ensure the impartiality and quality of data collection, analysis, and reporting.

SUBJECT SAMPLING AND RECRUITMENT ISSUES

Risks to researchers from working too closely in a research alliance are the possible loss of objectivity and the scientific ethic of responsibility. These risks became apparent in studies of the nature and extent of cocaine use in Rotterdam; the strategies that had worked well with heroin-addicted persons in Maastricht did not work with cocaine users. Cocaine users were far more varied in their personal characteristics than heroin-addicted persons, and cocaine was far more widespread in the city than was heroin. Unlike heroin-addicted persons, cocaine users tended to be better organized and socially integrated. Thus, the research approach emphasized independence as the fundamental fieldwork principle. This was apparent in the research design, which, like the earlier heroin-use studies, used snowball sampling to recruit subjects, but which added techniques such as newspaper advertisements and participant enlistments from jails (Bieleman et al. 1993; Kaplan et al. 1987). These other sources were important to minimize selection bias from community fieldwork, which can be a persistent source of sampling error, as described in the methodological experiment below.

Table 1 presents the results of a multiple classification analysis of the effects of fieldworker and milieu in the cocaine study. In this methodological experiment the three fieldworkers were women. Fieldworker characteristics that varied were heroin use (one was a heroin user, two were not) and age (one nonuser of heroin was young, the other was old). The fieldworker effect is a significant source of selection bias regardless of milieu (in this experiment, milieu was loosely categorized as artistic or nonartistic). The heroin-using fieldworker was much more likely to select other heroin users who also used cocaine ($\beta = 0.93$, $p < 0.000$). The other fieldworkers had a negative adjusted mean, indicating that they were more likely to select heroin nonusers who used

TABLE 1. *Adjusted deviations from grand mean (GM) on snowball sample profiling variables (heroin user, age, year of first cocaine use, and quantity of cocaine use per month) by fieldworker and milieu characteristics.*

Variable	Heroin- using GM=0.43	Age (Years) GM=31	Year (1979-1980) GM=1979.6	Quantity (grams/month) GM=6.1
Fieldworker+				
Heroin-using	0.57	-2.80	-0.70	4.20
Young	-0.42	3.40	-1.40	-4.20
Old	-0.26	-1.10	3.70	0.10
Milieu*				
Artistic	0.01	-0.20	-0.20	0.19
Nonartistic	-0.02	-0.60	0.70	-0.59
	+ p < 0.000 β = 0.93	+ p < 0.04 β = 0.50	+ p < 0.02 β = 0.51	+ p < 0.04 β = 0.50
	* p < NS β = 0.03	* p < NS β = 0.06	* p < NS β = 0.07	* p < NS β = 0.05
	R = 0.94 R ² = 0.88	R = 0.52 R ² = 0.27	R = 0.54 R ² = 0.29	R = 0.51 R ² = 0.26

cocaine. The heroin-using fieldworker also selected participants who used an average of 4 grams of cocaine per month more than the grand mean (GM) of the total sample.

This small study illustrates how much subject sampling is influenced by the fieldworker's dependency on his or her **own** personal network. In the Rotterdam study, this network dependency was overcome by intensive training of fieldworkers about objectivity and the need to go outside of personal networks to tap into multiple networks (i.e., to be independent). In addition, the representativeness of the total sample can be improved from the use of multiple snowball samples because independently

selected snowball samples tend to strengthen external validity (Bieleman et al. 1993; Frank and Snijders 1994).

In the experimental sciences, blinding and statistical assumptions on the normal distribution and the independent selection of the sample have been conventional procedures for bias control. But in field research these conventions are often violated. To minimize the effects of these limitations, field research uses multiple samples, well-trained fieldworkers constant, and systematic variation of milieus from which participants are recruited. Diverse milieus can be identified beforehand through social mapping and can then be analyzed as sampling clusters.

ETHICAL ISSUES: PRIVACY, CONFIDENTIALITY, AND SENSITIVE INFORMATION

The Maastricht research group considered informed consent forms a necessary formality but insufficient to ensure field ethics. Such forms are often seen as more protective of the researcher than the subjects. But first and foremost, the research participants had to understand the aims of the study and agree to invest time and energy to achieve them. Researchers must walk a fine line and maintain a neutral position on many issues that may directly affect the lives of research participants. Knowledge from such research often has political value because it may bolster the claims of one or more special interests or advocacy groups. For example, the so-called Junkie Union believed their participation in the study would result in more support for better services, fewer legal sanctions, and a general destigmatization of heroin addiction. Researchers are obligated to let their findings speak for themselves and must be cautious about taking advocacy positions on behalf of research participants.

Because the research involved an intrusion into the private lives of the participants, the research group developed a system wherein the community fieldworkers, many of whom were trusted associates of the Junkie Union, secured the coded identities of research participants under lock and key. The fieldworkers were required to sign a statement that they would not reveal identifying information to anyone outside the research team. Furthermore, code names were used in all field notes. A master key was retained for uncoding the personal data at the end of the study, at which time all keys were destroyed. This made followup research difficult, if not impossible.

Drug use by members of the research team was perhaps the most sensitive information because it could seriously compromise the ethic of responsibility. Such drug use may facilitate a membership role in the community of heroin-addicted persons, but it can also do serious harm to the research (Adler and Adler 1987). In this study active heroin-addicted persons who worked as community fieldworkers were required to abstain from drug use during work. Drugs were prohibited from the workplace for the rest of the research team as well, except in instances when field samples were collected for laboratory testing.

USE OF INCENTIVES AND REMUNERATION

A main incentive for participant involvement in the study seemed to be the possibility of influencing official policy. In the era of AIDS, the chance that participants could contribute to curbing the spread of the disease in their own communities through a better understanding of the risks and barriers to behavioral change in their daily lives reinforced an appreciation of the value of their own experiences. An additional incentive was the opportunity for therapeutic feedback. Although the prevalence of psychopathological disorders is high in this population, the normal clinical protocol for treating heroin-addicted persons in The Netherlands is to first provide drug services (van Limbeek et al. 1992). Only after the drug problem is cured is the person considered ready to confront his or her psychopathological problems. Thus, occasions for psychotherapeutic insight are often unavailable to heroin-addicted persons.

In addition to these social and psychological incentives, a sizable remuneration was provided to research participants. The research group felt that financial compensation was important to express appreciation for the participants' personal stories and accounts. Having no money and craving drugs (not merely liking them) are strongly statistically related (Kaplan 1992). This relationship is supported by recent diagnosis classifications in which the behavioral criteria for drug dependency and for pathological gambling are identical (Widiger and Smith 1994). Thus, money is fundamental to drug dependency, making the provision of money to drug-addicted persons to participate in a research study somewhat of a moral dilemma to the researcher. Nonmonetary incentives, such as food coupons or material items (e.g., clothing), are one way to solve this dilemma and have been used with some success in the United States (National Institute on Drug Abuse 1993).

CULTURAL AND OTHER BARRIERS TO FIELD RESEARCH

Cultural stereotypes can be significant barriers to field research. Heroin use is so stigmatized in today's society, whether in The Netherlands or the United States, that the researcher is suspect for becoming too close to heroin-addicted persons outside of a clinical relationship. Thus, a research project that might challenge long-held cultural stereotypes about heroin addiction can be quite threatening in the eyes of the general population.

Another barrier to field research comes from organized heroin and cocaine distribution networks. Several of the study participants worked in these networks, typically in low-level positions as "doormen" at dealing locations and as runners. There was a deeply held concern that business secrets would be exposed. There were also time constraints. The ESM protocol required a diary entry within 5 minutes following a signal given 10 times a day, which represents substantial interruption of the normal daily routine. The tempo of the drug business is intense, and no one likes to wait around for someone writing in a diary. Study participants who worked for these distribution networks were the ones with the lowest compliance in the sample. Several said that it was impossible to comply because work demands were so great that they could find no time to participate, even though they were highly motivated.

Minority group cultural barriers were another factor. While the Surinamese and Moroccans did cooperate, the Turks and Antilleans did not. This seemed to be partly due to the fieldworkers' limited experiences and contacts with these groups, but there were also other specific cultural barriers. For example, many Islamic cultures have taboos on talking about illicit behaviors. They believe that forbidden activities can only be properly handled within the extended family (van Gelder and Lamur 1993). It takes a versatile and highly specialized research team, which is often beyond organizational resources, to traverse this barrier.

PROCESSING, VERIFICATION, ANALYSIS, AND INTERPRETATION OF QUALITATIVE DATA

In many ways, fieldwork is a process of applying a "human machine-faced" instrument. The human fieldwork experience itself provides

important data, which are then supported (or not supported) by machine-readable quantitative and qualitative information. This viewpoint is not unlike the one emerging from contemporary clinical decisionmaking aided by computer-based diagnostic systems. For example, in their evaluation of the performance of four computer-based diagnostic systems, Bemer and colleagues (1994, p. 1792) conclude: "The programs should be used by physicians who can identify and use the relevant information and ignore the irrelevant information that can be produced." The clinical experience of the physician makes the programs useful, not the other way around. The same can be said of programs for coding, sorting, and analyzing qualitative data: the fieldwork experience of the researcher makes the data useful.

From the human fieldwork experience evolves a hierarchy of field research instrumental acts, with the primary act being that of listening to the voices (i.e., from a tape recorder) and preparing field notes (Kaplan 1989). Secondary acts are transcribing and reading. Transcripts must be made in accordance with specific rules to render them faithful to the voice on the tape. Coding of qualitative data follows, as an act of translation that requires a process of forward and backward cross-checking. Most coding schemes can be developed after 10 to 20 cases of coding and recoding (Glaser and Strauss 1967). Thus, it may not be necessary to transcribe all interviews. However, all tape-recorded interviews should be indexed in terms of research concerns and representative cases and then fully or partially transcribed for their specific contents. In addition, fieldwork should not be considered a research experience unless it is recorded as a field note. As a rule, for every 1 day in the field, 2 days are spent in the office writing field notes and analytic memos, listening to tapes, and preparing analyses.

Qualitative data processing combines most of the difficulties that are encountered with quantitative data with the added burden of dealing with connotative words rather than denotative numbers. The emergence of modern computer technology has greatly improved the speed and accuracy with which textual data can be processed. However, the need to raise qualitative data processing and analysis to the level of quantitative data processing and analysis is apparent. The field is now in a process of revolutionizing software with hypertext capabilities and functions that will code and retrieve and build theory and conceptual networks (Miles and Weitzman 1994).

In the research group's experience, data collection, processing, coding, and oftentimes analysis can take place on a case-by-case basis or, at the most, using several cases at a time. The group decided to represent the work not as ethnography, but as ethnographic analysis (Grund et al. 1991a). This meant working with an observational protocol that systematically guided the fieldwork and was complemented by field notes. The researchers employed an objective style of writing field notes by focusing on details of the events and people they were observing rather than on subjective reactions to them. This was achieved by rigorously separating objective facts in the field notes from subjective impressions: objective observations were saved in computer files in a field note directory and subjective thoughts or impressions were saved in an analytic memo directory (Strauss 1987).

A possible weakness in these analyses is linked to the proximity of the researcher to the daily lives of the research participants. The "clinician's illusion," if not the ethnographer's illusion, has been well documented (Cohen and Cohen 1984). These selection biases, derived from differences in professional roles and sampling strategies, need to be carefully controlled. The Maastricht research group attempted to control for ethnographic bias by applying a rule of certainty. A finding was not reportable unless at least three independent and variant patterns being described could be found in the field notes. While this rule appeared to work well, the obverse should also have been employed, namely, a rule of uncertainty. This rule would be used to search the field notes for three independent examples contrary to the findings about patterns in the data. These additional analytic controls would have substantially improved the confidence with which interpretations and conclusions were made.

In Frankfurt, a methodology of objective hermeneutics has been developed to better systematize what had been largely an intuitive process in data interpretation (Oevermann et al. 1979). This approach lists every conceivable interpretation in a transcript on a line-by-line basis. Although tedious, the method permits the development of multiple interpretations of the same ethnographic facts.

ISSUES IN COMBINING QUALITATIVE AND QUANTITATIVE METHODS IN DRUG ABUSE AND HIV RESEARCH

The destructiveness that cocaine brought to the daily lives of heroin-addicted persons, already apparent from participant observation field

notes, was dramatically profiled by ESM data where peak craving levels were observed both before and shortly after cocaine was taken (Grund et al. 1991c). The ESM data also underscored the profound effects of events like pregnancy and HIV seropositivity in the daily lives of heroin-addicted persons.

In studies of cocaine use in three European cities, the scientific and practical use of typologies became apparent (Bieleman et al. 1993). Typologies provide a way to compare qualitative data collected in different contexts. However, it may not always be possible to combine such qualitative data with quantitative information, such as data collected from questionnaires. For instance, the dimensions of typologies are often not abstract enough across sites to allow for linkage with quantitative material. This suggests an important constraint on combining qualitative and quantitative methods: the primacy of the analytic integrity of qualitative data must be maintained. Nevertheless, typology construction of qualitative data is a worthwhile activity in and of itself. In the cocaine studies, typologies were useful to policymakers and planners in providing a profile of specific risk groups and subpopulations to guide the development of targeted interventions.

CONCLUSION

The specific methodology described in this chapter can be said to be ethnographically driven rather than ethnographic. It argues for the primacy of qualitative analysis, but, to carry the metaphor a bit further, does not mistake the driver for the car. The vehicle for analysis and interpretation must have both a quantitative and qualitative component, just as a car must have an engine and a body. The driver (i.e., the researcher) is trained in the field and has firsthand knowledge of the daily lives of heroin-addicted persons not only in the clinic, but also in the streets.

In conclusion, the special methodology presented here combines ethnographic fieldwork with experimental design considerations. While ethnography gives primacy to field experience as data, experimentalism places primacy on the control of research experience. Their integration

into experimental ethnography attempts to bridge the gap between the two. This suggests several critical points about experimental ethnography:

1. It is epidemiological research characterized by continual movement between personal levels and population levels;
2. It requires integrated quantitative data to effect its controls;
3. It is practical and has practical implications for the community and the daily lives of research participants;
4. It is usually multisite and involves comparing and contrasting findings drawn from comparable units; and
5. It is multidisciplinary, requiring at minimum a collaborative team approach.

In the broader view, the specific methodology described in this chapter is not restricted to drug abuse and HIV research alone because it has an impact on public health and medicine as a whole: its quest is to focus on the individual in scientific and clinical practice and, by so doing, empower the community as the ultimate sentinel for prevention.

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Hitting A Moving Target: The Use of Ethnographic Methods in the Development of Sampling Strategies for the Evaluation of AIDS Outreach Programs for Homeless Youth in New York City

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INTRODUCTION

Large numbers of youth in the United States have made the urban streets their home in recent years. Physical and sexual abuse are frequently cited factors in the choice to leave home, as is conflict with parents, particularly conflict related to sexuality (Clatts and Atillasoy 1993). For many youth, the social and economic problems faced by parents have led to the breakdown of the family and household as viable socioeconomic units, leading to premature and often abrupt departure from home. Thus, the homeless youth population is a complex mix of runaways, throwaways, and castaways (Adams and Munro 1979; Adams et al. 1985; Caton 1986; Dunford and Brennan 1976; Shafer and Caton 1984; Yates et al. 1988).¹ These differences are probably related to the fact that these youth come to the streets with different kinds of problems and sometimes with very different capacities to manage these problems. In addition to these internal factors, these youth also come to the street environment with very different kinds of capacities to manage the street environment, a fact that may also have important implications both for the kinds of risk behavior in which they become involved in the street as well as for their capacity to leave street life (Clatts 1994a; Clatts and Atillasoy 1993; Clatts et al. 1990; Hillman et al. 1992; Kennedy et al. 1994).

Often faced with an ineffectual social services system and with nowhere else to go, these youth make their way on the streets—a precarious and often violent world where they do what they can to stay afloat. Often this means exchanging sex for money, drugs, food, or shelter (Atillasoy and Clatts 1993). Always it means risking safety and health to contend with the many hardships and dangers of street life. Not surprisingly, these

youth are exceptionally vulnerable to a number of poor health outcomes, including repeated exposure to sexually transmitted diseases, unplanned pregnancies (often with inadequate prenatal care), untreated tuberculosis, HIV infection, and rapid development of opportunistic infections associated with progressive immune dysfunction and AIDS (Affoumado, personal communication, September 15, 1991; Brunswick 1980; Hein 1988; Pries and Silber 1991; Rotheram-Borus and Koopman 1989; Rothman 1989; Stricof et al. 1991).

Roughly 10 years ago, a number of targeted social service programs based upon street outreach began to be developed for this population in New York City, and today such programs can be found in most major cities in the United States. Indeed, with the growing recognition of the problem of street youth worldwide, these kinds of programs are being developed in many cities around the world. As the connotation of the word suggests, the term “street outreach” refers to an attempt to provide a bridge to individuals for whom there are barriers to institutionally based services. Typically, the individuals targeted by street outreach may live in close geographical proximity to institutionally based services but lack effective entree into the mainstream service-delivery system. Particularly with the rapid spread of HIV infection among drug injectors, for example, street-based outreach services are often used as both a means by which to bring AIDS prevention information and materials to injectors in their natural setting as well as a way to improve their access to services, including drug treatment, outside the street setting itself (Watters 1987; Wiebel 1988). As the AIDS pandemic has expanded, street outreach has begun to receive considerable attention as an AIDS prevention strategy. As yet, however, there is relatively little information about the actual impact of street outreach, either in terms of the adequacy with which it reaches a particular at-risk population or the contribution that it makes to public health in terms of fostering sustained changes in risk behavior associated with HIV infection.*

This chapter is concerned with explicating the way in which ethnography has contributed to the Youth At Risk (YAR) Study, a 5-year evaluation of street outreach programs targeted to street youth in New York City, funded by the Centers for Disease Control and Prevention (CDC). The YAR Study has the following aims: (1) to assess the degree to which existing prevention resources are adequate to the task of reaching the target population, (2) to assess the frequency and consistency of outreach services to the street youth population, and (3) to assess the extent to

which existing outreach strategies are effective in fostering AIDS risk reduction within this population.

METHODOLOGICAL PROBLEM

Unfortunately, although there is certainly a vast body of literature on adolescence and even a rapidly growing amount of information regarding the disparate population that has come to be termed “high-risk youth,” there nevertheless continues to be very little known that is specific to the homeless and runaway youth population itself, particularly in New York City. Though diverse in many other respects, this population is composed of youth who are chronically without permanent shelter and who are largely dependent upon the street economy as a means of acquiring everyday survival needs (e.g., food, clothing, and shelter). As might be expected, relatively few of these youth are included in the usual kinds of places in which research occurs, such as high schools, after-school programs, and community organizations for youth.

Even the programs that serve this particular population, such as shelters and drug treatment programs, may be poor sources from which to conduct studies that will provide information about either the demographic or the behavioral characteristics of this population. Unfortunately, most of the empirical evidence about the street youth population, both in New York City and nationwide, is derived from just these kinds of sources. Although relatively few in number, the studies of street youth that do exist are derived primarily from convenience samples of runaway shelters, hospital emergency rooms, drug treatment facilities, and juvenile detention facilities—settings that are unlikely to provide a representative sample of the population on the streets. Moreover, by their very nature as institutional environments, these settings may not be the best contexts in which to obtain self-reported information from a population that is generally alienated from mainstream services and often extremely distrustful of adults. Consequently, on grounds of both reliability and validity, such data may have limited utility in the development and evaluation of service-delivery strategies. Obviously, these issues become all the more acute when, as in the study described here, the service-delivery strategy in question is street outreach.

Given the dearth of information about this population, it is of paramount importance that any evaluative research of street outreach activities be able to identify ways in which to obtain representative and replicable

samples of the population (Wiebel 1990, 1991). There are at least two reasons to use a street-based approach to accomplish this goal. First, since the streets and immediate environs (e.g., bus stations, parks, subway stations) constitute the natural settings in which the youth live, work, sleep, eat, and play, street-based sampling offers a much greater potential for obtaining a complete picture of the characteristics of the population as a whole. Second, street-based sampling is more likely to overcome reporting biases that may result from using institutional settings as the context in which the research process occurs. Again, the street setting-as an environment in which the youth have comparatively more control-is more likely to serve as a context in which to acquire reliable self-reported information.

To be sure, street-based sampling has its own set of problems and limitations. The streets are chaotic, and many standard research procedures are not applicable. The absence of relevant secondary data that could be used as a means of adequately defining or validating the universe of study serves to leave the question of representativeness unresolved. Particularly problematic in this regard is the lack of sufficient time depth found in many street-based surveys-a fact that may leave the issue of representativeness unresolved in any formally empirical sense. Finally, street-based samples are especially vulnerable to the vicissitudes of street-based life, particularly the high degrees of mobility and seasonal variation that are known to characterize many parts of the homeless population, including homeless youth. These factors have contributed to the methodological “noise” with which many of the existing studies of this population are fraught and may explain why so few of the studies of street youth have attempted to derive street-based samples.

Given these concerns, the specific methodological aims of this chapter are twofold. First, this chapter will show how ethnographic methods, particularly participant observation and life history interviews, were used in the development and implementation of a comprehensive street-based sampling strategy for the study of the street youth in New York City. Second, the chapter will show how ethnographic methods were used as a means of obtaining types of information that are less accessible from the use of standard survey methods alone, particularly key issues for street outreach such as geographic movement and temporal variability.

FORMATIVE RESEARCH

The first phase of the YAR Study involved a community assessment process in which the population that would be studied was specified on the basis of how service programs themselves viewed the target population. This process involved exploratory research on the nature of services available to the population, including the information systems that might provide some basis for establishing a sampling framework. Unfortunately, at this point it became clear that the existing information systems suffered from many of the same kinds of potential biases with which previous research was fraught.

Service providers themselves acknowledged their belief that there were large groups of youth who never appeared for services or who did so only under emergency conditions that did not facilitate the development of detailed case profiles. Outreach workers in particular described having had long-term service relationships with large numbers of youth who never appeared in drop-in centers or other kinds of service-delivery settings where they would be likely to be counted for the purposes of research. Consequently, it became clear that developing a targeted sampling plan based upon a descending sampling methodology, which is more typical of the way in which targeted sampling schemes are often devised, was not going to be feasible.³ For example, none of the existing information was sufficiently generalizable to use as the foundation for sampling quotas based upon either demographic or behavioral parameters. Again, this problem was made more acute because the population in question was street-based and also because the principal research questions were concerned with street-based phenomena (i.e., street outreach services).

The ethnographic data acquired during this formative phase of the study were used to develop a targeted sampling plan that would guide the subsequent survey research. The survey research consisted of two waves of cross-sectional surveys that were used to develop a comprehensive demographic and behavioral profile of the street youth population that could serve as a baseline sample. Subsequent cross-sectional waves were used to measure the behavioral impact of targeted enhancements to street outreach services, particularly as they related to fostering AIDS risk reduction in the street youth population (Clatts et al. 1994b). Thus, a key goal of the street-based sampling plan was the development of a sample that could be replicated over time and that included all the major demographic and behavioral segments of the street youth population in the

central Manhattan area of New York City, where street outreach services are focused.

Two specific ethnographic methods were used throughout the initial, formative phase of the YAR Study: participant observation and life history interviews. These methods are discussed separately here, but in practice they were used concurrently. Indeed, as will be shown, there was important feedback between the two. Each tool contributes to a particular methodological goal: participant observation provides the geographic lay of the land and the life history work provides temporal depth.

PARTICIPANT OBSERVATION

As Agar (1980, p. 120) has described it, “Participant observation suggests that you are directly involved in community life, observing and talking with people as you learn from their view of reality.” Adler (1990, p. 99) has added that in conducting participant observation, ethnographers attempt to gain a “quasi-membership role” that permits them “to participate in routine practices.” Both of these definitions emphasize the utility of participant observation in exploratory research, and although participant observation need not be limited to an exploratory role, it did have this importance in the study described here.

One of the initial tasks given to the ethnographers was that of mapping the geography of the street youth population, that is, locations where youth were involved in prostitution, drug dealing, hanging out, eating, and sleeping. A key feature of this process was gathering information about how these patterns of movement varied over time (e.g., at different times of the day, in response to seasonal changes in the weather). Attention to time and location was important not only in structuring the interviewers’ time in a systematic and efficient way, but also because these are central parameters for the evaluation of street outreach, since temporal and geographic coverage are fundamental issues to an evaluation. A second goal was to identify differences within the street youth population that could be mapped by reference to time or location. This was important in terms of examining the issues of temporal and geographic coverage and for evaluating the behavioral impact of street outreach as an intervention strategy.

Ethnographers began research in areas where street youth were known to congregate in and around the central Manhattan area and moved into other areas as they learned more about the movement of the street youth population. Over a period of several months, ethnographers observed the kinds of activities that were occurring and talked to youth informally about how they spent their day (Clatts and Atillasoy 1993). Through this gradual and largely inductive process, it was possible to develop a sense for where the street youth population could be found as well as for some of the observable differences among them. Some of the differences that were noted were demographic, others were behavioral. It became clear that the population was quite diverse, and even the most basic generalizations seemed to have very limited validity. Of particular concern in this formative process was identifying the specific ways in which youth were involved in the street economy and how these patterns varied by time and location. These details were recorded by individual ethnographers in the form of daily field notes and then discussed during weekly staff meetings.

What emerged was a detailed set of qualitative descriptions about the youth found in seven street locations that seemed to have some kind of distinctive character in relation to street youth, either because they were frequented by particular kinds of youth or because they were important for some reason relating to variability in the street economy. For example, ethnographers noted that the kind of youth found in the Port Authority Bus Terminal tended to be younger than youth found elsewhere, newer to the streets, and more likely to be involved in prostitution than drug distribution. Alternatively, youth found in the nearby Times Square area tended to be older, to have been on the streets for a longer period of their lives, and to be primarily involved in drug distribution. Conversely, youth found in the central part of Greenwich Village tended to be older than their counterparts in Times Square, but were primarily involved in prostitution.

Thus, information derived from participant observation provided the basis for developing a map of the street youth population, particularly in relation to their involvement in the street economy. Initially these mapped patterns seemed to suggest a fairly straightforward segmentation of the street youth population. There was the traditional kind of runaway in the port authority area, the slick drug dealer on 42nd Street, the tough hustler down in the Village, and so on. As the formative process progressed, however, the elegance of this ad hoc segmentation or typology began to break down. For reasons explained below, this serves to illustrate why

particular ethnographic methodological tools, such as participant observation, are best when they are used in concert with the application of other ethnographic tools as well.

LIFE HISTORY INTERVIEWS

Life history studies have a long record in the social sciences (Van Gennep 1961), particularly in American cultural anthropology (Kroeber 1961). More recent interest in the study of life history has maintained a general attention to individual life patterns but has also been concerned with showing the way in which individual life trajectories are part of larger social and economic processes. An interest in life course among social demographers has stemmed from an interest in relating experience to age and historical time.⁴ For example, life course has become a prominent framework for the analysis of demographic patterns, particularly transitions in the structure of the family and household (Elder 1984). In a similar vein, an interest in life history among some social psychologists has stemmed from an interest in showing the relationship between specific early life events and subsequent psychological and behavioral patterns (McLaughlin and Sorenson 1985; Strauss 1964).

In the context of the study described here, the use of a life history approach shared a concern with how risk behavior was related to time. Importantly, time in this perspective was recognized to have several dimensions, including historical time, time in relation to adolescent psychological development, and time in the sense of actual chronological age (particularly age at entrance into the street economy). Although far less ambitious than many full-scale life course studies, the life history interviews helped to tease out some of these issues, particularly in relation to how youth came to be homeless and how they came to be involved in particular roles in the street economy. As ethnographers became more familiar with the streets and with the street youth population, they developed better rapport with their subjects and began to ask more in-depth questions.

A series of life history interviews was conducted in which, over a period of several sessions, youth were invited to tell the ethnographer their life stories in their own terms, in their own way, and with an emphasis on what they felt was important for the ethnographer to understand about them. An interview guide, based upon prior ethnographic research done among street youth, was prepared for use in these interviews (Clatts et al.

1990). As much as possible, however, the interviews had an open-ended, egocentric focus. If a youth neglected to discuss a particular issue (e.g., involvement in the street economy), the ethnographer might prompt such a discussion with a general question that focused on how youth meet everyday needs like food and shelter. This often helped to focus the discussion on how youth acquired money, and hence how they participated in the street economy. In almost all cases, however, these kinds of issues emerged on their own. Indeed, allowing the issues to emerge in this way generally seemed to contribute to an overall comfort level among the youth and to the high level of informational detail that was accomplished in the interview.

Life history interviews, complemented by participant observation, helped to explain some of the apparent differences in the street youth population that had been tentatively formulated on the basis of street observation. From life history interviews it became clear that the various roles that youth play in the street economy, which had previously suggested an easy segmentation of the population, were in fact much more complex. Rather than representing different segments of the population, it was apparent that behavioral differences were better understood as reflecting different trajectories in the course of a "street career" (Preble and Casey 1969). For example, through life history interviews with drug-dealing youth in the Times Square area and with youth in prostitution in the Greenwich Village area, researchers found that all of these youth had begun their street careers in and around the port authority area, occupying roles in the street economy typical of youth in that area (generally street-based prostitution). Gradually, as they grew older and became better able to exercise power within the street economy, they were able to move into different niches within it. These niches afforded them the opportunity to occupy different roles within the street economy, such as more lucrative forms of prostitution than that which is typical of the streets and more lucrative activities in drug distribution. Thus, life history data allowed researchers to put the information from participant observation in a temporal perspective and to acquire an understanding of how youth move in and out of different roles in the street economy. Importantly, it also helped researchers to distinguish between fixed types of street youth and street youth who go through changes over time—that is, to differentiate street youth by both geography (street location) and time (both historical time and personal time).

This information was useful in developing the sampling plan, particularly given the fact that the study had very scarce interviewer resources.

Rather than taking a blanket approach to street-based sampling, the researchers used this information to focus interviewer resources on particular times and locations in such a way as to maximize the likelihood of obtaining a sample that was comprehensive in scope. The development of an understanding of street careers among street youth also proved important in the planning and development of intervention strategies. For example, as described below, it served as the basis for targeting particular kinds of outreach messages and resources in particular geographic areas (Clatts et al. 1994a). It is noteworthy that this information would not have emerged in the data acquired using survey methods if the researchers had not known where and how to look for it based upon the ethnographic evidence.

DEVELOPMENT OF A SAMPLING PLAN

The sampling plan focused on seven primary sampling units (locations) in the central Manhattan area where street youth were known to be involved in the street economy. Youth were contacted on the streets and asked to participate in a structured interview that was conducted in or near the street setting in which they were contacted. In keeping with parameters established by the funding agency, eligibility was restricted to youth who were between 12 and 23 years of age who were involved in the street economy (e.g., involved in the exchange of sex for money, food, or shelter; involved in drug traffic; involved in panhandling or petty theft) or youth who were without shelter or who in the past year had been recurrently without shelter.⁵ Because one of the goals of street outreach is to prevent youth from becoming involved in the street economy, a small number of youth who appeared to be at substantial risk of becoming involved in the street economy were also included in the study. For example, youth who spent time in the areas in which these activities occur and who were observed to be interacting with known street youth were also accepted in the study.

Initially, youth who appeared to fit these criteria were chosen at random; every third youth with whom the interviewer had contact was selected for potential recruitment (Biemacki and Waldorf 1981). Youth were approached on the streets, introduced to the study, and asked to participate in an interview that took place in a nearby setting that was part of the youths' own natural setting but also provided ample opportunity to conduct the interview in a coherent and relatively private manner, such as a coffee shop, pizza parlor, or park. In compensation for their time, youth

were given a small meal during the course of the interview, valued at roughly \$5, and were given \$5 in cash upon completion of the interview. After the interview was completed, the interviewer asked the respondent to recommend another youth for potential participation in survey interviews. Chain referrals were limited to one per respondent. The use of chain referrals in the development of the sample had no particular analytic purpose in and of itself. It was not intended, for example, as a way to examine a select group of street youth or to trace social networks. The purpose was solely to economize on the amount of time that an interviewer expended recruiting youth for the study relative to the amount of time that was available to conduct the interview itself. After a maximum of 4 hours of recruitment in any particular primary sampling unit (roughly half the span of the interviewers' day), interviewers moved to a different primary sampling unit, thus ensuring that a minimum of two primary sampling units were canvassed every day. This is roughly the same procedure that is used to structure street outreach.

If anything resembling an adequate picture of the Manhattan area's universe of street youth existed, it might have been possible to develop a targeted plan that would employ specific demographic and behavioral features in forming sampling quotas and a targeted sampling plan. For example, if the percentage of the street youth population in New York City under the age of 15 were known with any reasonable degree of confidence, a strategy could have been developed that would have ensured a proportionate representation of youth under that age. Similarly, if the researchers knew how the population was distributed proportionally across racial and gender lines, a targeted sampling plan could have been developed that reflected that distribution. However, since no such data existed, at least not with respect to street youth in New York City, it was not possible or useful to apply a sampling frame of this type.

As a consequence, the researchers were concerned simply with assuring some representation-albeit not necessarily proportional to their distribution in the population-of all major segments of the street youth population that had been identified. To achieve this goal, the researchers employed a framework that stratified the amount of time that an interviewer recruited in a given location and at a given time. This served to stratify the sample so as to include variation on important behavioral dimensions rather than to fill specific demographic or behavioral quotas. With the general orientation of recruiting individuals drawn from different parts of the street youth population, it was the amount of time that an interviewer spent in a particular location at a given time of day

that served as the basic organizing principle of the sampling strategy. Using information that had been acquired during the study's formative phase about the times and locations where youth with certain characteristics tend to be found in the central Manhattan area, interviewers modeled their recruitment of youth accordingly, sampling in the afternoon in locations where youth congregate during that time of day and in other locations where youth congregate later in the day.

Thus, given the unknowns about the population, the time-by-location distribution was the best way to acquire a comprehensive sample that could be repeated with a high degree of uniformity in subsequent survey waves and that provided a reasonable degree of sensitivity to the temporal and spatial factors that underpin youths' activities in the street economy, particularly those that may vary by time of day and season. Moreover, together with the data on youth interviewed in a south Bronx control site, the development of this kind of street-based sample allowed for a two-way comparison between location and time—both key goals in the evaluation of street outreach.

CONCLUSION

The utility of the particular sampling strategy that has been described here is limited to the local context in which it was developed and perhaps even to the particular kind of study in which it was utilized. It is an example of what some have called an ascending methodology (van Meter 1990) and contrasts with descending methodologies that are more common to the kinds of population studies that focus on questions related to the size and demographic distribution of a particular group. The latter are principally concerned with generalizability, and hence with overall reliability rather than with validity at the local level. For example, while somewhat at the far end of the scale in terms of the range of possibilities, the national census serves this kind of function. On a much smaller scale, descending sampling methodologies have also been used to examine demographic and behavioral trends over time in a given population, as well as patterns in migration (Kertzer and Hogan 1985), household composition (Hagestad 1986), timing of life events (Hirschman and Rindfuss 1982), and changes in socioeconomic roles (Elder 1987).

These kinds of methodologies have been used to examine issues that are central to public health, such as unplanned pregnancy, age of first sexual experience, and initiation into drug use. Answers to these kinds of macro

questions can be important in formulating funding priorities, particularly for populations whose boundaries are relatively fixed and in contexts such as public health, where a rapid response may be especially critical. Again, however, the utility of these kind of sampling frames stems principally from what they achieve by way of generalizability, which is often accomplished at the expense of specificity and attention to research questions at the local level.⁶

However, the fact that the local questions came to the fore was in some sense inevitable given the lack of reliable information about this population. Apart from the importance of the local questions themselves, there is very little that is known about this population. This precluded the use of descending sampling strategies, since the kind of information on which generalizability and reliability could be determined was simply not available. It is difficult to imagine, for example, what empirical basis there would have been for establishing any kind of sampling quotas. In addition, as is often the case in this kind of research, the staff resources available to conduct this research were limited, and this was the most efficient way in which to structure their work.

While acquiring an understanding of the general demographic and behavioral characteristics of the street youth population in New York City was certainly a central concern of the study described here, this information was gathered first and foremost for the purposes of understanding the way in which this population was involved in the street economy, where these activities were occurring, and what level of contact these youth had with particular kinds of AIDS prevention services (i.e., street outreach). Thus, these local questions regarding who, where, and how often took precedence over the more global problem of how many.

The aim of this chapter has been to show how ethnographic methods contributed to the evaluation of street outreach programs targeted to street youth in New York City. The data acquired using the sampling strategy that has been described here have produced the first street-based sample of the street youth population in New York City (Clatts and Davis 1993). These data are useful for the planning and development of prevention services for this population at the local level. In addition to identifying important geographic and temporal gaps in services, for example, the data provided information about a population of youth about whom little is known and that had not been targeted for outreach services (Clatts et al. 1994a). Moreover, as one of eight sites in a multisite study of street outreach, the information from this study is expected to contribute to a

database on street outreach and hence to make a contribution to prevention policy and planning at the national level.

NOTES

1. For example, in a recent report on the length of time youth spent in a shelter in New York City, the time ranged from overnight to 60 days, with an average of 17 days. Of the total of 1,223 youth served by these shelters, 31 percent were placed in other residential programs (e.g., Covenant House, Job Corps, group homes, or transitional living programs), 21 percent were returned home, and the remainder (nearly half) were either self-discharged, expelled, or seeking residence with other relatives or friends. The number of youth who ended up back on the streets was not known. The relatively small number of youth who returned home may be indicative of several different processes, but the fact remains that there are clearly a large percentage of youth who either cannot return home or who have no viable home to which they could return.
2. For a notable exception, see Wiebel et al. 1993.
3. As van Meter (1990, p. 32) has described, a descending methodology is one that “involves strategies that are elaborated at the level of the general populations,” usually necessitating “highly standardized questionnaires and rigorous population samples.” Ascending methodologies, in contrast, “involve strategies elaborated at a community or local level and specifically adapted to the study of selected social groups.” The basic point here is that it was not feasible to apply a sampling frame that worked from the population to the sample because of the lack of information about the target population.
4. The point being made here is that these studies share a general orientation to the study of life history, and life history is only one of many approaches to this problem. The authors do not, of course, mean to suggest that there are not important methodological differences between the various uses that different disciplines bring to life history or life course studies. For an overview of the use of life history in the study of cultural systems, see Langness and Frank (1981). For an overview of various kinds of uses of life history research in social science research, see Josselson and Lieblich (1993). For an overview of the use of this perspective in the context of social

history and social demography, see Elder (1987). The development of a number of computer programs for content and frequency analysis of textual data has greatly enhanced the speed and rigor of this kind of research. For methodological overviews, see McCracken (1988) and Riessman (1993).

5. For the purposes of this study, shelter was defined as having residence in a house or apartment of one's own, or living in a house or apartment of a family member or legal guardian on a regular basis.
6. Particularly in the context of a hidden and fluid population like street youth, this cost can be quite significant. Indeed, it is often precisely the inattention to these kinds of costs that has served to make service providers especially wary of researchers—a fact that can make service-oriented research all the more difficult. On the local level, service providers have their own set of needs and capacities. On quite another level, funding agencies have their own sets of reporting needs and bureaucratic constraints. Researchers often get caught in the middle and are seldom able to adequately serve both sides (Clatts 1994b).

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Using Focus Groups in Drug Abuse and HIV/AIDS Research

Michele G. Shedlin and Janet Mogg Schreiber

INTRODUCTION

The application of focus groups as a data collection procedure developed primarily in the private sector for marketing research. In contrast, the use of focus group interviews as a qualitative data collection tool for behavioral science research developed in the public sector and has just recently become more widely applied. As part of the National Institute on Drug Abuse (NIDA) Technical Review, "Qualitative Methods in Drug Abuse and HIV Research," it is important for this contribution on focus group methodology to add to the understanding of the technique as it is used in research in these specialized areas. Currently there is widespread interest in focus groups, and it has been said that the use of focus groups in HIV/AIDS research is now popular (Morgan 1993). However, a search of the literature reveals few articles addressing the issues related to the applications of this tool for substance abuse or HIV/AIDS research. While there exist excellent resources on the use of focus groups for research (Krueger 1994; Morgan 1993), only a limited number of articles have been published that refer to their use with high-risk behavior groups involved in alcohol and other drugs (AOD) (O'Brien 1993; Weiss et al. 1993). Furthermore, these articles do not discuss the methodological issues regarding the use of this technique with special populations and subgroups. A consideration of these issues is crucial, including clarification of standards in the design, implementation, and analysis of focus groups for research with these populations. This requires a careful examination of both methodological and pragmatic issues. Given the increasing popularity of focus group sessions, it is especially important to make explicit the steps necessary for the appropriate and rigorous application of this technique and the utilization of the data obtained.

PURPOSE OF THIS CHAPTER

The objective of this chapter is to provide the drug abuse and HIV/AIDS researcher, planner, and evaluator with specific information about the implementation of focus groups and the special considerations, strengths,

and limitations of their use. This chapter does not present general instruction on the basics of the technique, or how to recruit participants, moderate groups, or budget for focus groups in research proposals. Krueger (1994), Morgan (1993), Stewart and Shamdasani (1990), and others are excellent resources for learning and teaching about this technique. The topics covered by this chapter address some of the more salient issues and questions that commonly arise when planning or implementing focus groups as part of the data collection process. Important among these are the appropriateness of the technique for research on high-risk behavior groups; the determination of participant characteristics and group composition; the personal characteristics, experience, and skill of the moderator; the facilitation of the session; confidentiality; data analysis and reporting; and training considerations.

Many of the issues discussed here are different from those of focus group implementation in the private, commercial sector (the most widely recognized user of this technique), but they also differ from the experiences of focus groups in other social science and health research in the public, nonprofit sector. *Just as drug abuse and HIV/AIDS have raised new issues and methodological concerns for epidemiology and survey research, they have done so for qualitative research, its design considerations, and data collection methods.*

FOCUS GROUPS IN THE CONTEXT OF A QUALITATIVE APPROACH

In a consideration of the use of focus groups, it is important to keep in mind that *the focus group interview is a qualitative data collection method*. As such, focus groups have strengths and limitations similar to other methods in qualitative research. They permit the indepth study of selected issues, for example, as well as an approach to fieldwork that is not constrained by predetermined categories of analysis. They facilitate openness and produce detailed information about specific groups or issues. Focus groups, as do other qualitative methods, increase the researcher's ability to understand unique cases and situations rather than providing generalizability, as do quantitative methods.

The limitations of focus groups are much the same as those for other qualitative methods. For example, statistical aggregation of data and generalizability are usually neither appropriate nor possible. In addition, the open-ended nature of the responses require special skills for data

analysis and interpretation. The nature of the group interaction itself represents methodological strengths and limitations, which are discussed further on.

As one of the tools of qualitative research, focus groups are employed to explore, describe, and discover. Along with in-depth, open-ended individual interviews, focus groups offer the researcher a vital flexibility for these three research functions. For example, where survey research relies on preconceived response categories, the qualitative interview allows for the identification of issues and questions not yet in the information bank developed by the research. The formulation of new questions and routes of inquiry is an important strength of qualitative research.

Rapport, openness, communication, and veracity are the strengths of a qualitative approach as they are serious concerns in research with individuals who frequently survive by their abilities to manipulate and deceive. Where survey research limits and patterns the role of the interviewer, a qualitative approach and techniques rely upon the interviewer as the primary data collection instrument. The researcher's skills, attitudes, and experiences are key to engaging hard-to-reach individuals to participate in research studies.

Rapport in qualitative interviews within the communities and subcultures that are the primary focuses of AOD and HIV/AIDS research means more than good feelings and harmonious relations. Rapport means trust and communication as well as commitment and skills in interpersonal relations. The flexibility to develop rapport is an advantage of qualitative methods and an important factor in assuring the validity of the data. The focus group moderator, as an interviewer, works with these same constraints and strengths, orchestrating, interacting, and eliciting responses important to the research objectives.

DEFINING FOCUS GROUPS

It is important to clarify what focus groups are and what they are not, especially given the examples of misuse based on erroneous assumptions about their functions and the types of data they produce. Focus groups are sources of highly detailed, specific group data obtained on a focused research topic or question. Focus group interviews are interactive events guided by a skilled moderator (interviewer) whose ability to stimulate

participation, guide discussion, and probe directly affects both success in meeting research objectives and the quality of the data obtained.

Focus groups fit within a continuum of qualitative interviewing techniques. Generally, they are used to gain an understanding of the attitudes, beliefs, and perceptions of a specific group or population, which are then communicated to policymakers and program planners. Focus groups are different from individual ethnographic or other group interviews because of their composition and focus. They are contrived communication events rather than naturalistic observation or recorded spontaneous group discourse. However, like ethnography, focus groups are not a static, formulaic technique but rather are constantly adapting to both the research objectives and the group participants. Focus groups are dynamic and process driven and, unlike other group interviews, attempt to maintain the interaction predominantly within the group rather than between the participating individuals and the interviewer/moderator.

Focus groups can provide insights into the meaning of the behaviors and events within the research domain as seen by a particular group or population. The sharing of personal experiences, feelings, and opinions by members of the group interacting together provides for a clearer understanding of the range of these experiences, feelings, and perceptions in the larger group they represent. This range of possibilities is, of course, important in identifying extremes as well as mainstream information, and it does not provide the prevalence of these ideas. For AOD and HIV/AIDS research, where “epidemics” differ in nature according to geography, ethnic and cultural factors, and risk behaviors, and where the change is ongoing, both range and prevalence are critical issues.

As guided, interactive sessions, focus groups also provide an excellent mechanism for the exploration of the meaning of words and the use of language. The resulting insights are useful for increasing the effectiveness and validity of both qualitative and quantitative research instruments. This is notable in their application to marginalized, hard-to-reach populations, which often have their own subcultural vernacular and norms governing communication. The complex and varied regional vocabularies and forms of expression used by drug addicts and drug dealers, for example, provide insights into the norms and behaviors of their networks and communities as well as ways of communicating within them.

Focus groups have been used in numerous projects to inform the content and vocabulary of epidemiological and behavioral research questionnaires. In one study in New Jersey, for example (Weiss et al. 1993), focus groups were used to determine local street vocabulary for high-risk behaviors and the understanding of technical terms and research vocabularies. The moderator was initially told that “anal sex” was not understood on the street and that sex in the “butt hole” was the term used. With additional probing and testing of this information in the group, it became clear that while “butt hole” was used and understood by the *target population*, it was not perceived to be appropriate for use by the *research or health establishment*. A middle ground was reached by using the term “rectum.” An acceptance of the groups’ initial suggestion without exploration of the use of the term provided would have been problematic at best and offensive at least. Clearly, the development of instruments that communicate effectively and appropriately, and that illustrate a concern for cultural sensitivity, is important for achieving access and collaboration with the research participants.

Focus groups can be used to support and inform data analysis by explaining inconsistencies in research findings either by providing additional depth and detail on a particular issue or by bringing the unexplained variation or inconsistency directly to the group for its examination and analysis. Focus groups with Mexicans, Dominicans, and Puerto Ricans in El Paso, Texas and New York City helped to illustrate and explain ethnic differences found in survey data on high-risk behaviors in these groups (Deren et al. 1991, 1993) as well as HIV-related concerns and behaviors of low-risk women (Deren et al., in press).

Focus groups are particularly useful when there is a large perceived status or power differential between the population under study and the researchers (and the institution they represent). When there is a status differential between interviewer and interviewee, the individual may be extremely guarded, disclose much less information, and otherwise edit his or her responses. Focus group sessions tend to empower individuals to express their ideas by providing peer group support and reassurance.

Along this line, focus groups can facilitate collaboration between providers of health and social services and the target population as well as between the researcher and research subjects. For example, focus groups can be used to determine appropriate ways of communicating in a particular social context. They can help researchers and service providers who utilize research data to understand the context and environment of

the target population, the norms of communication, and the expectations placed on their behavior and presentation of self in the interview interaction itself.

To make explicit the factors necessary for application of focus group techniques in AOD and HIV/AIDS research, it is important to state what focus groups cannot do. Examples of inappropriate or problematic utilization of focus groups are found in the literature from both the private and public sectors. In a recently published article, for example, the authors recommend that focus groups be utilized to identify culturally relevant risk-reducing behaviors. Suggested are the use of non-professional community moderators (with no experiential or educational selection criteria mentioned); moderator recruitment of participants, which may bias group composition and discussion; *repeated* groups with the *same* respondents *known to each other*, which affect spontaneity and influence disclosure; small numbers of participants per group, which may limit the interaction and group dynamic; and “cut-and-paste” analysis of transcripts. Such recommendations raise serious concerns regarding methodological rigor, the validity of data, and the confidentiality and safety of the participants, among other issues.

Since focus groups are not based upon a representative sample, it is inappropriate to generalize from focus group findings to the more general population. This is, by far, the most frequent misuse of focus group data. It also is inappropriate to use focus groups when statistical data are needed. While focus group data can be quantified, the numbers produced are *descriptive of the groups only, and are not applicable to the general population*. Increasing the number of sessions to improve coverage and representativeness achieves neither and rarely affects the utility of the data. Conducting too many sessions suggests a basic misunderstanding of the purpose of focus groups and qualitative research in general and ultimately produces an overwhelming amount of data, which there is usually neither time nor funds to analyze.

Focus groups are not a substitute for demographic or epidemiologic data, ethnography, or the direct observation of behavior. Although in some circumstances focus group data can stand alone, they are best supported by long-term qualitative studies and experience in the local setting as well as epidemiologic, demographic, and behavioral survey research. Multiple data collection methods and sources of information to answer research questions are always preferred because they enhance power and validity.

Because they are not representative, focus groups are not in and of themselves evaluative. Rather, they are an important technique for identifying the range of reactions to particular information, material, activities, or program interventions. They are useful for exploring possible reasons for satisfaction and dissatisfaction and the underlying norms and values upon which costs and benefits as well as likes and dislikes are assessed. Focus groups can provide directions and insights to guide and inform evaluation activities, but should not provide definitive conclusions about success or failure, appropriateness, or effectiveness.

The purpose of focus groups differs from other group interactions in which the goal is to provide recommendations, reach consensus, or make decisions among alternatives (Krueger 1994). Brainstorming techniques seem similar to focus group interactions, but they are much more directed. Some researchers have conducted focus groups and used techniques that seem similar to focus group interactions but are much more directed. Some researchers have conducted focus groups in which participants write and rank priorities (as is done in Delphi processes and Nominal Group Theory); however, this is an inappropriate use of the technique. Nominal groups and Delphi processes are useful when participants are selected because they are expert or knowledgeable at finding solutions, but are not appropriate when participants are selected for specific behavioral or sociodemographic characteristics.

For these same reasons, focus group sessions are not sufficient in and of themselves for the design of program activities or interventions. They are, however, important for *informing* the design and development of interventions (Shedlin 1990). For example, asking session participants to design their ideal program, activity, or intervention as if they had a large budget and no obstacles can be very useful. Occasionally it is difficult to elicit creative responses from groups that have rarely had an opportunity to create and design, but this often can be an excellent stimulant for eliciting priorities and suggestions from such groups. (However, regardless of the resulting utility of the responses, the question itself is always empowering for participants who feel involved as contributors and advisors in a planning process).

WHEN TO USE FOCUS GROUPS

Focus groups are not always viewed as useful beyond the initial planning stage of research and the design of interventions. However, since focus

groups have multiple uses, they have multiple possible implementation points in the research process. Focus group data can, for example, inform the content and language of survey questionnaires implemented or modified during the research period. They can be used at a midpoint in the research to examine unexplained variation or to confirm initial findings. They can be used to monitor the research process itself by providing feedback from individuals and from groups of interviewers and supervisory personnel. They are valuable after the completion of preliminary data collection on a particular research topic and a given community or population. They are useful at all stages of data analysis to provide explanation, depth, and detail and to serve as another resource for cross-validation of data collected by other methods.

TYPES OF DATA PRODUCED

Focus group data are generally in the form of audio tapes, notes, and transcripts of the sessions. Field notes, information from screening instruments, notes from the debriefing, and observer/assistant field notes are also sources of data. Such data often include information on the environment or context, perceptions, beliefs, opinions, linguistic preferences, and interpretations of behaviors or events central to the research questions. These data are particularly important in research on hard-to-reach populations engaged in group-specific and context-specific behaviors and language because they facilitate communication and the understanding of the context and motivations that determine behavior and that can influence behavior change.

APPROPRIATENESS OF FOCUS GROUPS IN AOD AND HIV/AIDS RESEARCH

The decision as to whether focus groups are an appropriate qualitative technique should be guided by consideration of four interrelated factors: (1) the specific research objectives and data needs, (2) the topic of the research or content of the questions, (3) the characteristics of the participants, and (4) the ethical issues involved (Are there risks of exposure to participants? What are the particular needs for confidentiality?). Consideration of these factors will guide decisions about the appropriateness of the group discussion format and the feasibility of recruitment and implementation.

Group discussion can be a productive mechanism of eliciting information from subgroups of AOD and HIV/AIDS research target populations. However, it is always necessary to consider the implications of using the group discussion format. For some research questions requiring disclosure of stigmatizing or embarrassing personal behaviors, group discussion may not be conducive to disclosure. On the other hand, reinforcement from the group process among peers may be more effective for data collection than one-on-one interviews.

Group sessions, in fact, are often familiar to many high-risk behavior individuals who have experienced them in counseling, drug treatment, and the criminal justice system. The group process is, at the same time, supportive of individuals who may be suspicious and fearful and controlling of those who may be aggressive, high, verbose, or confrontational. It is able to encourage and support participation from individuals who may be reluctant to participate. Thus, support and control are two important characteristics of the group format.

As is well known to drug abuse treatment professionals and researchers, most individuals involved in drug and alcohol abuse have no difficulty discussing their drugs, drug use, or lifestyle in a conducive environment. This is especially clear in a group discussion when one participant's comments prompt others to give examples and add depth and detail (Schreiber 1992).

Researchers should be attentive to cues that indicate that disclosure of information that is seemingly risk free to the researchers may be perceived as potentially harmful to participants. In carrying out research on pediatric health care utilization by chemically dependent women in a New York City homeless shelter, for example, Shedlin (1989) found that revealing illness or vulnerability to other women put women at risk of accusations of child abuse and neglect as a mechanism for blackmailing them to become involved in the drug economy of the site. As a result, planned focus group sessions were canceled and individual interviews with the women were held offsite in parks or coffee shops.

A concern about the group format is, of course, the very issue of disclosure. Moderators need to pay attention to the experiences and information being disclosed and stop or limit discussion that may compromise the research, participants of the group, or the safety of all concerned. The tendency to mention names of drug contacts or others involved in illegal activities is an example of a disclosure that can place

the whole group at risk. Thus, it is important to announce at the outset that such information should not be revealed.

Disclosure of HIV status is another important group issue. When this is a possibility, it is necessary to caution participants to disclose only that information that they feel comfortable sharing and to be aware of potential problems that may result from *any* personal disclosure to the group. For many HIV-positive individuals, disclosure can place them at risk of ostracism and even violence (Schreiber 1994). The confidentiality of the session data in general is yet another issue (discussed below).

Another consideration of the group format is the tendency to cross the line from research-oriented to support-oriented interaction. When stressful discussions of difficult life experiences or current problems occur, the group may turn in the direction of support of certain individuals or may take on a group therapy/support group mode. Here the moderator must decide whether the research can continue without sacrificing research objectives or rigor. When the moderator determines that the research focus has been interrupted, he or she should acknowledge this to the group. It then depends upon the moderator's skills and training as to whether the group can continue in this manner. When the moderator is a trained social worker or HIV counselor, these groups can continue as support groups, and referrals for further support can be made responsibly.

Loss of research focus is directly related to characteristics and immediate needs of the participants, the topics discussed, and the skill of the moderator. It can help to present this possibility to the group before the session has begun or when it appears to be changing focus and to reinforce the importance of their input to the research. Ethically, however, responsible moderators will not continue a research format if participants become emotionally compromised or distressed. It is important to inform all moderators of this possibility, to advise them how to respond, and to assure that they have access to referral and support resources if necessary.

CHARACTERISTICS OF THE GROUP PARTICIPANTS

Once it has been decided that focus groups are appropriate and feasible, it is necessary to determine the number and composition of the groups to be implemented. While reality frequently dictates that the number of

sessions is determined more by time and budget than methodological considerations, a major dilemma for the research team is usually the prioritization of respondent characteristics. Since homogeneity of group participants is a methodological priority, researchers must negotiate among themselves to agree on the characteristics of target groups that will yield information required for meeting the research objectives.

While there are no hard-and-fast rules governing the composition of groups, aside from the need for homogeneity (Krueger 1994), experience in AOD and HIV/AIDS research has shown that:

1. Gender is a crucial issue. Men and women have significant differences in life experiences, attitudes, modes of expression, perspectives on relationships, motivations, and risk behaviors. Mixing groups can introduce bias and should only occur for comparisons with single-gender groups, except in special circumstances. Even when men and women are broadly identified as part of the same risk group (e.g., needle drug users), their issues are substantially different because of gender. When gender identity and sexual orientation are salient issues, decisions on group composition should take into account gender identity, relationships, and behavior over biological gender.
2. Differences in status and hierarchy among participants affect the group dynamics in important ways. Group members tend to defer to those individuals who have higher educational status, political status, or perceived power and authority. When research involves gang members, drug networks, or group peers assisting the research, program, or system, attention must be given to the effects of perceived status.
3. Risk factors and specific behaviors are important considerations in group composition. It may or may not be advisable to mix groups by specific behaviors and experience (e.g., prostitution, needle drug use, or incarceration). Because individuals may be members of numerous risk-behavior groups simultaneously, it is important to assess the salience of their multiple memberships to the other group members. Long-term heroin use, for example, may be significantly more important as a defining characteristic than drug dealing or prostitution. Current involvement in treatment and treatment history may influence decisions about participation and the quality and content of the information provided.

4. Ethnicity may or may not be a category that divides groups, depending on the salience of cultural and linguistic factors and local ethnic group dynamics. When the research objectives include the exploration of ethnic factors in HIV risk behaviors, mixing ethnicities could bias and confound group data. An examination of the perceptions and use of needle-exchange programs, however, might not require ethnic-specific groups. When language is being explored for the development of educational materials or research instruments, it is helpful to hold ethnic-specific groups. Translation issues require an awareness that the language may have different countries of origin and different syntax and vocabularies. Puerto Rican, Dominican, and Mexican Spanish in New York City are an example of this multiethnic language issue.

5. Decisions about the size of the group need to consider characteristics of the participants and the amount of specificity and detail needed in the data. Groups of AOD users tend to be active, and individuals frequently want to share a great deal of experience. Smaller groups of a maximum of eight participants appear to result in better control of the discussion, fewer distractions and side conversations, and more satisfaction within the group. With larger sessions of 10 to 12, individuals may need to wait too long between opportunities to participate, become frustrated, and either withdraw or interrupt each other.

Other factors that merit consideration in determining the composition of groups are age, education, health status, acculturation, marital (partner) status, parity, specific drugs used, treatment experience, criminal justice involvement, gang involvement, homelessness, and experience with violence and abuse. There may be important characteristics to assess in the light of the research objectives and issues of group dynamics.

DEVELOPMENT OF THE INTERVIEW GUIDE

As with all questionnaires, interview guides, and checklists, content is determined by the research objectives, which grow out of specific research questions. The focus group interview guide should result from a collaborative effort by the research team, including the moderator. In work with special populations, it is advisable to consult experts with knowledge of the target population to assist with development of the guide.

Interview guides may have different formats with varying amounts of detail and instruction, depending on the amount of direction and information needed by the moderator. Frequently, when the moderator is familiar with the research and target population, the guide will serve as a checklist, with reminders of when to probe and what key words are needed to explore particular issues and topics. It is important to avoid creating a verbal version of a survey questionnaire. The guide may not include wording of questions, but may simply list topics and permit the moderator to phrase the question in the context and tone of the ongoing discussion. The level of detail and specificity will depend on the experience and skill of the moderators who will be using it.

Experience interviewing high-risk behavior groups has shown that some individuals may be concerned or suspicious if papers are held by the interviewer/moderator. The authors have found that when this situation exists, it is important to place the interview guide in full view and to discuss the reason for its use. For this reason, it is not advisable to have any confidential information on the instrument itself.

MODERATOR CHARACTERISTICS AND GROUP DYNAMICS

The skill of the moderator directly determines the quality of the data produced by the focus group interview. For this reason, the selection of a moderator who has the skills necessary to conduct the group is pivotal to the success of data collection.

Important personal characteristics in a moderator are openness, ability to listen carefully, flexibility, and skill in group dynamics and interviewing. However, moderation of groups of substance abusers and persons living with AIDS often requires unique skills and experience. Patience, a sense of humor, the ability to be nonjudgmental, and an understanding of the target population and its environment and risk behaviors are crucial. In addition, it needs to be emphasized that *neither color, ethnicity, nor personal experience with a situation or risk behavior automatically confer moderating or research skills or cultural sensitivity.*

Insider/outsider status is one of the most frequent issues to arise during the process of selecting a moderator. Suspicion and distrust are not reserved for outsiders and may take on other dimensions if the moderator is a member of the target group (e.g., an addict in recovery, a past member of the sex industry). Group identification with the moderator

does not guarantee trust and, in fact, may impose another set of issues on the moderator-group interaction. While insider status may increase the spontaneity and comfort level of the group, it may decrease the amount of explanation and detail provided by a group that assumes the moderator already knows the information. Outsider status can be an advantage when the group perceives a need to provide additional explanation and detail to the moderator. Thus it is useful to demonstrate some understanding of an issue, but also to present oneself as a learner/student rather than a teacher/expert.

Effective moderator characteristics for these groups include:

1. A nonjudgmental attitude,
2. A clearly projected interest in the group and the topics,
3. Sincerity and openness,
4. Comfort with sensitive topics,
5. A sense of humor, and
6. A basic knowledge of the target population and significant knowledge of the research topic.

Gender is often a factor to consider regardless of other qualities and attributes. No matter how relaxed, sincere, and direct, a moderator of the opposite gender will have an effect on the discussion, especially when gender is, in itself, one of the factors to be explored. Sexuality, sexual practices, condom use, partner relationships, and family violence are examples of this in AOD and HIV/AIDS research.

One of the authors was asked to moderate a group of male, minority “old-time heroin addicts” in a methadone maintenance program facility. Being white, middle class, and female, she suggested that this group be utilized only as a training experience and that the observer be particularly attentive in noting how gender affected the discussion. The resulting transcript and observer notes illustrate that comfort and a sense of humor are important in guiding a discussion of HIV risk behaviors. However, when 12 poorly educated, street-wise heroin addicts used the terms “penis” and “intercourse” rather than more common vernacular, it was

easy to interpret this as courtesy and respect for the moderator, which may have influenced the data in other ways.

As noted, it is helpful for moderators to have training in HIV counseling, testing, and referral. When working with groups of persons living with AIDS, this is an important strength and resource for assuring the responsible treatment of participants and for facilitating a greater understanding of group process and data collection. Such training is widely available from State and city health departments.

MODERATING THE SESSION

In any type of group, the moderator is the key to assuring that the discussion flows smoothly and that the research objectives for the session are met. Moderators must create a relaxed and thoughtful atmosphere, present ground rules for the session, and set the tone for the discussion. In working with groups that may be suspicious of the activity as well as of the moderator, these steps are crucial and require an understanding of participant characteristics and needs.

It may take more time to create an atmosphere that is perceived as comfortable and safe for AOD- and HIV/AIDS-affected and infected groups than for other groups. Some individuals may need additional explanation and reassurance about the location of the session, objectives of the discussion, and role of participants. Extra effort may be needed to explain the research, why it is being carried out, and what will be done with the information obtained. It is important to explain why it is necessary to tape record the session, and it is useful to request that the individual most obviously uncomfortable with the tape recorder *take control* of its operation. This is often a successful strategy for reducing anxieties in the most apprehensive individuals. Any participant who remains uncomfortable about the taping, however, should feel free to leave without penalties or consequences.

It is always necessary to review issues of disclosure and confidentiality to be sure everyone in the group is satisfied that they will not be placed at risk by the information they disclose or by their fellow participants if the ground rules are followed. It is also important to address any group issues and concerns about the moderator without showing annoyance or impatience and to provide appropriate personal information. The group will function more effectively if members feel comfortable with the

moderator, and some personal disclosure may be necessary to reinforce perception of a nonjudgmental attitude and to legitimize the moderator.

Some focus group sessions require a greater degree of moderator direction and control than other types of groups. Subtlety in directing the discussion is not always effective, and the moderator may need to stop or change routes of discussion by clear and firm statements and suggestions. Participants are rarely offended when the moderator reassures them of the importance of their contribution and at the same time expresses the need to hear their ideas and suggestions on other issues. However, because low self-esteem is common among members of these groups, it is usually necessary to reassure participants that their contributions are understood and valuable. The use of the techniques of paraphrasing and body language (i.e., leaning forward toward the speaker and maintaining eye contact) effectively communicates understanding and interest.

Directness also may be necessary to close the session, since focus group members usually enjoy participating and may want to continue the discussion even after the research topics have been covered. The moderator can use a “thank you” to signal closure and to reinforce the importance of the group’s contribution to the research. Payment to the participants (the amount, form, and appropriateness of which should be discussed with local/site personnel) should then be initiated by the observer/cofacilitator while the moderator says goodbye to the individual participants. This is also a good time to distribute educational materials, suggest referral resources, and otherwise encourage and guide the exchange of information and support.

CONFIDENTIALITY

As with all research in AOD and HIV/AIDS, confidentiality and risks of exposure of participants must be considered before deciding to use focus group sessions. It is important to consider that the flow of discussion in these sessions may be defined more by the group process than by the moderator, resulting in less predictability and control of information. In addition, the permissive group environment cultivated in focus groups gives individuals license to disclose highly personal behaviors and emotions that often do not emerge during other forms of questioning. Group discussions, however, are a public, not a private, format, and although the moderator and research team may be able to ensure the confidentiality of the overall project data, the group needs to be reminded

that it is not possible to ensure that information will not be disclosed by other participants in the discussion. It is therefore necessary for the moderator to advise the group of the potential risks of disclosure and to empower the group to determine its own safeguards and controls on the content of the discussion.

ANALYSIS AND REPORTING

There are a variety of choices to be made about data analysis strategies for the numerous forms of data (tapes, verbatim transcripts, field notes, screening instruments, moderator notes, and observer or debriefing notes) that can be collected. Analysis of these types of qualitative data are generally person-intensive and time consuming. One strategy is to review the tapes and notes of the discussion and construct a grid of themes across groups. This is less time consuming than the more thorough method of tape transcription, development of a coding scheme, input of text into a computer, and the use of one or more software programs for the organization and analysis of textual data.

Since focus groups can produce a large quantity of data, there is often a temptation in analysis and reporting to provide many pages of text under the assumption that more is better. However, it is more important to be familiar with the target audience and to provide concise information in a format that is *utilization focused* for them (Patton 1990). The level of analysis and the amount of detail provided depend on the research question and the data needs of the audience. For example, a focus group held to explore cultural factors in drug treatment utilization patterns may require more detailed analysis and may need more depth and detail than one to explore appropriate language for questionnaire development.

Reports are most useful when they are well *organized, succinct, and direct*. Carefully selected quotes should be included as examples of vernacular, to clarify meaning, and to illustrate statements and conclusions. Too many quotes may discourage other audiences. Quoted material and discussion can always be provided in an appendix for readers wishing more examples and details.

TRAINING IN FOCUS GROUP RESEARCH

Few graduate programs in behavioral science teach about focus groups as a data collection technique, and few consulting firms provide training workshops. The Centers for Disease Control and Prevention now provides annual workshops on focus group research and qualitative data analysis for its personnel. However, few universities or research organizations--even those whose staff utilize focus groups--attend to the development of training courses and materials in focus group methods for their students and staff.

Professional expertise and skills to facilitate focus groups are required to ensure methodological rigor and the validity of data. An interviewer/moderator of focus groups may need more, not less, training and experience than interviewers who are entrusted with ethnographic or case study interviews. Yet it is frequently assumed that a lower level of training is needed to conduct these interviews, which require attention and skill in group process as well as qualitative interviewing skills.

Moderators of focus groups in behavioral and health research need to have sufficient grounding in research and interviewing skills as well as group process in order to be effective moderators. The preparation of qualified moderators requires training, not merely teaching. Individuals need to participate in the development of interview guides, role-play as group participants and moderators, and become familiar with the analysis of tapes and transcripts even if they will not be doing the analysis themselves. This experience permits them to be more sensitive to data collection and the needs of the researchers. Tapes, transcripts, and videotapes can be used for interactive training exercises to increase skills and comfort levels before the actual implementation of groups.

Practice and experience, however, are the most important factors in becoming an effective moderator. Learning when to listen, how to probe, when to use silence, and how to transition into another topic are skills honed by observation and experience. Training programs should take into account the educational and skill levels of potential moderators and tailor the instruction and training exercises to be responsive to individual needs and to the needs of the research itself.

CONCLUSION

Focus group sessions have great potential in AOD and HIV/AIDS research. When careful consideration of their methodological and situational appropriateness is made, focus groups can provide data important to the development of research instruments, prevention education materials, and public health interventions. Because of the nature of the group format, focus groups are also uniquely effective in obtaining information from hard-to-reach populations who are traditionally difficult to interview.

As discussed in this chapter, however, focus groups require sufficient knowledge and skill to achieve the methodological rigor that assures the collection of meaningful, valid, and useful data. The fields of AOD and HIV/AIDS research would clearly benefit from the use of this technique and require that researchers receive training in its implementation and application. Such mastery, along with stringent quality control practices, promises to yield new insights and understandings of the complex behaviors associated with AOD and HIV/AIDS.

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Qualitative Research Considerations and Other Issues in the Study of Methamphetamine Use Among Men Who Have Sex With Other Men

E. Michael Gorman, Patricia Morgan, and Elizabeth Y. Lambert

INTRODUCTION

The authors' purpose in writing this chapter is to describe what is known about the connection between methamphetamine (speed, crystal) use and the epidemic of HIV/AIDS among men who have sex with other men, to delineate the cultural and sociological contexts of the use of this drug, and to describe how understanding these contexts is essential to measuring and reducing the scope of this problem. Drawing from the authors' combined research and clinical experience, this chapter examines the role of qualitative methodology in framing a research agenda to investigate methamphetamine use among men who have sex with other men (MSMs) (i.e., gay and bisexual men, including those not gay identified).

To date, very little has been published about this hard-to-reach and hidden population, despite the fact that MSMs who have been injecting drug users (IDUs) constitute 7 percent of the U.S. AIDS caseload, approximately the same proportion as those attributable to heterosexual transmission. In the western United States, this proportion is even greater, ranging between 10 to 12 percent of all AIDS cases in many western States. Indeed, in many States the numbers of AIDS cases among MSMs who have a history of intravenous (IV) drug use far exceed the comparable number of heterosexual AIDS cases with a similar risk profile. While the common assumption about this seeming anomaly has been that HIV transmission was sexual for those who were MSMs, it is very likely that a considerable number of these infections may be due to drug use. Yet little is known about this population. There is evidence to suggest that IV drug use, and substance abuse generally among MSMs, may take on a different pattern than among heterosexual IDUs. In particular, the drug of choice and pattern of use may differ. For instance,

methamphetamine (speed) use seems to have a particularly salient role among MSMs in the western United States and to contribute to the increase in HIV seroincidence in MSMs in a region where they may constitute as much as 80 to 90 percent of the AIDS caseload.

To that end, this chapter examines the relevant epidemiological data for this as yet understudied and hidden population, particularly in relation to HIV, and identifies the social and cultural contexts, or “subecologies,” in which methamphetamine is used. Awareness of such ecologies is intrinsic to the methodological issues of recruitment, sampling, handling highly sensitive information, confidentiality, and data analysis for this population. In addressing these methodological concerns, the chapter first situates the problem and defines its parameters by discussing epidemiological data and considering specific social and cultural aspects of the gay/bisexual world. It then addresses specific qualitative methodological issues relevant to this population in terms of research and community and clinical experience to date and in the future. Finally, the chapter describes a number of salient “niches” (or contexts or subecologies) that are critical for understanding methamphetamine use among MSMs.

BACKGROUND

In the United States, methamphetamine use is not a new problem but may be experiencing a resurgence in popularity, especially in the western States (Arax and Gorman 1995; Derlet and Heischouer 1990; Diaz et al. 1994; Harris et al. 1993; Newmeyer 1994; NIDA 1991; Sadownick 1994; Wrede and Murphy 1994). Yet there is inadequate information about the use of this drug (speed, crystal) among hidden and hard-to-reach populations, or about its role with respect to high-risk sex, needle sharing, and HIV transmission. One of these hidden populations, gay and bisexual men, constitutes the largest proportion overall of AIDS cases, approximately 60 percent of all adult AIDS cases (Centers for Disease Control and Prevention [CDC] 1994).

In the western United States, MSMs constitute 80 to 95 percent of the cumulative AIDS cases and continue to represent the largest proportion of incident cases. Indeed, recent data indicate increasing HIV seroconversion rates among young gay and bisexual men (Hirosawa et al. 1993; Lemp et al. 1993). For example, in the San Francisco Men’s Health Study, a population-based survey of young gay and bisexual men (18 to

29 years) in 21 census tracts of San Francisco, 18 percent were HIV positive overall. Five percent of 18- to 22-year-olds and 29 percent of the 27- to 29-year-olds were HIV positive. Among those with a high school education or less, 35 percent were HIV positive (Osmond et al. 1994). Findings such as these are not limited to San Francisco. Other cities and communities of varying sizes are similarly documenting increases in unsafe sexual behavior (Catania et al. 1992; Ekstrand and Coates 1990; Hays et al. 1990; Kelly et al. 1990, 1992; Stall et al. 1992). Moreover, several studies have found that gay and bisexual men of African-American and Latin descent are at elevated risk of acquiring HIV (Peterson and Marin 1988; Peterson et al. 1992).

Gay and bisexual men who are diagnosed with HIV/AIDS and who have a history of IV drug use represent about 7 percent of all male AIDS cases in the United States, about 11 percent of all adolescent and young adult male cases (ages 13 to 25), approximately 11 percent of all male AIDS cases in California and Washington, and about 9 percent of all male AIDS cases in Oregon and Colorado. Sociodemographically and behaviorally, these men are similar to other gay men who do not use drugs, more so than to male heterosexual IDUs (Hopkins 1994). According to the CDC Supplemental HIV/AIDS Study (SHAS) (Diaz et al. 1993), many of these men use methamphetamine.

There are other indications of the importance of methamphetamine in the HIV epidemic. Among recent reports is a 1993 San Francisco study from a major drug-free detoxification program, which found that for the period 1990 to 1992, HIV seroprevalence was highest (20 percent) among IDUs whose primary drug of choice was speed. This was followed by "speedball" (combined use of heroin and cocaine) at 15 percent, cocaine at 9 percent, and then heroin at 4 percent. Unexpectedly, among non-IDUs in the same program, the HIV positive rate was even higher, at 50 percent (San Francisco Department of Public Health 1994).

An analysis of sexual risks for HIV transmission in gay men attending a substance abuse treatment program (Paul et al. 1993) found that amphetamine users in particular had difficulty recognizing the risks of HIV from using drugs, especially speed, and having unprotected sex. In a gay San Francisco substance abuse treatment program called Operation CONCERN, speed has replaced alcohol as the most common drug mentioned by treatment-seeking gay and bisexual men (McCormick 1994). The popularity of speed is seen in other western cities as well: Seattle (Hall and Broderick 1991; Harris et al. 1993; Popanz and

Zuckerman, personal communication, February 1994), Portland (Stark, personal communication, September 1994), Honolulu (Morgan et al. 1993, 1994), Denver (Koester, personal communication, July 1994), and smaller cities such as Sacramento (Anderson et al. 1994). In the San Francisco Young Men's Health Study, over 30 percent of the study participants had used speed during the past year (Gorman 1994). Additional evidence of the high prevalence of speed use in both the gay and lesbian communities comes from the National Institute on Drug Abuse (NIDA)-funded Three Community Study of Methamphetamine Use (Morgan et al. 1993, 1994). A major finding from this research is the higher proportion of IDUs among gay respondents compared with the overall sample. Injection was the primary mode of methamphetamine use for over half of gay/bisexual respondents compared with 33 percent of the overall sample. Increased sexual activity in association with use of methamphetamine was reported by 76 percent of the sample. Among gay respondents in Honolulu, this percentage is even higher (86 percent). In addition, 53 percent of gay/lesbian respondents reported changing the types of sexual activity they engaged in as a function of their methamphetamine use, considerably more than the percentage who said this among the heterosexual respondents (38 percent). Moreover, gay and lesbian respondents were more likely to report multiple sex partners during the 12 months prior to the interview (72 percent compared with 57 percent of heterosexual respondents). A large percentage reported more than 50 sexual partners during this time (19 percent compared with 1 percent of heterosexual respondents) (Morgan et al. 1994).

These findings underscore the significance of the problem of methamphetamine use in the gay and bisexual community and the serious lack of research knowledge on which to base meaningful interventions. In what follows, an attempt is made to identify and link methodological concerns and contextual issues in conducting research on gay speed-using populations. This chapter describes the importance and utility of qualitative research methods for addressing these public health problems and for providing insights on the development of effective prevention and treatment interventions.

LINKING CONTEXTUAL ISSUES: THE RELEVANCE OF GAY CULTURE

Gay culture is often characterized by a particular set of symbols and meanings, institutions, and a code for conduct (D'Emilio and Freedman

1988; Gorman 1980, 1991; Greenberg 1988; Herdt and Boxer 1992, 1993; Kochems 1987; Murray 1984, 1992; Plummer 1981, 1985; Thompson 1987; Weinberg and Williams 1975). As such an entity, gay culture is a relatively recent phenomenon that has gradually emerged over the last 25 years. Associated with this cultural system are artifacts, signs, and an ethos, what Geertz (1973, p. 26) describes as the “Tone, character and quality of people’s lives, their moral aesthetic style, their underlying attitude toward themselves and their world.” Some important aspects of gay culture are its political, social, and economic institutions; its community and cultural events; and its identifying symbols. Related to these, and encapsulating them as part of the culture, are the rituals and social processes intrinsic to the identification of the gay world. These include the process of “coming out,” collective gatherings such as various Stonewall Day celebrations, and the establishment of gay territorial communities, such as San Francisco’s Castro District, Seattle’s Capitol Hill, Washington, DC’s DuPont Circle, and the West Village in New York City (Dar-row and Gorman 1986; Gorman 1986, 1991; Levine 1979).

In spite of the growing awareness of gay culture in United States society, in 1994 gay and lesbian identity remains stigmatized, and homosexual behavior remains illegal in some 23 States. However, institutions that have a distinctly gay/lesbian orientation have emerged over the last 25 years, including political organizations, athletic and recreational organizations, newspapers, theaters, religious congregations, and chapters of Alcoholics Anonymous (AA) and Narcotics Anonymous (NA). Some of the first gay-oriented institutions were bars, and the 1960s and 1970s saw the establishment of gay-oriented baths and sex clubs. The latter went through a period of decline during the first decade of the AIDS epidemic (the 1980s) but have since re-emerged in major urban centers.

While many of these institutions and neighborhoods serve as nodal points of gay communication and lifestyles, not all individuals who visit or use these institutions consider themselves gay or lesbian. In recent years, there has been a growing number of individuals who do not define themselves as gay but use gay institutions (or institutions where gay people meet), and who interact and meet with gays for a variety of purposes, including sex. In a recent analysis of AIDS cases in Seattle, some 13 percent of the men who reported having had sex with other men identified themselves as heterosexual (Hopkins 1994). This observation has relevance to the development of methodological approaches for research on the sexual and drug-related behaviors of the gay lifestyle

because it underscores the range of sexual identities among people who engage in such lifestyles; research on HIV/AIDS and drug use among the gay and bisexual community is made more complex by the fact that the population is diverse and pluralistic, and not a simple entity.

The gay bar has historically been the primary institutional frame for establishing and supporting gay identity and culture and for sanctioning alcohol and drug use among gay bar clientele. Research has shown that there is a high prevalence of alcohol and drug use among homosexual populations (Fifeld 1975; McKirnan and Peterson 1989a, 1989b; Nardi 1982; Stall and Wiley 1988; Stall et al. 1986). In comparing homosexual and heterosexual male drinking patterns, Stall found few differences for alcohol, but did find significant differences in the prevalence of drug use over a 6-month period. McKirnan and Peterson (1989a) found a greater number of reports of drinking-related problems in a Chicago sample of gays and lesbians. Several researchers have noted that gay men who use alcohol, drugs, or both are more likely to engage in unprotected sex (Ekstrand and Coates 1990; Stall and Ostrow 1989).

Recently, there appears to be evidence that certain recreational drugs such as speed, cocaine, and ecstasy (MDMA) are experiencing an upsurge in popularity. The San Francisco Young Men's Health Study, for example, has documented high rates of both alcohol and drug consumption among study participants. In 1992, 69 percent of study respondents reported current use of marijuana and 40 percent reported use on a weekly or daily basis. In the past year, 23 percent had used cocaine, 23 percent had used amyl nitrite (poppers), 30 percent had used methamphetamine (speed or crystal), 37 percent had used psychedelics, and 3 percent had used heroin. Ten percent of this population-based sample of young gay men reported that they had ever injected any recreational drugs (Gorman 1994).

In addition to homosexuality, substance abuse is stigmatized behavior. Despite the high prevalence of substance abuse, chronic drunks, "acid heads," "speed freaks," and so-called tweakers are viewed with disdain by the mainstream gay community. This is especially true for shooters or IDUs, who report feelings of ostracism and shame due to their drug use, even in 12-step programs like AA and NA. There is an irony to this stigmatization because speed has become a quintessential gay drug (Sadownick 1994). For many it is the perfect aphrodisiac because its pharmacological properties contribute to sexual intensity.

Interviews with gays underscore the importance of speed (Morgan et al. 1994). For example, a 23-year-old speed user in San Francisco describes his reaction to his first speed experience (Morgan, unpublished observations):

There was a party going on and I heard about all these wonderful experiences about doing speed. Shooting it up and these sexual feelings that went with it. I wanted to try it. My friend J. fixed me up a point and I did it. The feeling and the rush were so incredible, intense. I was running around trying to have sex with everybody! [laughs] It's true! I ended up waking up the next morning downstairs in the garage.

A 47-year-old who had been using speed intravenously since the 1960s describes sexual attractions when on speed, even though he is now HIV positive (Morgan, unpublished observations).

I had a problem with premature ejaculation and speed kept that from being a problem. Mentally, my fantasies would become more sexually driven and I was less inhibited sexually. I . . . I couldn't possibly stand it if I wasn't high!

These users represent a segment of the gay community for whom speed provides the foundation of their sexual activity. Furthermore, speed provides this foundation in myriad ways, and is used for numerous reasons by diverse types of users.

Gay and bisexual men who use speed remain largely hidden from mainstream society, from the usual sentinel drug surveillance points, and even from the gay community and their own partners and support systems. Gay and bisexual speed users typically are middle or working class, and are more likely to be Caucasian, Asian, or Latino. They are more likely to live in middle class or gentrified neighborhoods in gay-identified geographic communities, and are unlikely to end up in jail unless they are caught drug dealing. They may hold a job for years, in part because they may only use drugs occasionally, and not to the extent that there is interference with job performance. Once they admit they have a problem with speed, they may once again become invisible because there are few if any treatment programs designed for methamphetamine abusers. Many users may be referred to 12-step

programs such as NA, or to general treatment programs that attempt to address the needs of individuals with a variety of other substance abuse issues and from a variety of cultural and socioeconomic backgrounds. A further disincentive is that, as gays, they may be fearful of disclosing their sexual orientation to the treatment program, or they may fear being told it is irrelevant. An additional complication may arise if they have HIV/AIDS since they may feel even more uncomfortable disclosing information about sexual behavior in the context of drug use.

Current drug abuse treatment data tend to underestimate problems related to sexual orientation and speed addiction. Methamphetamine use is often recognized as a serious health and case management problem in the provision of AIDS services by organizations up and down the West Coast (Stoller, personal communication, July 1994), in hospice settings (Zuckerman, personal communication, May 1994), and in HIV research such as in the CDC-funded SHAS, which collects data about drug of choice among those diagnosed with HIV/AIDS who report a history of IV drug use. However, these data are apt to miss many gay speed users because they focus on IDUs rather than the larger proportion of gays who also snort and smoke the drug. Consequently, speed users in the gay and bisexual communities tend to be hard to reach or hidden, even though they are very high-risk groups. This leads to two fundamental methodological issues. The first issue is the difficulty of identifying and thus desegregating the subecologies of diverse user populations in order to assess the scope of the drug problem, and the second is a consequence of the first, the difficulty of developing appropriate interventions to reduce, prevent, and treat the problem within the contexts of the particular subecologies.

Issues of access to discrete subcultures of gay and bisexual speed users for research purposes are critical. Trust is perhaps the single most important criterion in gaining entry or access to these subgroups, due not only to the layers of secrecy that characterize these communities and the isolation of individuals who use drugs within them, but also to the symptoms of clinical paranoia that occur with prolonged stimulant use. Compounding these issues, the isolation of various subcultures tends to take on different gestalts or particular patterns that require insights about relationships between behaviors and their respective cultural contexts. Qualitative methodologies like targeted, purposive sampling, including the use of community outreach workers and consultants and focus group interviews, are useful for overcoming some of these problems and for accessing and characterizing these respective population subgroups.

LINKING METHODOLOGICAL STRATEGIES

Qualitative research designs can be linked with clinical experiences to improve what is known about methamphetamine use among gay and bisexual populations. One conceptually simple research strategy for doing this is to build on the multiple strengths of applied public health, clinical, and anthropological methodologies.

Qualitative methods serve unique research purposes because they permit the identification and examination of complex behaviors in their natural niche or context, yet also include the use of systematic sampling strategies as part of an overall research design. Some of the attributes of qualitative research methods can best be highlighted from the NIDA-sponsored, community-based study of ice and other methamphetamine use (Morgan et al. 1993, 1994).

The Three Community Methamphetamine Study provides important methodological lessons and implications for research on drug use and gay and bisexual men. This was an exploratory, community-based study of 450 primarily heterosexual methamphetamine users in San Francisco, San Diego, and Honolulu. It compared gender, race/ethnicity, and social/environmental characteristics of drug users according to the amount, frequency, patterns, motives, and modes of methamphetamine, other illicit drug, and alcohol use. The research involved the compilation of data from both indepth personal interviews and a standardized survey questionnaire.

The study involved user populations of unknown characteristics and dimensions. A primary research goal was to develop a comprehensive sampling frame that would include the broad spectrum of representative user subgroups. To achieve this, it was first necessary to identify as many subgroup-specific, contextual variables as possible. A process of triangulation of data sources was employed, wherein sequential and concurrent data collection methods were used to gather information, validate it with other data sources, and modify data collection strategies by expanding to other sources or by further focusing in on initial sources. This dynamic, interactive, and iterative process allowed for representation of many eligible population subgroups of drug users and provided assurance that the results of the research would be sufficiently valid and generalizable.

A comprehensive examination of the range and characteristics of potential target populations was undertaken for the Three Community Methamphetamine Study to gather evidence about the significance of the problem and to assess the capacity of the research team to identify and access relevant user groups. The study design included a 6-month pilot phase to allow enough time to gather the information needed to develop a viable sampling frame. The sampling design aimed to systematize chain referral methods and thus to maximize representation of hidden methamphetamine user populations. The strategy was derived from previous qualitative studies (Biemacki and Waldorf 1981; Kuzel 1992; Watters and Biemacki 1989). However, because the exploratory study had to first identify and access particularly difficult-to-reach groups, it was necessary to have an extended sample development phase to incorporate data from multiple sources (including demographic and problem indicator data, information from community consultant and focus group interviews, and ethnographic fieldwork). The triangulated use of these multiple data sources helped to identify target samples and to guide development of the qualitative interview guide and questionnaire.

Demographic and problem indicator data included treatment and emergency room data, program evaluations, and client demographics, and were obtained from alcohol and drug program agencies, criminal justice sources, hospital discharge sources, and mental health and welfare agencies. This information was matched with demographic data from the 1990 census to identify geographic areas with high concentrations of potential target groups. For research on gay and bisexual populations, demographic and problem indicator data can be obtained from community centers, mental health and primary care clinics, substance abuse treatment centers, and HIV service organizations.

The preliminary phase of the study employed community consultant and focus group interviews to obtain up-to-date, detailed information on the range of characteristics of target drug user groups. An interview guide was developed to gather information on drug user demographics, geographic locations, social circles, user methods and amounts of use, and price per gram/unit of the drug. Focus groups are key for developing a working knowledge of the attributes and behavioral nuances that characterize a particular population subgroup, especially when the behaviors of concern are relatively sensitive and covert (e.g., sexual practices and drug use) and the populations are particularly elusive and hard to reach (e.g., gay and bisexual men).

During the preliminary phase of the study, community consultants or key informants were recruited and interviewed. These individuals often include former or current drug users, service providers, and community activists who are knowledgeable members of the community and who are well informed about its behaviors, drug use patterns, and social practices. They are uniquely positioned to access specific population segments, broaden networks of contacts, add to the credibility and legitimacy (face validity) of research, describe or explain behavioral subtleties and practices, and provide feedback on the validity and gaps in data collection instruments. For research on speed use among gay and bisexual men, such persons are critical as cultural liaisons or brokers who bridge the interface between the community and the research team. These individuals and the research team are pivotal to the success of ethnographic fieldwork and exploratory community-based research about drug use, sexual behaviors, risk factors, and characteristics of drug user groups.

Data collection and analysis for the Three Community Methamphetamine Study occurred simultaneously, as is common in qualitative research, in order to systematically interpret, analyze, and describe the drug user's perceived reality of his or her social world. The ability to reconstruct the reality of the user's social world is the cornerstone of paradigm development. It aims to build theory from the ground up by using analytical methods framed by grounded theory (Glaser and Strauss 1967, 1970). This process involves the continuous coding of interview transcriptions and analysis of the transcripts to identify salient and recurring patterns and categories of information. The analytical process includes the development of theoretical "memos" or "thick descriptions" (Geertz 1973; Goetz and LeCompte 1984) of behaviors and the contexts in which they occur. These are then used as a basis for focus group and individual interview guides; information generated from the interviews provides for the validation of the memos and thick descriptions and results in their further refinement. This iterative, simultaneous data collection and analysis process provides for the development of meaningful hypotheses about human behavior, which can be tested in controlled experimental settings.

The next few paragraphs elaborate on the qualitative methodological issues described above in the context of research on the use of speed by gay and bisexual men. Key informants or cultural brokers to these population subgroups are usually other gay and bisexual men. Gay and bisexual liaisons are more likely to understand the implicit linkage of

speed use to the gay sexual culture and can therefore ease the processes of gaining access to and developing trust of potential research participants. This does not mean that persons who are not gay or have not used speed are less likely to be successful in establishing rapport with these subgroups---only that the processes can be smoother and more credible when similar persons act as research liaisons. Ethnographic fieldwork in the study of gay speed use includes such methods as street outreach, personal interviews, focus groups, drop-in sessions at treatment and mental health clinics, and unobtrusive participant observation in a variety of settings including private homes, dances, sex clubs, and bathhouses. A successful approach for accessing the transgendered population (see below) in San Francisco's Tenderloin District used a mobile health outreach team composed of a nurse/ethnographer, a social worker, and a health educator (Rowniak, personal communication, February 1994).

Recruitment of gay and bisexual drug user participants in the Seattle Needle Education and Outreach Network (NEON); the Prospero Project, which was targeted at men engaged in San Francisco's sex industry; and the Three Community Methamphetamine Study were relatively successful because of the use of gay and bisexual outreach workers and research liaisons. Paul and colleagues (1993) successfully utilized ongoing relationships with a substance abuse treatment program for gay drug users to recruit participants. Speed use is very common in gay communities in the West. Chain referrals of their friends (and their friends' friends) by gay and bisexual men in treatment can be used for recruiting adequate numbers of research participants, provided there is credibility on the part of the research team and an adequate level of trust is established.

Research that involves stigmatized, sensitive, or illegal behaviors requires clear and unambiguous commitment to privacy and protection of confidentiality. Such research may also involve public health considerations such as referrals to substance abuse treatment, counseling, testing, and other HIV/AIDS services. Many gay and bisexual men who use speed are HIV infected or have AIDS diagnoses and are in need of health and mental health services. The ethnographer and qualitative researcher must be prepared to meet people with these types of problems during the research project, which means being able to provide confidential referrals and information about safe sex and drug use practices (e.g., information about needle hygiene and needle-exchange programs), as appropriate.

Qualitative research on drug use among MSMs is strengthened when it incorporates existing knowledge about the population from as many diverse sources as possible, especially from the rich information derived from clinical and outreach experiences. This includes the experiences of primary health care providers (social workers, nurses, physicians), substance abuse counselors, mental health therapists, case managers, and community outreach workers in both clinic and outreach settings. Methods to incorporate data from clinical and outreach perspectives include informal and semistructured individual interviews, participant observation, small group discussions, focus groups, and in some instances, record review and abstraction. For example, on the West Coast there are a number of community-based substance abuse treatment agencies (e.g., Seattle's Stonewall Recovery Center, San Francisco's 18th Street Services, and Operation Recovery), AIDS service agencies (e.g., AIDS Project Los Angeles, the Northwest AIDS Foundation, Bailey-Boushay Hospice, and the San Francisco AIDS Foundation), and public health and primary care clinics (e.g., San Francisco's City Clinic and Seattle's NEON Project) where clinicians and other service providers have extensive experience and knowledge from working with this population.

Other methodological strategies that should be considered for use in qualitative research about drug use among MSMs include targeted sampling and social network analysis. Targeted sampling (Watters 1993; Watters and Biemacki 1989) is as useful in ethnographic research as snowball sampling (i.e., chain referral). It utilizes knowledgeable experts such as community consultants, community leaders, and clinicians to generate sufficient numbers of participants for a research project. In a discussion of the significance of sampling and understanding hidden populations, Watters (1993) refers to "The appearance of elephants to the blind." This analogy resonates with regard to research on MSMs who use speed, about whom little published data exist despite their importance in the transmission of HIV. In other words, if only current sentinel drug abuse and arrest data are used, or only data about heterosexual drug-using populations, only part of the HIV/AIDS elephant will be known, leading to further risk of disease spread.

Social network analysis is another useful methodology for the study of gay and bisexual drug users. A social network is simply the sum of linkages among people in a defined population (Klovdahl 1985). That is, it is a grouping of personal networks-its linkages between individuals vary depending on history of past relationships, individual transiency,

duration of contacts, frequency and number of contacts, place of contact, and variety and intensity of emotional ties (Auslander and Litwin 1987; Marsden 1987; Pilisuk and Froland 1978; Saulnier and Rowland 1985). Total variations in individual linkages result in gestalts or patterns of social network structures that have significant effects on transmission of communicable diseases (Williams and Johnson 1993). Williams and Johnson (1993) used social network analysis to characterize the linkages and potential vectors of disease transmission among IDUs in Houston, demonstrating the merit of this approach for research with hard-to-reach drug-using populations such as gay and bisexual methamphetamine users.

GAY/BISEXUAL SUBECOLOGIES AND METHODOLOGICAL IMPLICATIONS

The last section of this chapter is devoted to a discussion of gay and bisexual subecologies or disparate communities that function as ecological niches within the gay and bisexual population. Some of these are more important than others. Gay communities can be found in many cities. They have social, commercial, and political functions, with a high density of gay businesses, bars, athletic centers and gyms, social service centers, and churches. Such businesses tend to be the most visible landmarks of the urban gay community.

In terms of speed use, these more identifiable gay establishments often serve as locations for drug acquisition and use. Many gay speed users have their own gay drug dealers to call and place their orders. Drug deals are not usually done on the street, but more usually take place in someone's apartment—either the dealer's or the procurer's. There is considerable furtiveness about drug deals and drug use in general, particularly when needles are involved. Users will often refer to “closing the blinds” and “drawing the curtains” so no one can see in. One gay user said that a consideration he had in deciding on a new apartment was that it had a linen closet large enough for him to crawl into to “shoot up in privacy” (Gorman, unpublished observations).

Once someone has used speed, he is considered to be “partying” and may spend the weekend with a partner he picked up or, if he used alone, he may decide to stay home or go to a bar to be around others. Almost always, however, the use of speed eventually becomes sexualized. Speed is often used to experience a burst of energy to accomplish some unpleasant task (like house cleaning) before going out to party. This

highlights the importance of community consultants to gain access to speed users in these community settings. It is necessary to know which bars and sex clubs are the most likely speed user locations because not all are. Such access is facilitated by knowledge about the mores and subtleties of gay male culture and by consultant referrals from others in the drug users' network.

There are a number of salient gay subecologies that need to be considered in doing research on gay and bisexual speed use. Each has its own lifestyle and ethos. At the same time, each is not a completely discrete entity: there are overlaps and intersections among them. Knowledge of these different contexts constitutes a critical a priori condition for entry into the world of the speed user. In important ways, each niche has its own ethnographic dimensions (i.e., physical location, opinion leaders, codes of behavior, and rituals). The qualitative researcher must gain access to the gay niche context—be it a bar, a club, a social network—by establishing trust and rapport with key individuals and demonstrating familiarity with and understanding of its rules of behavior. Significant gay and bisexual subecologies include gay/lesbian geographic communities, sex industry workers, transgendered populations, the homeless, MSMs in suburbs, and gay and bisexual youth.

Gay/Lesbian Geographic Communities

Some gay/lesbian geographical communities are particularly well known, such as San Francisco's Castro District and South of Market, Seattle's Lower Capitol Hill, and Los Angeles' Silverlake or West Hollywood. These neighborhoods have high densities of gay and lesbian establishments and community resources such as the San Francisco Bay Times, the Seattle Gay News, and the Damron Guide, a national listing of gay and lesbian businesses, organizations, and meeting places that is updated yearly. There are a number of distribution and contact points for speed in these neighborhoods, which represent key areas for ethnographic research using targeted sampling methods.

Among specific gay communities where the use of speed has become prevalent is the "leather community." Exactly who belongs to the leather community is a matter of some considerable discussion. There is no question that it exists as a distinct subculture in the gay world, with its distinctive bars and clubs, including motorcycle clubs and specific events such as the yearly San Francisco Folsom Street Fair. Black leather is a salient or obvious symbol of this lifestyle, which runs the gamut from

leather fraternities and biker clubs to sado-masochism (S & M) clubs and Sunday beer busts at local leather bars. Lesbians are also involved in the social organization of the leather world.

Before HIV/AIDS, speed was a central component of various leather communities; its use subsided for a brief time, but in more recent years, it appears to have made a comeback, largely as an aphrodisiac. There are also new reports of a resurgence in sexual risk-taking behavior in these communities, at least some of which may be due to increased recreational use of substances such as speed. As can be seen, information about the lifestyle and behaviors of this subgroup population is essential for understanding the public health issues and implications for prevention and treatment of speed use.

Sex Industry Workers

The sex industry in Western cities is typically divided into street hustlers and call men (Marotta 1988; Marotta et al. 1982, 1988; Waldorf 1994). The former tend to come from disadvantaged backgrounds, to be younger, more racially and ethnically mixed, and less often gay identified. Street hustlers may have girlfriends and consider themselves to be heterosexual, turning tricks only to pay the rent. They often loiter in the streets of certain neighborhoods in the same manner as female prostitutes (but on different streets) or in pornographic bookstores. There are quite a few who are homeless and some are transgendered.

Call men, on the other hand, tend to be middle class, typically Caucasian, and more likely to be gay identified. They are reported to use drugs less than street hustlers and, if they shoot speed (which they are also less likely to do than hustlers), they usually have their own injection equipment or “rig.” In both groups of sex workers, however, speed use is prevalent. Entering their worlds and gaining their confidence are challenging tasks, made more so because, in addition to being stigmatized, exchanging sex for money is illegal. There is thus a tendency among call men and hustlers to remain elusive and hidden. Little data exist about this subgroup, but what data there are have been obtained from careful interviewing, participant observation, and interacting with these men in outreach situations and in substance abuse and HIV treatment settings. Many male sex workers have serious health concerns in general and relative to HIV/AIDS in particular, so that investigators conducting a research project need to be prepared to provide referrals for counseling, testing, and other health services.

Transgendered Populations

A cultural category or niche of speed use among gay and bisexual men is also represented by transgendered individuals—those who are either transvestites or pre- or postoperative transsexuals. Transgendered males typically dress like females or at least androgynously. They may work in the sex industry and use speed as hustlers and call men do. Many have health problems—sexually transmitted diseases (STDs), mental health illnesses, and HIV/AIDS, which compel them to contact with the health system. Transgendered persons represent a particularly challenging population in that they are not well understood, experience considerable discrimination, and often have difficulty obtaining appropriate services. As with other marginalized populations, they tend to migrate to major metropolitan areas like Seattle, San Francisco, Portland, and Honolulu, where there are established social networks of gays and where gays tend to congregate, as in San Francisco's Tenderloin and Polk Streets. Although this subgroup's population is at extremely high risk for HIV/AIDS and for transmitting the infection to other gay and bisexual men, there is a dearth of information available about their lifestyles and the considerable role that substance abuse—particularly speed—has in their lives.

The Homeless

Yet another population of MSMs in which speed use is prevalent is the homeless. In San Francisco, as many as 20 percent of homeless males are MSMs. 64 percent of those infected with HIV are gay or bisexual men, and 66 percent of these men have histories of IV drug use (Zolopa et al. 1994). Thus, while MSMs represented only about 20 percent of the study population, they accounted for most of the HIV infections, possibly due to IV drug use. In other cities such as Seattle, Los Angeles, and Portland, high proportions of MSMs have also been found among homeless populations. Public health practitioners and researchers have observed for some time that many of these men are speed users (Rowniak, personal communication, February 1994). Many are dually diagnosed and have other significant health problems including STDs. Speed addiction may be a contributing factor to their homelessness, their HIV infection, and their other health issues. As is the case with other gay populations, homeless MSMs are a hidden, multiethnic population, poorly understood and relatively invisible except to those who provide services to them. As with other marginalized and stigmatized populations, trust is critically important for gaining access to networks and social circles of these

individuals. One way this population was first identified was through interactions with the San Francisco Department of Public Health and Seattle-King County's NEON Program. Qualitative methods utilized in what little research has been undertaken to date with this subgroup have included participant observation (Rowniak and Froner 1987), informal interviews, small group interviews, and clinical observations.

MSMs and the Suburban Connection

There is another niche of gay and bisexual speed users occupied by MSMs who do not self-identify as gay and who do not live in gay neighborhoods. Some of these men are married or are involved in relationships with women. San Francisco, Seattle, Portland, Denver, and Los Angeles have recognized areas for such sexual encounters, which can entail drug use, including use of speed. Given the growing popularity of speed as a reinforcing sexual drug and the fact that its occasional use can be concealed, especially at first, with symptoms of its use attributed to other causes (e.g., to stress, irritability, too much to do), this population of speed users represents a particularly high-risk subgroup for acquiring HIV and for transmitting it to other drug users and to gay and heterosexual partners.

Access to these men is facilitated through the same avenues they use to make contact with other men (i.e., bars, gyms, phone-sex lines, computer bulletin boards, and personal ads in newspapers). While these MSMs do not identify themselves as gay, and while they may be peripheral to mainstream gay culture, they acknowledge occasional encounters with other men and are sometimes accessible through the various institutions of gay culture. Current HIV/AIDS prevention efforts have generally been directed to these men through public interest messages. The efficacy of such efforts could be enhanced by targeting intervention at the same locations these men use to contact other men.

Because this is a truly "hard-to-reach" population, its members are likely to be highly motivated to conceal their behaviors in their everyday lives. Yet, they represent a major risk to others who are part of their everyday lives, such as their wives and their children. The character of this subgroup is such that its members are generally the least accessible of all the subgroups described thus far. Qualitative methods such as unobtrusive participant observation, informal interviews, and semi-structured or indepth interviews when possible are appropriate for engaging this subgroup in ethnographic research.

A particularly innovative approach to this hidden population was undertaken by the Aries Project at the University of Washington, which provides an anonymous 800 telephone number for purposes of HIV risk reduction (Project Aries 1993). CDC's SHAS Study (Diaz et al. 1994) represented another approach, involving interviews with men in this subgroup after they had been diagnosed with AIDS. More needs to be done to contribute to a better overall understanding of this population and of appropriate HIV/AIDS prevention interventions, including the utilization of anonymous drop-in focus groups, targeted one-to-one interviews, and participant observation in appropriate settings,

Gay and Bisexual Youth

San Francisco and Seattle are often destinations for runaway gay and bisexual youth. Frequently these young people live on the streets and are involved in drug use, drug selling, and selling sex for drugs or just for basic survival. Many of these youth suffer various kinds of trauma, victimization, and violence due to the poverty and stigma of their circumstances. Many initiate drug use, including injection drug use, early in life. One young man, aged 18, attending a support group sponsored by the NEON Project, reported that he was introduced to drugs at the age of 14 by his stepmother (Gorman 1994). Recent national data from the Monitoring the Future Project (NIDA 1994) have shown increases in drug use among youth, including increases in the use of marijuana, crack cocaine, LSD, and stimulants, including amphetamines. In-depth interviews with such youth, focus group sessions with small groups of youth, and participant observation in street-based settings and in youth clubs would serve as useful modalities to improve understanding of this population, its drug use, and sexual risk behaviors.

THE IMPORTANCE OF ETHNOGRAPHIC/QUALITATIVE RESEARCH METHODS

The intent of this chapter has been to describe what is known about the connection between speed use and the epidemic of HIV/AIDS among gay and bisexual men, the cultural and sociological contexts of meth-amphetamine use in this population, how understanding these contexts is essential to measure and reduce the scope of the problem, and the importance of triangulated applications of qualitative methods for enhancing the knowledge base about hard-to-reach and at-risk populations. The concurrent and sequential use of qualitative research

methods including participant observation; demographic and problem indicator data: interviews with community consultants, focus groups, and selected small groups; and social network analysis can help in understanding the nature and extent of drug use, economic factors that affect drug supply and demand, the natural history of use, and the variety of drug-related rituals and associated HIV risk behaviors practiced by a given population. In turn, the public health information derived from the triangulated use of these qualitative methods provides a foundation for improved and targeted HIV and drug-related prevention, intervention, and treatment.

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Team Research Methods for Studying Intranasal Heroin Use and Its HIV Risks

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INTRODUCTION

Illicit drug use is dynamic. Within neighborhoods and across the United States the popularity of any one drug waxes and wanes, a drug's availability fluctuates, the forms and modes of ingestion of drugs change, new drugs are introduced, and people vary in their willingness to try and continue using various types of drugs. Given the potential impact of substance abuse on matters as grave as health, education, and crime, intelligent policy formation often requires that accurate information be produced quickly. For example, until recently Chicago's heroin users could be characterized as an aging cohort of injectors, many of whom began their use of the drug between the 1950s and 1970s. This profile is being altered by large numbers of people in their twenties or younger who have begun using heroin—most often intranasally. For health workers and policymakers concerned about HIV/AIDS, one question about this trend looms above all others: Will these new users become injectors? Prediction is, of course, science's most difficult task, but answers are needed now. New injectors historically have been prone to sharing needles and other injection equipment (Waldorf et al. 1989). Thus, a move to injection by these new heroin users may quickly and markedly elevate their risk for contracting and transmitting HIV.'

In the shadow of often rapid and substantial changes in drug use patterns, researchers in this arena must decide which investigative methods are most appropriate for their concerns. Douglas (1976, p. 8), mindful of the practicalities of research, recommends considering the following questions when designing a study:

1. What are the goals of this research?
2. What, in view of these goals, is the kind of data I want this research to produce?

3. What research will allow me to achieve these goals and get this kind of data?
4. Given these goals and this research setting, what research methods should be used *ideally*?
5. What research methods are practical in this research setting?
6. Given this estimate of the practical methods, is it possible to approximate sufficiently the goals and kinds of data we want to make this research desirable?

In studying the situation discussed above—the large numbers of new people using heroin and their risk for becoming injectors—the authors decided that ethnography and other qualitative methods would address the most compelling questions, produce good data quickly, and stay within the budgetary, personnel, and time constraints that precluded a full-scale, multimethod approach. Contributing to the authors' confidence in their ability to produce valid data within a relatively short time was the use of team field research methods. This chapter discusses the use of these methods, paying particular attention to the team research approach.

BACKGROUND

Setting for the Study of New Users of Heroin

In 1987 the National Institute on Drug Abuse (NIDA) launched the National AIDS Demonstration Research (NADR) projects in more than 60 sites throughout the United States to test and evaluate models for the prevention of HIV infection among injecting drug users (IDUs). The Chicago AIDS Outreach Demonstration Project, which performed the research reported in this chapter and is now known as the Community Outreach Intervention Projects (COIP), was among NADR's first group of five projects. COIP employs the Indigenous Leader Outreach Intervention Model (Wiebel 1988, 1993). Building upon a long tradition of innovative, community-based programming, the model combines basic principles of medical epidemiology (deAlarcon 1969; deAlarcon and Rathod 1968) with community ethnography (Becker 1953; Feldman

1968; Finestone 1957; Lindesmith 1947). The model was first used to study and intervene in community outbreaks of heroin addiction (Hughes and Crawford 1972) and then expanded to address other types of drug abuse (Shick and Wiebel 1981; Shick et al. 1978).

Since early 1988, COIP has operated research field stations in three lower-income areas of Chicago that differ in their racial and ethnic makeup: the mostly African-American South Side, the ethnically mixed North Side, and the largely Puerto Rican Northwest Side. COIP opened a fourth field station in 1993 in an African-American neighborhood on the city's West Side that targets young people who use drugs, regardless of the route of administration. All field stations are staffed by outreach workers and case managers, and each of the original three stations has an ethnographer and a physician's assistant who operate a weekly medical clinic for HIV-infected people.

Outreach workers (indigenous leaders) are former addicts who were selected for their familiarity, credibility, and trustworthiness with the target audience, qualities that enable them to capture the audience's attention and motivate behavioral change. The intervention targets not just individual injectors, but networks of IDUs-social groups whose membership is defined by IDUs' interaction around obtaining and injecting drugs. By targeting networks, the expectation is that members will encourage one another's risk reduction and, in doing so, multiply the impact of street outreach.

Working out of the field stations, outreach workers and ethnographers go into the neighborhoods and congregation sites of illicit drug users (e.g., drug-selling areas) to conduct AIDS education and individual risk assessments, pass out HIV prevention materials, reinforce attempts at risk reduction, provide referrals to appropriate social and medical services, and conduct research. This ongoing involvement in subjects' lives, in a helpful, service-oriented fashion, facilitates the gathering of data.

To monitor trends in risk behavior and HIV incidence, a panel of 850 out-of-treatment, HIV-seronegative IDUs was recruited through street outreach for study. Between 1988 and 1994, structured interviews and blood samples (baseline and eight followups) were collected from the panel, with a followup rate of over 70 percent (Wiebel et al. 1993b).

COIP also has a mobile outreach team that is neither field station-based nor formally engaged in research; team members, however, are used by

COIP ethnographers to gather qualitative data. The mobile team operates in South Side and West Side neighborhoods not served by the field stations.

Past Heroin-Use Patterns in Chicago

During most of the 1980s heroin use in Chicago's lower-income neighborhoods was confined primarily to long-time users. These people formed an aging cohort, many having become addicted to the drug between the 1950s and the 1970s (Wiebel et al. 1993a). By the 1980s, one condition that discouraged those who experimented with drugs from trying heroin or continuing its use was the drug's low purity—typically under 5 percent as sold in street bags (Wiebel 1990). Heroin of this quality is expensive and more suitable for injection than for intranasal use or smoking. Relatively few potential users found these conditions attractive. Instead, cocaine was the more popular choice. Users could satisfactorily snort the drug, or they could achieve an especially intense high by smoking or injecting it. Throughout the 1980s cocaine prices generally fell, purity increased, and the appearance of rock cocaine in street drug markets made cocaine widely available in a powerful and inexpensive form (Ouellet et al. 1992).

Beginning in the late 1980s, a more powerful “China White” heroin moved into a market dominated by weaker Mexican brown heroin.² China White's superior strength apparently forced an improvement in the purity of competing heroin products and now Chicago heroin is far more potent than at any time in recent years. For example, whereas the purity of Chicago's street-level heroin in the early 1980s, as measured by the Drug Enforcement Administration's (DEA) Domestic Monitor Program (DMP), averaged around 2 percent, the 1991 average was 10 percent. In the first quarter of 1992 purity averaged 15 percent, and by the first quarter of 1993 it was 28 percent. Ethnographic data support these estimations. In the last 2 years the sight of people in a deep heroin “nod” has become much more common, and there has been an upsurge in requests from users seeking assistance in entering drug treatment for heroin addiction. Further, long-time users who normally denigrate whatever heroin is current in contrast to the heroin of their youth now often make favorable comparisons. Consistent with these reports, the project now commonly hears heroin addicts complain about having “monster” habits: “I don't have a monkey on my back, I got a 500-pound gorilla.”

As heroin's purity increases, the cost for a quantity sufficient to produce its psychoactive effects decreases. For example, during the 5 years in the 1980s that the DEA purchased heroin on the street as a part of its DMP, the average national cost was \$2.72 per milligram (GAO 1992). By early 1993, the DEA estimated that the average price for a milligram of heroin in Chicago was 63 cents—one of the lowest prices in the Nation.

Current Heroin-Use Patterns in Chicago

While there is no single indicator in Chicago that accurately identifies changes in the number of new users of heroin or in the patterns of current users, a variety of epidemiologic and qualitative indicators can be used to discern trends (Wiebel et al. 1994). These data suggest an increase in the number of people using heroin, more severe addiction, an increase in intranasal use, and the beginnings of a cohort of younger users. Treatment admissions for narcotic dependence, after declining as a proportion of all admissions in the last decade, rose from 5 percent to 9 percent between 1991 and 1993. Sixty percent of 1993 admissions cited intranasal use as the primary route of administration, up from 30 percent in 1991, and intranasal users were much more likely than injectors to be under 35 years old. In Chicago's hospital emergency rooms there was a 31 percent increase in heroin/morphine mentions between 1991 and 1992; among 18- to 25-year-olds the increase was 57 percent. Annual prevalence estimates of heroin use from NIDA's 1991 Household Survey indicate that approximately 0.7 percent of Chicago's residents used heroin in the previous 12 months as compared to 0.3 percent of the U.S. population, the highest figure among the six metropolitan statistical areas polled. The most recent police data, which record only State figures, show an 89 percent increase between 1990 and 1991 in the amount of heroin seized. Ethnographic data both presaged and support the trends indicated in the epidemiologic data. For example, as an indicator of the popularity of intranasal use, the project encountered a heroin dealer who began supplying straws with each bag sold.

A new cohort of young, intranasal heroin users appears to be developing. Will they become injectors? Almost without exception, experienced heroin injectors answer "yes" to this question and cite potent incentives: to achieve a better high, to reduce the drug's costs, or to mitigate a drop in purity. If this transformation takes place, new users will be at risk for sharing injection equipment. And if new injectors share with current injectors, they will be in high-risk contact with a population that is

infected with HIV at a rate of approximately 30 percent (Wiebel et al. 1993b).

IDENTIFYING THE PROBLEM AND DEVELOPING A RESEARCH STRATEGY

As the ethnographers became aware of the inroads being made by China White heroin into Chicago's street drug markets, the heroin's increasing potency, and the growing numbers of new users with a preference for intranasal administration, they asked the outreach workers to gather more information. They also began probing their contacts on the street. Because COIP's research to this point had focused on networks of IDUs, the researchers were quite ignorant about the new intranasal users; they typically were 10 to 20 years younger than IDUs and tended not to associate with them.

Early reports suggested that intranasal heroin use by young people, like many other drug trends, was not distributed evenly across the city.³ The researchers quickly discovered that young heroin snorters could be found in all the neighborhoods in which the researchers worked, but that the practice was most pronounced in West Side areas that had very active and highly visible street drug markets known for their high-quality heroin.

As it became clear that the increase in intranasal heroin use warranted further investigation, the researchers agreed on a set of issues to explore: the incidence and prevalence of heroin use, demographic profiles of new users, the process of initiation and continued use, current use patterns, users' understandings and feelings about heroin, experimentation with injection, attempts to quit, knowledge and experience with the drug treatment system, and HIV risk.

Topics such as incidence, prevalence, and demographic profiles are best addressed by using quantitative, epidemiologic survey methods (though, as the authors argue below, this may not be the case when the subject is injection). Such an approach would not, however, provide deep understandings for issues such as initiation, current use, and the forces that encourage or discourage injection. For example, the researchers wished to go beyond explanations for injection decisions that rest upon variables such as age, race, education, and drug history and, instead, develop a visceral understanding of what different routes of administration mean to young heroin users and how these meanings are shaped

by peer subculture. To understand the behavior of these people, the researchers believed it wise to try to see the world from their point of view and to allow for the expression of a wide range of human motivations. Thus, the researchers wanted to hear about the pleasures of heroin use, the situated nature of decisions about use or quitting, the emotional elements in these decisions, heroin use as an element of self-identity, and the extent to which identity is shaped by a heroin-snorting subculture. Without knowledge of these topics, the result might be public policy that targets the right groups, but has little idea of what to do once the groups are identified. As Adler (1993, p. 533) has noted:

People live in scenes and subworlds filled with meaningful objects. They choose courses of action based on their interpretations of situations, which arise from the meanings they share with others about their social worlds. To understand their behavior, researchers have to learn about these subworlds . . . [and develop] the deepest existential understanding of how people think and live.

The study's goal was to relatively quickly develop high-quality data that could be used to inform incipient public policy (including the setting of research funding priorities) and interventions that could target new or potential users of heroin. While the emergence of a new cohort of heroin users warrants a full-scale investigation combining both epidemiologic and qualitative methods, the study lacked the resources to do so. The researchers decided to use qualitative methods, because they best addressed the matters of most concern while also enabling the addition of information to improve quantitative estimates of the distribution of heroin use and related behaviors. For example, it would be sufficient for the study's purposes to ask heroin snorters, injectors, and, especially, dealers from the neighborhoods under study for nonnumeric estimates of the incidence and prevalence of local heroin use and for demographic profiles of new users and snorters.

Once the researchers settled on a qualitative approach, they acknowledged that a full ethnography was inappropriate because they lacked the time and wanted a broader sampling of heroin snorters than such a research strategy would allow (Agar 1993). Instead, the researchers decided to recruit small numbers of snorters in neighborhoods across the city for ethnographic interviews (Spradley 1979). As the study progressed, the researchers also interviewed longtime heroin snorters,

people who both snort and inject, and IDUs or those involved in selling drugs who are in contact with snorters.

The Research Team

Since the sampling, recruiting, and interviewing were performed by a research team, it makes sense at this point to describe the team and its formation before discussing these research issues. COIP's ethnographers have worked approximately 7 years in their respective neighborhoods. As noted, however, their focus on IDUs led to little contact with new intranasal heroin users, because the snorters generally are younger than IDUs and in minimal contact with them. The exception was the West Side, where COIP's outreach staff work with youth, but there is no assigned ethnographer here. The researchers' lack of contact with snorters and lack of knowledge about heroin snorting, coupled with the desire to gather data quickly and the need for the North Side ethnographer to work not only those neighborhoods but also in West Side areas where the ethnographer was not well established, attracted the researchers to the team research approach.

The team consisted of indigenous outreach workers, site ethnographers, and the principal investigator. Indigenous staff members have at one time been substance abusers. All either live in or are otherwise familiar with the neighborhoods in which they work, and they reflect the local racial and ethnic composition. Both male and female staff, ranging in age from 22 to 67 years old, were selected for the research team, and most once used heroin. Outreach workers were used to contact and gain the cooperation of potential interviewees and to gather data while performing outreach. In addition, two indigenous staff members assisted the ethnographers in conducting interviews.

Sampling and Recruitment: In the Beginning

The researchers targeted neighborhoods in the four city areas served by COIP field stations. Through street contacts the researchers also identified an area on the city's near West Side not normally served by COIP in which many young people were said to be snorting heroin. As this ongoing research develops, the researchers will ask members of COIP's mobile outreach team to identify other areas appropriate for sampling. This strategy allows wide coverage of Chicago in geographic, ethnic, and racial terms, but it restricts the study to a mostly low-income population.

Beyond insuring relatively wide coverage of the city, the researchers wanted the sample to evolve in response to the data collected (Schatzman and Strauss 1973). Agar (1993, p, 524) has described this process of theoretical sampling:

In ethnographic research, two considerations guide sampling. First, because of the emphasis on ongoing, high-rapport relationships, random sampling makes no sense at all. An ethnographer has to work with people who are willing to spend the time. Second, significant dimensions of population variation are learned only after the research has started. For these reasons, ethnographic samples are emergent. They are constructed as the research develops, and choices of what kinds of people to include are made as the evaluation becomes clear. Ethnographic samples are known after, rather than before, the fact. The researcher keeps a record of the sample as it develops, so that comparison of the ethnographic sample with already available population descriptions can be made to gauge the sample's representativeness.

Thus, people were selected for interviews (both formal and informal) and sites for examination in order to broaden observations, pursue points of interest, validate data, develop and test hypotheses, and produce "grounded theory" (Glaser and Strauss 1967).

Recruiting began at the West Side field station because staff there were already working with heroin snorters, the youth outreach workers had longtime personal contacts with numerous young snorters, and it appeared that heroin snorting by young people was more entrenched here than at the other sites. The North Side ethnographer worked with the three youth outreach workers to identify and recruit appropriate subjects. At this early exploratory stage, the main goal was simply to contact active or recently active heroin snorters who were in their twenties or teens-a group observed to be representative of the majority of new heroin users-and interview them one at a time in order to get a better feel for this scene. The likelihood that the West Side outreach workers would recruit friends with whom they had grown up was acceptable-in fact it was seen as an advantage. Since the study's goals did not demand a random sample (which, in practical terms, probably is an impossibility due to the lack of a sampling frame), the ethnographers were happy to

take advantage of friendship bonds that would foster trust between the core research team and the people interviewed. After the first set of West Side interviews, the ethnographers expanded their research to include the Northwest Side, the near West Side, and the North Side.

On the West Side the ethnographers relied solely on outreach workers and one street contact to identify and recruit a small number of people for the study (N = 12). Once the ethnographers moved back to their home bases, however, this method was supplemented with snowball or chain referral sampling (Biemacki and Waldorf 1981). This technique involved asking snorters who had been recruited to refer fellow snorters to the ethnographers, a technique that leads to a better understanding of any group dynamics involved in using drugs and is useful in contacting people who are otherwise difficult to find.

Interview Setting and Payment

The formal ethnographic interviews were conducted in COIP field stations, with one exception. Interviews with snorters from the near West Side, an area not served by a field station, were conducted in offices at the university. Interviews were conducted with people at least 18 years old after they provided informed consent. Interviewees were paid \$15 at the interview's conclusion. In addition, they were offered a full range of services: HIV/AIDS risk-reduction education and counseling, HIV testing, referral to a wide variety of social and medical services (including help in getting quicker access and better quality service), and information on peer support groups. Participants seemed to appreciate being able to discuss their problems in a relaxed, nonbureaucratic setting (with the exception of those interviewed at the university) with former drug abusers who listened without preaching and offered help if it was wanted.

Recruiting Snorters When IDUs Have Been the Target Population

Aside from the West Side youth outreach team, none of the field station staff were in regular contact with more than a handful of heroin snorters, who tended to be longtime users who associated with IDUs. For example, one 33-year-old North Side woman had snorted heroin for 10 years, but she did so while her husband injected heroin; she did not participate in a heroin-snorting scene. To find heroin snorters, team members began asking about them when talking with heroin-using IDUs and with people involved in selling heroin (e.g., dealers, "security")

“touts”). In the initial stages, researchers tried to do this without revealing the intention to pay people for interviews because the ethnographers felt they would not be able to spot bogus self-identified heroin snorters hoping to make \$15. It was only after these discussions led the researchers to believe that the person might truly know heroin snorters that they raised the issue of payment for an interview. While some of the street sources were able to describe an apparent increase in young heroin snorters, they usually did not know young snorters well enough to recruit them for an interview. However, a few contacts were able to deliver such a person. For example, on most days while doing outreach on the North Side, outreach workers talk to a woman in her late twenties who works in a store and her boyfriend, a marijuana dealer and senior gangbanger in his early thirties, who conducts his business nearby. These people are ex-IDUs who, even while injecting, did so only occasionally and mostly associated with non-IDUs. When the outreach workers asked about young heroin snorters, they said they knew such people and would try to recruit one. The woman contacted a young snorter who, after hearing her vouch that the researchers were “stand-up” people he could trust, agreed to meet with the researchers. He agreed to be interviewed and recruited some young heroin-snorting friends.

Validating a Subject’s Status as a Heroin Snorter

The ethnographers knew they would encounter people who would like to be paid the interview fee, regardless of their qualifications. Having seen naive researchers badly hustled by streetwise people claiming to be whatever the researcher needed, the ethnographers wanted to avoid this mistake. They recognized that, compared to IDUs, identifying and validating heroin snorters presented more of a problem, because snorters-like sex partners of IDUs- have nothing akin to needle tracks to verify their claimed status. To screen out counterfeit snorters, the ethnographers could have asked for urine samples to test for heroin use and taken a positive result, combined with the absence of needles tracks, to indicate a snorter (or smoker). This strategy was ruled out for four reasons. First, it would not eliminate injectors-some IDUs have no tracks or they inject in parts of their bodies that were inappropriate to scrutinize simply to validate their status. Second, occasional snorters who had not used heroin recently would be eliminated by urinalysis. Third, using urinalysis implicitly violates the trust upon which the study’s research and service delivery have been built; thus, using it seemed too costly compared to its advantages.⁴ Finally, urinalysis did not fit the budget for this research.

Instead, the researchers felt that ethnographic methods and the team field research approach provided the tools to sufficiently validate subjects' claimed status. The study used experienced, indigenous outreach workers, all of whom have many contacts among illicit drug users, to identify and recruit bona fide snorters. In addition, the ethnographers used their own contacts, which have been developed over the years independent of the outreach staff. When interviewing began, the ethnographers relied on the two indigenous members of the core team-both experienced former heroin users and former snorters-to identify any counterfeit snorters from the interviews. As the interviewing progressed, the ethnographers accrued the sort of understandings needed to spot impostors. For example, the ethnographers would probe a subject's physiological reactions to the experience of snorting heroin, would ask about "hot dope" (heroin that burns the nose because it is cut with quinine), or would ask about snorting rituals. The ability to do this is perhaps greatest in ethnographic interviews, at least as compared to survey instruments. Whereas subjects responding to a survey instrument typically select from a list of predetermined answers or, when presented with an open-ended question, need only provide a rather brief answer, subjects who are ethnographically interviewed are asked, in essence, to demonstrate considerable acumen and feeling for the matters being discussed. Any single answer in an ethnographic interview is likely to be probed, and interviewers who suspect deception are free to pursue a line of questioning meant to reveal it. In addition, deceptions often are not simple matters of true or false, and an ethnographic interview allows for the expression of shadings and multiple understandings upon which a deception may be built. Finally, the sustained contact with the people being researched that is typical of ethnography and that is multiplied by the use of a research team rather than a lone ethnographer enhances the ability to validate data. Over time and with a team of people gathering and reporting data, the ethnographers often are able to determine-directly or through secondhand contacts-whether something they are told is, in fact, true.

So far, only one impostor has been identified-a near West Side woman whom the contact did not want to have interviewed but who literally threw herself into the ethnographer's car so as to be included in the group being taken to the university interview site. It was easy to uncover the deception, given her real concerns. Soon after the ethnographer began her drug history interview, the woman asked him to turn off the tape recorder and then told him that a few days earlier she had been told by her doctor that she had tested positive for HIV. She attributed her

infection to either injection drug use or sexual contact. She was terrified, pleaded for help, and begged him not to share her secret. One other person was not quite what the ethnographers expected. He turned out to be an IDU who snorted only in exceptional circumstances rather than a combination snorter and injector. In this circumstance, the ethnographer completed the interview and paid him. By completing and paying for any interview the ethnographers begin, people are more likely to reveal characteristics that would disqualify them from being interviewed. This strategy improves the validity of the data and allows the ethnographers to discard that which is inappropriate.

In all, the ethnographers are confident that these methods have so far allowed the study to build a sample of genuine heroin snorters.

Ethnographic Interviews: In the Beginning

The first interviews were designed as twofold explorations. On the one hand, the ethnographers had some specific interests that are common to most studies of illicit drug use, such as demographic profiles, initiation, current use patterns, and attempts to quit. On the other hand, the study's concerns were quite broad: Is there a scene—perhaps a subculture—developing? What does it look like? What are its pleasures? Do heroin snorters have a language that distinguishes them from others and, if so, from whom (e.g., “straights,” cocaine smokers, IDUs)? How and in what context are new users using the drug and what meaning do they attach to using it in this manner? What are their understandings of themselves and their drug use? How do gangs fit into the picture? Are the worlds of IDUs and snorters distinct or do they overlap? Does a fear of AIDS fit into their calculations?

Demographic data and drug-use histories were collected and recorded by using a close-ended questionnaire. The ethnographers chose this method mainly because it allowed them to build consistent and parsimonious profiles of the people interviewed.

For the bulk of the study's interests, however, researchers used ethnographic interviewing techniques. Subjects were asked, through open-ended questioning that allowed the exploration of unanticipated areas, to reveal their views and understandings of the world they inhabit, with an emphasis on its cultural elements. In addition to probing for norms, values, attitudes, and action—all of which are typically understood by researchers to be based on a rationality that may or may

not be apparent-the researchers made room for the less rational elements of feeling and emotion (Adler 1985). This approach is nicely summarized by Adler and Adler (1987, p. 20) in their reference to Zurcher's (1977) work in existential sociology, the theoretical perspective perhaps most likely to assign a central role to emotions and feelings in explaining human conduct:

Existential sociology differs from symbolic interactionism and other sociologies in its view of human beings as not merely rational, symbolic, or determined by the norms, values, classes, or social structure framing their existence. Instead, its proponents believe that people have strong elements of emotionality and irrationality, and often act on the basis of their situated feelings or moods. They are thus simultaneously both determined and free, affected by structural constraints while still mutable, changeable, and emergent.

The goal of this approach is not to reject rational thought and action, but to combine these elements with the less than rational realms of feeling and emotion to produce a deeper understanding of human life. Thus, for example, the researchers tried to probe beyond physical addiction as a central motive for continued heroin use so as to include motives such as excitement, self- and group-identity, and rebellion. As an example of the fruits of this approach, the researchers found several young North Side heroin snorters who seemed more addicted to the thrill of going to the West Side to "cop" heroin than to the heroin itself. As another example, one snorter, a fledgling musician, told about wanting to mimic the lives of heroin-addicted musical heroes such as John Coltrane and Keith Richards.

Formal interviews were audiotaped and transcribed. In addition, information from informal encounters was recorded in field notes. For example, someone might come into the field station, begin talking about heroin snorting, and provide information worth recording. In one case, the ethnographer happened to come across a young snorter whom researchers had interviewed a month earlier and had helped to get into drug treatment. The young man and his girlfriend were struggling with multiple bags of groceries, so the ethnographer offered them a ride home. During the ride the man updated the ethnographer on his situation, and the ethnographer added this information to the study's field notes (including noting that the man's girlfriend was present and that this might

have affected what he said). Likewise, outreach workers and other members of the research team often brought to the ethnographers information gleaned from the street, and this, too, was recorded. Using multiple sources of information and having repeated contact with those people interviewed are means of improving the validity of the data.

Interviewees were offered anonymity, though they often opted for confidentiality—that is, they decided to provide their full names and a means for contacting them and relied on the ethnographer to protect this information. For those choosing anonymity, first names were kept alongside their study identification numbers to facilitate further data gathering and analysis. (Interviewees were invited to use an alias when they offered a name, but they were asked to use one they would remember if they had further contact with the researchers; if no name was given, the ethnographers made up a name simply to help recall the person). Interviews, after being cleansed of potentially harmful identifiers such as people’s names and drug-dealing locations, are stored in an encrypted form on a computer. Information linking study identification numbers with names and descriptions is encrypted and stored on a separate computer.

THE EVOLUTION OF THE SAMPLING DESIGN AND INTERVIEWING METHODS

When researchers describe their studies, particularly in the abbreviated forms preferred by scientific journals, readers usually get the impression that the study designs were fully realized products carefully worked out in advance of data collection. The authors suspect, however, that chance plays a role here more often than published reports let on. So it was in this study. Originally, the researchers planned to sample individual heroin snorters and to interview them one at a time. The two ethnographers agreed to do the first interviews together before interviewing individually at their respective field stations; they believed that this would help them to better coordinate their efforts. For these early interviews they asked a female outreach worker who snorted heroin for 13 years and who had been trained to do ethnographic interviews to join them so as to provide the expertise in this subject that they lacked. They planned to use her for one-on-one interviews with most of the female heroin snorters they recruited, but they planned to discontinue using multiple interviewers for single interview sessions as soon as they learned enough to competently interview snorters. These plans changed.

When the ethnographers and the outreach worker conducted the first interviews at the West Side field station, the youth outreach workers brought in four people who knew one another; all were friends and two were “running partners” (they regularly hustled and used drugs together). The team had planned to interview only two people and were slightly pressed for time. In addition, the rooms at the field station that were usable for interviewing were not going to be available for the 5 hours they estimated individual interviews would take. As a consequence, they decided to administer only the brief survey covering demographic characteristics and drug-use histories individually and in private and then to gather the four people in one room for a single ethnographic interview.

The results were provocative. While this method has important limitations and is a transcriber’s nightmare, it offered two rather distinct advantages that were consistent with the study’s goals. First, it became evident that in interviewing friends who at least occasionally used drugs together, a situation had been set up that encouraged the expression of what the subjects saw as positive elements of the experience of snorting heroin, including those that enhanced their friendships. When subjects are interviewed alone, many have a tendency to emphasize the negative aspects of drug use and to explain their participation in this activity as a consequence of the drug’s chemical powers. The emphasis on negative elements, rather than accurately portraying drug users’ overall experience with drug use, seems to reflect their judgment of what a Ph.D. researcher (or even an indigenous service provider) expects to hear and the fact that those doing the interviewing may be able to provide help for some of these problems. In order to understand the attractions of intranasal heroin use for these young people and their risk for injection, it was necessary to understand its pleasures. When a group of friends were interviewed together, they felt freer to express these pleasures than if they were being interviewed individually, and this enabled the ethnographers to partially witness the role of heroin snorting in bonding the group:

Interviewer 1: Did you guys ever use together, cop together?

Mike: This is the ____ Crew.

Mike, Bill: Cop together, ya.

Bill: But never no needles. Never shoot up.

Mike: This is the ____ Crew. We're always together.
We go together to the spot.

Bill: You know the Animaniacs? (Bill points to Mike, Mary, and then to himself to indicate "that's us").

Interviewer 3: Ya. I know them. It's a cartoon.

Mike: Right, they're always together.

Mary: The two guys and the one girl.

These people went on to describe the thrills and mutual support they experienced when "copping" heroin together, and they likened this activity to an adventure into a dangerous but enchanted land. Repeatedly, throughout the interview, they emphasized that they were a group that supported one another—an uncommon theme in individual interviews.

By learning of heroin snorting's pleasures and its meaning within cliques of users, the researchers were better able to evaluate heroin snorting as an authentic way of using the drug.' In the research literature on heroin use, intranasal use—if it is mentioned at all—typically is dealt with as a transitory, often brief, phase before the individual begins the authentic form of heroin use: injection. This approach is reflected in the stories told by older heroin injectors who first used the drug intranasally and were teased by IDUs for this "wasteful" form of administration or for not experiencing heroin's true high. Another way of viewing this teasing is that the IDUs saw the snorter as not engaging in authentic heroin use—snorting was the way of novices, fools, and "wannabe cool cats." Thus, it seemed important to know if snorting is seen as an authentic mode of heroin use by young, new users of heroin, because authenticity would support a continuation of this mode of use rather than a switch to injection. By interviewing a group of friends, it became possible not only to hear their words but to observe group interaction and to experience some of the *feelings* generated within the group by their involvement in heroin use.

By combining brief one-on-one interviews with a group interview, the ethnographers were more able to achieve a second goal: gathering information that snorters were likely to hide from one another, especially any encounters with drug injection. From the start these young snorters

expressed great disdain for drug injection and saw it as something that would taint them before their peers.

Bill: You lose your self-respect, you know? You just lose your self-respect. Plus, between the guys you hang with, they don't want to see you do that, man. It's like, "I'm Bill, I'm Bill. . . . If I start to shoot up . . . my friends would say, 'Bill's starting to let himself go. We're still snorting, but Bill can't feel it no more. I guess he got to shoot to the vein.'"

Jose: (Before I'd inject) I'll take a bullet first.

In order to identify accurately their risks for adopting injection as the primary mode of drug administration, including any experimentation with or history of injecting, a way was needed to overcome the blot on their reputations and self-identity associated with injecting. By interviewing a clique, the research team needed only one person willing to admit to injecting to be able to know about the entire group, and by doing the drug histories in private the team presented them with this opportunity. For example, the reader might be surprised to learn that the "____ Crew" quoted above, despite numerous and vehement condemnations of injecting during the group interview, had recently injected heroin as a group for a week. Mary revealed this secret to the female interviewer. If the disclosure of injecting or a willingness to inject comes during the group interview, it is likely to draw out the members who were unwilling to admit to this. Further, by doing two interviews, the ethnographers experienced a warming effect. That is, the second interview was enhanced by the greater familiarity bred in the first interview, even though one interview almost immediately followed the other. The researchers are still trying to decide which ordering yields the best data: an individual drug history first and then a group ethnographic interview or vice versa.

In addition to interviewing cliques of snorters, the interviewing evolved in another way. Rather than sticking with the plan to use one interviewer per session as soon as the ethnographers felt able, the ethnographers continued interviewing as a team. The advantages of using an interview team were twofold. As a group they had greater expertise in exploring heroin snorting. For example, the female outreach worker was excellent at calling upon her own experience as a heroin snorter to persuade people to talk about how they experienced "the drain" (the feeling of snorted

heroin as it moves from the nose to the throat), the ethnographers could direct discussions into more abstract issues having to do with rituals that authenticate snorting and discourage injection, and the older male outreach worker could encourage discussion of the move from snorting to injection by citing his own experience. Thus, by using a team of interviewers, the study widened the array of experiences, talents, and knowledge in the interview.

The second advantage of team interviewing is that subjects are more likely to find an interviewer they identify with, or whom they believe truly understands their situation. Consider the North Side team. While the North Side ethnographer considers himself as generally at ease and sociable within the research setting, his indigenous coworkers are particularly so. And sociability on the researcher's part is not to be taken for granted. One of the few researchers to pay serious attention to this issue noted that:

In the academic world, because of the self-selection of those who are most interested in doing library and book work, there are high percentages of people who are quiet, reclusive, and generally inexperienced and inept at dealing with most kinds of people in our society (Douglas 1976, pp. 210-211).

While the North Side ethnographer feels he is not such a person, he freely admits that he could spend the remainder of his life working among lower-income drug users on Chicago's North Side and never achieve the ease and competence with which his indigenous coworkers operate in this milieu. For example, not only does the one indigenous interviewer have over 40 years of experience as a heroin user and another 10 years in the drug treatment system, but the hustles he used to support his drug use-sales scams, confidence games, and pool hustling-generally required a high degree of sociability. The second indigenous interviewer, who while working as a nurse also stole expensive merchandise from Chicago's best stores, characterizes herself in those days as an actress:

[While shoplifting] I had to know how to put up my front, to talk right, walk right, distract the sales people, and then get whatever it was I was after. Out on the street it was the same thing, I had to know how to "be street" so that I could survive and not get hurt or ripped

off. The little bit of time I was dealing, I had to know how to be real dirty.

Thus, these two interviewers brought not only a wealth of experience to the interviews they helped conduct, but also a high degree of sociability. These qualities often made it particularly easy for subjects to connect with them.

In addition to possessing experience and sociability, the older male interviewer's age is a plus for the team. He is close to 70 years old and healthy. Rather than seeing him as someone who is over the hill and irrelevant to their lives, young drug users often admire the fact that despite his background—one that experience has taught them is fraught with lethal hazards—he has made it to a relatively ripe old age, has a good job, and continues to work. The ethnographers have seen many of these young people take to him almost as if he were their father or grandfather, while at the same time confiding secrets to him that few are allowed to know.

After the researchers recruit a clique, they try to get a sense of which interviewer would best match which subject for the purposes of the one-on-one drug history interview. The female interviewer is likely to take any women in the group, while the indigenous male interviewer—who is the lead recruiter on the North Side—is likely to take the clique member he has been working with during the recruiting process. If the clique has an obvious male leader, the ethnographer usually takes him as a means of recognizing his standing, since it is apparent that the ethnographer is the leader of the interviewing team. Sometimes the researchers make these matchups based simply on intuition. During the course of the group ethnographic interview, pairings emerge naturally. It is not uncommon to see subjects direct much of their conversation to a single interviewer.

It is only fair to note that by having multiple interviewers the study also increases the chance that there may be one person present to whom a subject may *not* want to disclose something. However, this possibility is countered somewhat by the one-on-one drug-use history interview, unless the interviewer was the one who inspired reluctance in the subject. In addition, the study's ongoing involvement with the people under study provides them with opportunities and incentives to eventually set the record straight about their drug use.

In sum, the study's sampling and interviewing methodology evolved almost as soon as research activities began. Where the researchers originally planned to recruit individual heroin snorters and administer one-on-one ethnographic interviews, they soon began recruiting heroin-using cliques for a combination of one-on-one and group interviews. Ethnographic methods make such adjustments easy; indeed, they are built on the premise that adjustments are desirable. As research continues, it is likely that further changes will be made.

DATA ANALYSIS

There is much written on data analysis using ethnographic methods, and it is not the authors' purpose here to go into great detail about this matter. It should be noted, however, that while computer programs are used to enter, code, and help analyze the data, the analysis is not simply a matter of combing through the interviews in more or less detail. Instead, data analysis begins with the first interview. and as more is learned and new questions and problems develop, the sampling and interviewing is adjusted accordingly. These questions and issues often grow out of discussions among team members and, at least in the early stages, are usually oral, not written. They also grow out of the process of coding transcribed interviews. which is a sort of analysis in itself.

It is particularly important to note that adjustments in sampling or questioning are not solely indicated by the content of the interviews, which is to say that interviews are not treated as objective data readily amenable to useful analysis apart from the people who collected them. For example, new questions may grow out of the suspicion that subjects are engaging in evasions, false fronts, half-truths, or lies, and this possibility may not be at all visible in interview transcripts. Instead, the skepticism may have been triggered by the tone of an answer, a shift of the eyes, or body language, or it may be intuition born of the interviewers' experience with the subject, with the subject's friends and milieu, or with the issues being discussed. In such cases, the researchers add their doubts to the interview transcripts or to separate field notes.

The ability to adjust for various forms of deceit on the part of subjects is one of the advantages of ethnographic methods. Much research is rather amazing in its faith that people will tell the truth, or that, when they lie, it is of the obvious, self-conscious sort that can be adjusted for by using questionnaire techniques to identify inconsistencies. But deceit is

pervasive in society to the extent that one mark of the well-adjusted adult is the ability to convincingly and appropriately lie (white lies). As Douglas (1976, p. 79) noted, "People are adept at marshaling all kinds of interpretations, lapses of memory and misremembering to reconstruct into self-deceptive 'truths' what they once experienced as lies." Team field research, involvement in subjects' lives beyond a single interview, and investigative methods such as combining individual with group interviews all enhance the ability to spot deceptions. A research team multiplies the sources of information, and the involvement of team members in providing services to many of the people under study often leads to a far better understanding of their lives than is possible in formal interviews. For example, the North Side ethnographer recently received a phone call from one of the young people in this study asking for advice. He complained that his girlfriend had been on a 2-week binge smoking cocaine and showed no interest in their children. He said he was ready to turn his back on her, but he wondered if there was still something that the North Side staff could do to help. After some discussion he decided that it might be useful if the indigenous interviewer he met through this study, whom he knew was the mother of two children and a former heroin addict, could stop by their place and talk to his girlfriend, assuming that his girlfriend was open to such a visit. Members of the North Side staff also later helped the same young man enter a residential drug treatment program.

Each team member knows, assists, and, in effect, collects data from many people, and these data can be brought to bear on any topic the researchers study. Field notes amenable to computer analysis cannot record all of this experience due to its sheer magnitude. In other words, data analysis is not only a matter of searching and sorting through recorded text with a sophisticated computer program, but also includes a good deal of personal experience and expertise, garnered through involvement in the lives of the people under study, that is too vast to be fully recorded but that is applied during computer-assisted analysis.

DISCUSSION

There is much to be learned about new users of heroin-particularly among the young-in Chicago and elsewhere, and it will take a combination of quantitative and qualitative methods to present a full and accurate picture. Among the questions the authors wish they could answer are: What are the prevalence and incidence of heroin use,

especially among people under 30? Are these rates increasing and, if so, by how much? What is the age distribution of new users? How long have they been using heroin? What other drugs do they use or have they used, in what quantity, and for how long? Are there demographic, socioeconomic, geographic/neighborhood, drug history, or peer affiliation characteristics that predict heroin use? How likely are new users to seek drug treatment? How knowledgeable about AIDS are these new users? Clearly, these questions call for survey research, and the study so far suggests that a well-done survey could collect valid data about these matters.

The authors also wish they could more accurately answer questions about the incidence and prevalence of *injection* among young new users of heroin and about their injection practices, a critical issue for understanding the future of HIV/AIDS. Like the above questions, the estimation of these rates is the province of survey research, but here the authors are not confident that even a well-done survey could provide accurate data, given the severe stigmatization of injection by Chicago's young people. As noted earlier, the "____ Crew" had recently and for the first time experimented with injection-they injected heroin every day for 1 week and then returned to intranasal use-but they all denied doing so when researchers administered the drug history survey instrument. It was only during a private conversation *after* completing the drug history that the subject, by now aware that the interviewer, too, was a mother and had experience with heroin use, admitted that she and the two other members of the "____Crew" had injected (though without sharing injection equipment). This was not a group that was particularly secretive. One member told the researchers he was a cocaine dealer (researchers later verified that he was the main supplier of cocaine to numerous IDUs they knew), both males were willing to discuss their gang involvement, and all shared embarrassing details of their sex lives.

While the authors doubt the possibility of gathering data that would produce accurate quantitative estimates of injection drug use among young, self-identified heroin snorters across Chicago, some estimation seems possible. A study that targeted a specific neighborhood, used both quantitative and ethnographic methods, and offered needed services could achieve a level of involvement in subjects' lives that would encourage them to share with researchers their experience with injection drug use. Ethnographic data, in addition to the sort of contributions discussed in this chapter, could contribute to the construction and administration of more effective survey instruments and could assist in validating survey

data. By offering services, the ethnographic researcher is able to enjoy the fruits of an “active-membership role” (Adler and Adler 1987) among those being studied; these include being positioned to get “more personal, more accurate, more in-depth insight into the groups they are studying” (Adler and Adler 1987, p. 66). When ethnographic research in an active membership role is performed by a team that includes indigenous people, its advantages are multiplied: more points for recruiting and gathering data, a greater likelihood that subjects will find a researcher with whom they feel comfortable enough to disclose information they normally would hide, data that are more nuanced, more opportunities for validation, and improved analysis.

Finally, as noted earlier, some of the most interesting problems regarding new users of heroin are best addressed by ethnography and other qualitative methods. For example, it is not likely that survey research would reveal the heroin snorters who appeared more addicted to the excitement of coping heroin than to the drug itself.

SUMMARY

Nineteen years ago Douglas (1976), a sociologist, vigorously recommended team field research. As Douglas noted, most ethnography is carried out using the “Lone Ranger” approach, which-while producing a number of excellent studies-generally limits the researcher to small groups or parts of large groups. In the few cases where field research teams were assembled (e.g., Becker et al. 1961), they tended to be homogeneous and to simply divide the group being studied between them and then essentially perform identical investigations (Douglas 1976).

Douglas had a different vision. He saw the optimal field research group as heterogeneous, able to take on large projects, and able to take multiple perspectives. Such a team would have a variety of talents, experiences, and inclinations to call upon and would be more able to connect with the people being studied (e.g., by including indigenous members noted for their sociability). Douglas argued for giving greater consideration in designing research to society’s conflictory nature and the desire and need for people to misinform, evade, construct false fronts, lie, and deceive themselves. According to Douglas, field research teams were an excellent means of coping with these problems. With various members using their array of talents to study a problem from multiple perspectives

and through numerous webs of social cliques and networks, research teams would be particularly able to get behind people's facades and produce valid data. Though Douglas presented a compelling argument, there is little evidence of an increase in team field research, with one exception: research groups studying HIV/AIDS.

The NADR program, funded by NIDA, created a number of field research teams across the United States that combined ethnographers with indigenous staff who, whatever their principal duties, could be used to assist in the research. These field research teams were also part of a survey research effort, and, in this fashion, quantitative and qualitative methods were combined to a degree uncommon in social science research.

While many of these research groups have since disbanded, COIP was fortunate enough to remain in operation. The authors have described how they assembled a field research team composed of COIP members that combined ethnographers with selected indigenous staff to address a particular problem—new heroin use and its implications for HIV/AIDS. The goals the researchers set for the study would have been impossible for a single ethnographer or for a survey research team acting alone: to discern potential trends in new heroin use (though researchers were limited to studying mostly poor people); to develop fairly deep understandings regarding the study's central concerns (e.g., factors likely to influence the decision to inject heroin); and to quickly and economically collect data that were useful and valid. The authors note that all members of the research team had a host of other responsibilities; thus, this study was conducted as a sort of side job, that is, researchers had to fit it in when time and circumstances allowed.

Altogether, the team field research method as applied to new heroin use in Chicago has enabled the research team to quickly and economically generate data that can be used to inform public policy on this issue (Ouellet et al. 1993; Ouellet et al., submitted). The authors believe that they can make a reasonably strong case for the following: New heroin use deserves greater study—the prevalence and incidence of use are probably sufficient to form a new cohort of potentially longtime users. New users are most likely to be found where major heroin street drug markets operate. Among youth there is a need for education about heroin—current users often report being surprised by heroin's addictiveness. Intranasal use is the predominant form of heroin administration among young, new users, and there is strong peer pressure against

injection. Experimentation with injection, however, is being reported. If heroin becomes scarce and suddenly more expensive, intranasal users will be faced with increased pressures to inject. In addition, while intranasal use is seen by snorters as an authentic mode of heroin use, the normative support for not injecting tends to be age-specific and may become less salient as people move into their late twenties and beyond. The likelihood of these people injecting, therefore, probably is low in the short term, but will increase with time. Young users often know little about drug treatment and few understand how to access it. However, directing young intranasal users into drug treatment may encourage injection by putting them into contact with IDUs.

Without using team field research methods it would have taken the researchers far longer to collect data, and the data would have been narrower and of lesser quality.

NOTES

1. While there is some evidence that the threat of HIV/AIDS has led to less needle sharing by initiates to injection (Friedman et al. 1993, 1994; Neaigus et al. 1991), the first days and months of injection drug use still appear to be a particularly ripe time for the sharing of injection paraphernalia.
2. Analyses of China White samples indicate this is heroin, not fentanyl. For a brief history of China White that is fentanyl, see *Forensic Drug Abuse Advisor* (1994).
3. COIP concentrates its efforts in impoverished neighborhoods. Thus when the authors discuss distributions of certain behaviors across the city, they are actually talking about the city's poorer neighborhoods.
4. The authors would consider using urinalysis under the following conditions: the research absolutely hinged on finding a very specific drug-use profile; the researchers felt unable to accurately identify people with this profile; and the researchers believed they could communicate to drug users, in a way that would not violate the trust and goodwill already established, the need to use this test. For example, urinalysis might be necessary if the study had to recruit a large sample of people who use heroin but not cocaine. Given the role urinalysis may have had in potential subjects' lives-as a tool

used by police, hospitals, child welfare agencies, and other such entities to identify and report illicit drug use-the authors believe researchers should use this test sparingly.

5. This issue also would apply to heroin smoking (Grund and Blanken 1993). In Chicago the smoking of heroin appears to be very uncommon, and the few people the researchers know who have tried it smoke only very occasionally.

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Multimethod Research From Targeted Sampling to HIV Risk Environments

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INTRODUCTION

This chapter explores the usefulness of employing multimethod research (combined quantitative and qualitative research techniques) in a systematic and coordinated manner in examining social phenomena. Presented are examples of multimethod research for examining the connections between injection drug-mediated risk behaviors, HIV infection, and the structure of drug acquisition among injecting drug users (IDUs).

Multimethod research may refer to the use of two or more methods within a particular paradigm. For instance, it is common for qualitative investigators to collect both observational and interview data. Here, however, multimethod research refers to the concurrent or sequential use of both qualitative and quantitative data collection techniques to describe and understand a social phenomenon (Denzin 1978; Jick 1983; Webb et al. 1966). To date, multimethod research has been largely restricted to issues of questionnaire development, the construction of samples among hidden populations, and, to a lesser extent, the evaluation of HIV prevention programs (Watters and Biemacki 1989; Wiebel 1988). Multimethod research also can be employed to interpret epidemiological data concerning modes of HIV transmission.

METHODS

Two study components were used: a qualitative component ($N = 60$) and a survey component ($N = 420$). In the qualitative component, active and recent IDUs were recruited from two neighborhoods between 1991 and 1993: 40 in Central East Oakland and 20 in West Oakland. Verification of needle use was determined through visual inspection of needle marks. Respondents were interviewed by trained personnel using a semistructured, open-ended interview guide. Interviews were tape recorded,

transcribed, and content analyzed. In addition, street drug sales and use patterns were observed regularly over this 3-year period by the first author.

The survey component consists of open cohorts of out-of-treatment IDUs recruited in street settings in two neighborhoods using target sampling techniques (Bluthenthal and Watters, unpublished manuscript; Watters and Biemacki 1989). Respondents were interviewed using standard questionnaires that recorded demographic information, medical history, drug use, and HIV risk behaviors. Following the interview, each respondent received pretest counseling and gave a serum specimen. Sera were tested for anti-HIV-1, and results were given at a separate posttest counseling session approximately 1 month later. As this study is part of an ongoing effort to evaluate HIV preventive interventions, this chapter presents only preliminary data collected at the initial risk behavior assessment. The quantitative component, which started in fall 1991, is scheduled to continue through fall 1995.

MULTIMETHOD RESEARCH AND SAMPLING

This chapter broadens the discussion of research that identifies social factors related to HIV transmission using targeted samples of out-of-treatment IDUs (Bluthenthal and Watters, unpublished manuscript; Watters 1988; Watters and Biemacki 1989). First, this chapter provides an example of how multimethod research can be applied to the study of hidden populations. Second, new findings, obtained as a direct result of targeted sampling procedures, are presented regarding HIV risk behaviors among IDUs.

Targeted sampling calls for the collection of quantitative data (e.g., institutional, survey, and biological specimens) and qualitative data (e.g., ethnographic interviewing, field observation, and systematic coding). In constructing targeted samples in Oakland, this study has followed, with some modifications, the strategy originally proposed by Watters and Biemacki (1989). This strategy consists of four steps: (1) initial mapping of county- and city-level indicators of injection drug use; (2) ethnographic mapping of promising candidate census tracts, neighborhoods, or other geopolitical entities; (3) development of an initial recruitment plan for each site; and (4) ongoing revision of a recruitment plan for each site. These steps are outlined below.

Initial Mapping

The purpose of initial mapping is to assemble indicators of injection drug use and other high-risk behaviors among populations in a defined geographical area. These indicators are then analyzed to identify neighborhoods with the greatest concentrations of injection drug use and other high-risk behaviors, such as prostitution. While many sources may be considered, this study used the following indicators: (1) HIV seroprevalence data from methadone treatment programs, (2) local AIDS case data, (3) Drug Abuse Warning Network (DAWN) data on local emergency room admissions and medical examiner reports, (4) drug and prostitution arrest data, (5) census data, (6) drug treatment program admission data, and (7) data collected by social service agencies and outreach programs among IDUs as available. Through mapping these indices of drug use and other high-risk behaviors, districts can be identified and selected for more intensive ethnographic study and observation, as outlined below.

Ethnographic Mapping

Ethnographic mapping is intended to help investigators understand the social organization of behaviors under study in the targeted neighborhood. Its goals are (1) to provide information needed to rank candidate districts; (2) to refine district boundaries; (3) to identify and cultivate contacts with social networks of IDUs in each district; (4) to help establish sample quotas according to such characteristics as drug of primary use, sex, and race/ethnicity; and (5) to develop an indepth understanding of major injection drug-using networks in terms of drug preferences, needle-use practices, sexual preferences and practices, and knowledge and beliefs about HIV/AIDS. The principal tools used in this stage of the research are (1) direct observation of social settings through systematic “walks through”; (2) semistructured, taped qualitative interviews of key informants; and (3) systematic coding of each block within the district. These three methodological tools represent significant additions to those originally suggested by Watters and Biemacki (1989).

Walks through consist of dividing a candidate district into sections and then conducting systematic street-level observations of the people, homes, businesses, and traffic in these sections on a street-by-street basis. Field notes are produced for each section. Of special interest in these field reports are areas of drug use and sales within each section. Walks through typically are conducted during daylight hours on weekdays.

For this study, daylight hours were chosen for initial observations because these are safer times for nonresidents to be present in high-crime settings. Direct observations of areas of interest within candidate districts were conducted by senior ethnographic staff on weekends and evenings. Weekend and evening work was done only by more experienced staff, for reasons of safety and complexity of task, and only after sufficient knowledge of the neighborhood had been garnered during daylight observations.

In each district, semistructured, taped qualitative interviews with recent and current IDUs were conducted. The interviews addressed current and past drug use and practices, sexual preferences and practices, knowledge about AIDS and HIV, general health issues, the characteristics of drug use and sales, and the presence and type of sex trade activity in the district. Respondents were recruited through introductions by outreach workers from collaborating agencies, meeting people during the process of walks through, and the use of informants in community social service and health care agencies (e.g., staff of drug treatment programs). Interviews took between 1 and 2 hours to complete and were conducted in respondents' homes or temporary field offices in Oakland. Using chain referrals (Biemacki and Waldorf 1981), multiple snowball samples were started and directed to involve overlapping and nonoverlapping social circles of IDUs.

Use of a stipend should be carefully considered in targeted sampling. Incentives help reduce the time recruitment may take, but may also bias samples in the direction of the most indigent. In this study, respondents were paid a \$20 stipend. Another strategy, used by Feldman and Biemacki (1988) in San Francisco, did not use stipends, although ethnographers did have money to buy respondents an inexpensive meal or beverage.

The combination of the walks through and indepth interviewing provide two of the three pieces needed to construct a recruitment plan. The third study component requires comprehensive information on each street in the district in terms of drug use and sales as well as issues of block morale (e.g., general upkeep of property), neighborhood life cycle (e.g., a neighborhood in transition), and resident demographic information. To accomplish this, systematic coding techniques described by Bowser (1988) were used.

In this exercise, ethnographic staff code face blocks' according to groups observed in residence and on the street, upkeep of public spaces and accessible private property, and the condition and level of security of homes, apartments, and businesses. The examination of each street provides valuable information regarding the location of public drug-using and acquisition sites in a district, their physical characteristics, and the composition of their clientele. Taken together, the walks through, qualitative interviews, and systematic coding provide rich details about the physical and social environments in which study participants live and operate and are invaluable in the interpretation of survey data.

Initial Recruitment Plan

The recruitment plan for survey sampling for each district incorporated the identification of drug acquisition sites with other data collected. This included the characteristics of users that frequent drug acquisition sites, the feasibility of street-level recruitment at each site, and strategies for recruiting IDUs not readily accessible through street-level recruitment by research staff or outreach workers.

During quantitative data collection, potential respondents were screened to ensure that the sample represented the targeted populations in the district. After establishing eligibility (through visual inspection of respondents for old and new venipuncture marks), respondents were asked about drug preferences, age, race, sex, and the general location (e.g., nearby cross-streets) where they buy drugs. This information was also used to monitor and adjust recruitment over the 5- to 7-day period of data collection, during which 225 to 250 respondents were admitted into the survey component of the study.

Asking sensitive questions at intake can pose problems, such as potential respondents refusing to cooperate or lying. A demonstration of detailed information regarding the local drug market by research staff tended to put respondents at ease. For example, some respondents were leery about divulging information about locations where an individual might acquire drugs. By offering the respondent a choice of the most commonly used sites in the neighborhood, the research staff both reassured respondents that they were not divulging unknown information and that the project was concerned enough to have already figured out the lay of the land.

Revised Recruitment Plan

Flexibility and continuous investigation are important tenets of targeted sampling. Ongoing field observation and interviewing allow for adjustments in both recruitment procedures and survey instrumentation. Shifting risk and service environments as well as changing drug use patterns and other dynamics of neighborhood life over the course of a multiyear study may require the modification of survey instruments. For example, just prior to the implementation of an underground needle-exchange program in one neighborhood, supplemental questions regarding the street price of syringes were added. These items were intended to establish a baseline for evaluation purposes. Continued use of these items in subsequent waves of data collection will permit analysis of self-report data regarding street prices of syringes.

The targeted sampling approach seeks to increase comprehensiveness and flexibility. First, use of multiple methods and indices provides more in-depth and varied information about selected districts. These features of targeted sampling are crucial in the development of the primary research enterprise as well as for the development of supplementary and complementary research questions. Second, greater knowledge of the community allows for the achievement of more ambitious sampling quotas among underrepresented groups (e.g., women of color). Third, the collection of extensive community-based information helps reduce bias from the sole reliance on agencies for developing study samples (e.g., drug treatment programs, HIV prevention outreach workers).

These guidelines also provide a model for ongoing multimethod research. This model includes the process of (1) reviewing and compiling existing institutional data sources; (2) collecting preliminary qualitative data through field observation and semistructured, open-ended interviewing; (3) collecting quantitative survey data (including biological specimens, as appropriate); and (4) reformulating research questions and methods based on these findings. This process can be systematically applied in research programs related to questions of HIV transmission among various hidden populations. In the following example, multimethod research protocols were used to address risk behaviors, HIV infection, and drug acquisition practices in two communities in the San Francisco Bay Area.

Quantitative Results: Geography, Risk Behaviors, and HIV Infection

Multimethod research approaches are routinely applied in the development of samples of hidden or hard-to-reach populations and in the creation of questionnaires. The concerted and systematic application of both qualitative and quantitative research methodologies to issues of HIV and drug epidemiology deserves continued exploration (Adler 1993). Below, this chapter discusses preliminary attempts to apply multimethod research to the association of HIV infection with geography (neighborhoods), risk behaviors, and drug acquisition.

Using the methods described above, 420 IDUs were recruited in two adjacent neighborhoods in Oakland, California during 1992. Data gathered included prevalence of risk behaviors and HIV infection in these two neighborhoods, as reported by Bluthenthal and colleagues (1993). Table 1 presents summary characteristics of IDUs in these two neighborhoods.

In the sample, IDUs from these two neighborhoods were similar in terms of drug treatment history, frequency of drug use, utilization of shooting galleries, sexual risk, and homelessness. Since many studies have found higher HIV rates among African-American IDUs than among other races, the relationship between HIV infection and the racial composition of the sample requires additional analysis. Table 2 presents HIV infection rates by race and neighborhood.

These data indicate that respondents in West Oakland were more likely to be HIV seropositive than those in Central East Oakland, irrespective of race. Using the Mantel Haenzel procedure, it was determined that West Oakland IDUs were nearly three times as likely to be HIV seropositive as IDUs in Central East Oakland, when adjusted for race (adjusted odds ratio = 2.9; 95 percent confidence interval = 1.3, 6.6).

The survey suggests that despite the lower rate of HIV seroprevalence in Central East Oakland, IDUs in that neighborhood were more likely to report sharing syringes than IDUs in West Oakland. In Central East Oakland, 60.7 percent of IDUs reported having shared a syringe in the last 30 days, compared to 43.1 percent in West Oakland. Yet, the HIV infection rate in West Oakland was nearly three times greater than the infection rate in Central East Oakland. The reason for lower HIV

TABLE 1. *Selected characteristics of heterosexual IDUs in Oakland, 1992.*

	Central East Oakland, Percent (N = 168)	West Oakland Percent (N = 252)
HIV Infection Rate *	6.6	18.7
Homeless	33.7	34.3
Drug Treatment (last 30 days)	8.8	8.8
Employment (last 30 days)	33.5	30.8
Gender		
Male	61.9	66.3
Female	38.1	33.7
Age *		
≤40	57.7	33.3
41+	42.3	66.7
Race		
African American *	47.0	84.1
Hispanic *	35.7	6.7
White	10.7	6.7
Other *	6.5	2.4
Times Inject Drugs		
25+ times in the last 30 days	87.5	83.9
Sex Risk		
Low	47.9	46.8
Moderate/High	52.1	53.2
Shared Syringe (last 30 days) *	60.7	43.1
Shared Injection Supplies (last 30 days)	61.1	60.1

KEY: * = $p < 0.05$

TABLE 2. *HIV infection among heterosexual IDUs in West Oakland and Central East Oakland.*

	Central East Oakland, Percent	West Oakland, Percent
African American	6 of 78 (7.7)	41 of 212 (19.3)
Other	5 of 88 (5.7)	6 of 40 (15.0)

infection rates among IDUs in Central East Oakland represents an epidemiological puzzle.

Qualitative Results: HIV Risk Environments

Qualitative data suggest three factors that may explain the paradoxical situation described above. These factors relate to neighborhood differences in (1) drug acquisition routines, (2) police enforcement of paraphernalia laws, and (3) drug injection settings. Taken together, these factors represent components of a neighborhood HIV risk environment. HIV risk environment refers to the composite of a neighborhood's situational, social organizational, and structural aspects that routinely influence individual risk behaviors. The HIV risk environments of two neighborhoods are explored below.

Observations indicate that drug acquisition varies by city, neighborhood, and individual. Different arrangements for drug purchasing can put IDUs in situations where they are more likely to share injection equipment and supplies. In Central East Oakland, heroin drug acquisition practices were frequently conducted by telephone. In such instances, IDUs contacted local drug distributors through beeper numbers. As one female respondent reported:

It has gotten much better for us anyway with the beeper things. They come to us. It's dangerous out there, you know. You set to go out there and find a man and you want to wait in a car with any chance to get jacked up and busted and you're scared. You might have a

warrant. . . . [N]ow we just beep' em . . . and stay home and they come to the house It's much better, safer.

In addition, many of the drug distributors in Central East Oakland were not IDUs. This is in contrast to West Oakland, where drug sales characteristically occurred on the street and typically were conducted by drug distributors who also injected drugs.

There were at least two HIV risks associated with the pattern of drug distribution in West Oakland. First, street-level sales of drugs invited police intervention, which routinely resulted in IDUs not carrying syringes. This situation may have made sharing injection equipment more likely. Second, sharing drugs and injection equipment with dealers is more likely when the drug distributors are IDUs. A 48-year-old African-American respondent who distributed drugs in West Oakland described yet another risk associated with drug distribution and use in this context:

Interviewer: So can you tell me some of the problems you've ever had with cleaning your needles?

Respondent: Yeah, 'cause a lot of time I'll be in a rush and I want to hurry back to get back to my position, to what I'm doing, selling drugs. I don't have that much time. I just have time to put it in water and skeet it up and that's about it.

These results suggest two reasons why HIV is more prevalent among IDUs in West Oakland than in Central East Oakland. First, because a great many drug distributors in Central East Oakland do not inject drugs, an important risk for HIV infection is eliminated. Second, given the time demands of street-level drug sales, IDUs who also sell drugs may often find themselves unable to adequately disinfect syringes used in the context of multiperson syringe use.

The second factor is enforcement of drug paraphernalia laws. A number of studies have identified fear of arrest for possession of drug paraphernalia as a consistent situational factor related to the sharing of syringes (Booth et al. 1993; Conviser and Rutledge 1989; Zule 1992).

This study also found support for this hypothesis. As a 54-year-old white IDU reported:

I've had a friend drive from San Francisco over here and, he doesn't bring his outfit with him, 'cause he doesn't want to get caught with it, or whatever. And he'll use somebody else's, But he's even brought a used one for two dollars up on 14th Street. And then you don't know if you're gettin' a good one, I mean a new one, or not, because they take it out of the package, you know, and you don't know. There's no way of really telling.

While fear of arrest on drug paraphernalia charges is ubiquitous, important neighborhood differences were observed in the course of ethnographic study. In Central East Oakland, where the drug trade occurs alongside legitimate small businesses, the police regularly confiscate syringes and arrest IDUs for possession of paraphernalia. This practice discourages IDUs from keeping their own syringes and may help drive multiperson use of syringes. In West Oakland, a largely residential neighborhood, IDUs' fears of arrest for possession of paraphernalia typically were less pronounced. One 40-year-old African-American respondent described the police attitude in West Oakland towards drug paraphernalia:

They ain't gonna take you down for one needle. They figure that's personal use. They don't like to deal with that, but if you got a bunch of them, they can harass you, or if you're on probation, they can make something out of it.

This contrasts sharply with the reports of IDUs in Central East Oakland. For example, the 59-year-old Latino respondent reported that it is common for police to follow IDUs into bars to make arrests:

Yeah and by the time you, if a cop knows that by the time he knocked the door down, you flush the needle and everything away. 'Cause anytime you go into a bathroom you don't know when the cops is gonna come in. 'Cause they see you go into a bar. Then they peek in there and they don't see you sitting down in the bar. Even if they see you, they are gonna come in anyway if you are hot. You know, the guy thinks you are doing

something. He's gonna go in and jack you up. And if you go in the bathroom, he's gonna go after you.

The final feature of HIV risk environment described here is the drug injection setting. While drug injection can occur in a wide variety of settings-cars, bathrooms, homes, abandoned buildings-the focus here is on the use of two specific drug injection settings in the neighborhoods under study. In Central East Oakland, IDUs can utilize a half-dozen different outdoor settings around railroad tracks that run along the main north-south street in the neighborhood. In West Oakland, the most frequently used location for IDUs with no other option is an abandoned house located across the street from a major drug acquisition site.

The way these settings are used by IDUs in Central East Oakland and West Oakland suggests one factor that may help explain differences in HIV infection rates between these neighborhoods. While a number of outdoor injection settings exist in Central East Oakland, use of them was intermittent and restricted largely to homeless injectors. Small groups or individuals used these settings, but not so frequently that regular contact with other IDUs in these settings was common. In West Oakland this was not the case. The abandoned house referred to above was the primary location many IDUs used to inject drugs when under time pressure. One respondent described the scene at the abandoned house:

Well, it's an empty house. It's like a basement. It's like you go up under the house and you go down there and it's got dirt in there. We all be down there and you could just go down there and you know you pop open your cookers, you got cookers down there and people use the same cookers, the same outfits everyday. It going on everyday, it's going on now.

Even the infrequent sharing of syringes and other injection supplies in this social context is likely to result in the transmission of HIV infection and viral hepatitis. That is, introduction of an HIV-infected IDU in this setting may, in a relatively short time, circulate infection among the more tightly bound social networks in this community. Thus, the structure of the drug injection setting can operate as an efficient mixer of HIV infection (Des Jarlais et al. 1992).

DISCUSSION

Multimethod research is often utilized by investigators interested in gaining access to hidden or hard-to-reach populations such as IDUs not enrolled in drug treatment. This chapter demonstrates how multiple research methods can be operationalized in sample construction. It also provides some examples of how a multimethod research strategy can enhance the interpretation of HIV transmission among IDUs. Other uses of multimethod research include the evaluation of HIV prevention strategies and the development of new approaches tailored to neighborhood-specific HIV risk environments. Additional discussion of the HIV risk environment approach is warranted.

Although considerable attention has been devoted to the study of the geographic distribution of HIV infection among IDUs, a great deal remains unknown. In the United States, HIV rates for IDUs range from under 5 percent to over 60 percent (Des Jarlais et al. 1994; Hahn et al. 1989; Siegal et al. 1991). Several explanations of geographic variation have been proposed, such as the time of HIV introduction, the racial composition of the IDU population, and the extent and timing of prevention activities (Friedman et al. 1987; Watters 1988). These explanations, however, are not complete (Williams and Johnson 1993).

HIV risk environments, as proposed here, offer another partial explanation for disparities in HIV seroprevalence rates. This approach builds on and extends previous work on social network analysis and contextual explanations of divergent HIV seroprevalence rates (Watters 1989; Williams and Johnson 1993). Since HIV is passed during intimate social contact, research and prevention approaches that identify and describe the linkages between individuals and groups in terms of both needle use and sexual behaviors seem to be a logical starting point in the effort to understand both differences between risk groups and the specific practices that transmit HIV. The social network approach maintains that in low seroprevalence locales, links between user groups are either few or infrequent, thus minimizing the spread of infection. Contextual approaches, on the other hand, attempt to identify features of the injection drug-using environment and customs that may contribute to greater levels of HIV infection, such as widespread use of commercial shooting galleries (Watters 1989). Other contextual factors include the intensity with which police enforce paraphernalia laws (Conviser and Rutledge 1989; Grund et al. 1991; Kane and Mason 1992; Zule 1992).

The HIV risk environment approach attempts to link the social network aspect of HIV contagion with the contextual factors that influence HIV risk behaviors. The study identified factors that might help explain differences in HIV infection rates and risk behaviors observed in the two survey neighborhoods. These include drug acquisition routines, law enforcement practices, and drug injection settings. Including both social network and contextual variables results in a more complete picture of how complex social interactions and the social environment lead to risk behaviors and HIV infection. The resulting analysis may be of use in the evaluation of existing HIV prevention strategies and may inform the design of approaches that influence both social interactions and the environment of drug use.

Multimethod research allows the investigator to document salient attributes of the HIV risk environment. Two recent developments in HIV prevention research underscore the importance of multimethod research.

The bleach controversy in HIV prevention programming for IDUs might have been avoided if a multimethod research approach had been applied sooner to the use of bleach by IDUs when attempting to inactivate HIV during multiperson use of needles and syringes. Recent studies have prompted researchers and policymakers to recommend 30 seconds of bleach contact to reliably disinfect syringes (Flynn et al. 1994; Shapshak et al. 1994). At the same time, observational data in natural settings, office-based video recording, and compliance testing of bleach utilization by active IDUs indicate that prevalent practices of syringe sterilization are of briefer duration and therefore inadequate (Gleghom et al. 1994; McCoy et al. 1994).

The coincidence of these findings is fortuitous, yet they reveal the hazards that can result from health recommendations that have not been tested or validated. In the present case, multimethod research provides options for studies that address lingering and unanswered questions of relevance to the AIDS epidemic. Distribution of bleach has been a foundation block in the structure of HIV prevention for IDUs since 1987, yet systematic description of bleach use by IDUs in natural settings was not initiated until 1993. Recent epidemiological studies suggest that IDUs' use of bleach as a disinfectant has not had the preventive effect against HIV infection that was hoped (Moss et al. 1994; Titus et al. 1994; Vlahov et al. 1994).

The recently completed multicenter study of needle hygiene illustrates the promise of multimethod research. This seven-city effort, sponsored by the Community Research Branch of the National Institute on Drug Abuse (NIDA), collected observational and interview data on the needle use and hygiene of active IDUs. Respondents were recruited from targeted samples of IDUs enrolled in cohort studies in these communities. The resulting data are being compared with survey data collected as part of this NIDA cooperative agreement and will provide thick description of actual needle-using practices.

Preliminary findings from this study suggest that IDUs in the process of drug preparation may be exposing themselves to HIV infection through the shared use of cookers, cottons, and rinse water (Needle et al. 1994). Both qualitative and quantitative studies indicate that the sharing of these injection supplies is more common than multiperson use of syringes (Bluthenthal et al. 1993; Needle et al. 1994). Several cross-sectional and cohort studies of IDUs indicate that multiperson use of syringes and needles has decreased (Des Jarlais et al. 1994; Watters 1994; Watters et al. 1994). The combination of methodologies is proving to be necessary to understand all the potential routes of HIV transmission within IDU networks.

The most important methodological innovations in the field of AIDS research are those that have contributed to the understanding of how to prevent the spread of HIV (Boulton 1993). Multimethod approaches to HIV risk behaviors among IDUs have begun to meet this criterion and continue to make important contributions to programs directed at HIV prevention, education, and evaluation (Booth et al. 1993; Parker et al. 1991).

NOTES

1. Face blocks are both sides of the street on a residential or commercial block.

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Ethnography and the Evaluation of Needle Exchange in the Prevention of HIV Transmission

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The AIDS pandemic has contributed to the consideration and implementation of a range of public health strategies designed to block specific routes of viral transmission in particular populations, including populations that have not been reached or effectively served by past public health efforts. Needle exchange—the provision of new, sterile needles and syringes to active drug users in trade for used “works”—has gained attention as a potentially effective approach for AIDS prevention among a high-risk, hidden population (Des Jarlais et al. 1994; Hartgers et al. 1992; Ljungberg et al. 1991; Schwartz 1993; Watters et al. 1994). Rates of HIV infection in this population are extremely high in several parts of the world. In southern Europe, especially Spain and Italy, injecting drug users (IDUs) constitute more than half of reported AIDS cases. In some Latin American cities, such as Rio de Janeiro and Sao Paulo, Brazil, rates of infection among IDUs have been reported to be over 40 percent. Infection levels also have been rising rapidly among IDUs in Asia, particularly Thailand, India, Myanmar, and parts of China. In the United States, approximately one-fourth of known cases of AIDS have occurred among heterosexual IDUs (Mann et al. 1992). In some parts of the country, especially sections of the Northeast, IDUs constitute more than half of diagnosed AIDS cases (Singer et al. 1992).

On March 25, 1993, three U.S. Federal public health institutions, the National Institute on Drug Abuse (NIDA), the Centers for Disease Control and Prevention, and the Center for Substance Abuse Treatment issued a special “Community Alert Bulletin” on AIDS risk reduction. The bulletin reported on a meeting held in February 1993 at the Johns Hopkins University School of Hygiene and Public Health (Haverkos and Jones 1994) concerning new laboratory and field research related to drug injection patterns and the use of bleach by IDUs to decontaminate drug injection equipment (Flynn et al. 1994; Gleghom et al. 1994; McCoy et al. 1994; Shapshak et al. 1994; Vlahov et al. 1994; Watters 1994). A conclusion of the meeting was that bleach cleaning of injection

equipment is an imperfect approach for HIV prevention. Because it is recognized that an effective response to the AIDS epidemic must include means of blocking the connection between injection drug use and HIV transmission, one impact of this conclusion has been an intensified consideration of needle-exchange programs (NEPs) in national and regional policies on HIV prevention. As Haverkos and Jones (1994, p. 742) urge:

Other HIV prevention strategies need to be explored, implemented, and evaluated rapidly. Increased availability of sterile needles and syringes is one such strategy. Sterile needles and syringes are safer than bleach disinfected, previously used needles and syringes. Each community should review State and local laws and regulations that limit needle and syringe availability and drug paraphernalia possession. Needle and syringe exchange programs offer another means of providing sterile equipment to users and decreasing multiperson use of injection equipment.

Unlike education- or counseling-based programs, NEPs are predicated on the idea that, despite having a full awareness of HIV transmission or a strong motivation to reduce risk, IDUs will continue to engage in risky behaviors for other reasons, including structural factors beyond their control (Koester 1994b). These structural factors, including the street cost of new needles, prescription laws or pharmacy practices that block easy or regular access to clean needles, local or regional paraphernalia laws that outlaw needle possession without a prescription, and police pressure that dissuades carrying of clean needles, increase the likelihood that IDUs will use shooting galleries and rent or borrow used needles (Compton et al. 1992; Lawrence et al. 1991; Murphy 1987; Page 1990; Singer et al. 1991).

Needle exchange as a public health measure was first initiated in 1984 in Amsterdam, originally as a drug user response to prevent the transmission of hepatitis B (Buning 1991). By 1987, needle exchange had been initiated in 40 municipalities throughout The Netherlands and the approach had spread to other countries. In the United States, clean needle distribution began in 1986 as a legally unsanctioned effort in response to the spreading AIDS epidemic among IDUs. By 1988, more formal needle exchange linked to counseling and referral was initiated in Tacoma, Washington (Singer et al. 1991). Currently, there are over

35 NEPs located in 30 U.S. cities, primarily along the west coast from California to Alaska and in the Northeast (Lurie et al. 1993).

While all prevention approaches for IDUs have encountered some level of opposition, NEPs have proven to be especially controversial (Des Jarlais and Case 1992; Des Jarlais and Stepherson 1991; Gyuish et al. 1993; Primm 1990). There have been complaints that needle exchange will promote drug use or be used as a cheap substitute for drug treatment programs that are sorely needed in inner-city areas. Needle exchange is seen by its opponents as sending the wrong message to current IDUs and others at risk for drug involvement, and it has been labeled by some as cruel abandonment of these individuals to the tortures of drug addiction (Dalton 1989). There also is serious concern that NEPs will involve only a select group of IDUs and will not effectively promote decreased needle sharing or reuse (Fernando 1993). These concerns raise important research questions for the evaluation of the prevention effectiveness of NEPs and call attention to the range of methodologies necessary for conducting useful evaluation research on NEPs.

A number of researchers have noted the problems of conducting needle exchange evaluations (Des Jarlais and Friedman 1993; Lurie et al. 1993; van Ameijden et al. 1992), including the need for especially large sample sizes for assessing seroconversion, significant constraints on randomization to intervention conditions, and appropriate ethical barriers to the use of experimental control groups. In addition, as Page (unpublished manuscript, p. 2) recently has argued:

[A] key missing aspect in all of the evaluations of needle exchange/distribution strategies to date . . . is the ethnographic component that traces what happens to needles from distribution to return. Direct observations and indepth interviews on these questions will help to define variants of needle using behavior that may increase risk while a needle is “out,” and they will add to the repertoire of survey questions about risk that delineate the extent to which the larger population of IDUs practice those variants.

The purpose of this chapter is to address the ethnographic gap in needle-exchange evaluation by describing the role of ethnography in the evaluation of the Hartford Needle Exchange Project. In this project, ethnography—the field study of human groups, including both their

beliefs and social behaviors, in natural social contexts-is used as part of a larger, more comprehensive research design. The emphasis in this evaluation project is on synthesizing (Myers 1977) both qualitative and quantitative ethnographic data (Pelto and Pelto 1978) with the findings of other research methods (e.g., structured surveys, laboratory findings) to allow for the collection of corroborating data of various sorts. This chapter argues that, in addition to the critical issue noted by Page, ethnography provides a number of significant contributions to needle exchange evaluation and to the broader understanding of needle exchange as an approach to AIDS prevention among IDUs.

The Hartford Needle-Exchange Program

Hartford's NEP was authorized by Public Act 92-3 of the Connecticut General Assembly and has been operated by a community-based consortium called the Community Alliance for AIDS Programs since its inception in March 1993. Local support for initiating the program grew from recognition of the high prevalence of HIV infection among IDUs in the city. Connecticut ranks 11th among States for the total number of AIDS cases reported in 1993 (1,769), up from 17th in 1992. Also during this period, Connecticut moved from having the eighth highest per capita rate of AIDS cases (19.4 cases per 100,000) to having the fifth highest rate (54.0 cases per 100,000 population). During 1993, Hartford experienced a 198 percent increase over AIDS cases reported in 1992 and now leads the State in the total number of reported cases (965). The AIDS incidence rate in the city is 199.2 per 100,000 population, seven times the rate for the State as a whole. AIDS is now the leading cause of death for both women and men in the city who are 25 to 44 years of age. The most dramatic increase in AIDS cases in Hartford has been among heterosexual IDUs. Since 1985, injection drug use has been the source of the largest number of new AIDS cases. Since 1987, IDUs have contributed a larger percentage of new AIDS cases each year. By 1993 IDUs constituted 60 percent of new AIDS cases reported in Hartford (Department of Public Health and Addiction Services 1993).

The Hartford NEP operates as a voluntary program through a mobile van that is clearly marked to identify the project. Supported by funding from the Connecticut Department of Public Health, a coordinator from the Hartford Health Department and outreach workers from participating community agencies staff the van and conduct needle exchanges. At least two members of the team, one of whom must be bilingual, work in the van per exchange shift. The NEP operates at least 5 hours a day, 3 days a

week. The van travels to prearranged sites during the course of each daily shift. Exchange locations are determined based on proximity to areas of high drug activity. The exchange program does not operate within 1,000 feet of elementary or secondary schools in deference to the State Statute (21-0267) pertaining to illicit drug sales and use around school premises. A schedule of exchange hours and locations and a description of the program is disseminated via cooperating community-based organizations, health facilities, and other institutions to inform active IDUs of the NEP and to recruit them into the program. All NEP users are offered HIV testing and counseling through the Hartford Health Department, asked if they would like to enter drug treatment, and provided with assisted referral into drug treatment or other health or social service programs.

At intake, all participants are administered the NEP intake questionnaire to determine sociodemographic characteristics and AIDS risk behaviors at baseline. This short intake instrument was designed by the project to record needed information while not violating project protocols (see below). Following intake, all individuals served by the NEP receive a 5-minute, one-on-one educational message about AIDS, sexually transmitted diseases, and risk-reduction measures. Needle exchange is conducted on a one-for-one basis. No needles are provided to those who lack needles for exchange. Participants may visit as many exchange sites per day and per week as they wish but may not exchange more than 10 needles per site per day. Needles are coded with preprinted bar code labels. All needles that are provided to participants and returned by them are scanned for bar code numbers, and this information is recorded with the date of exchange and the participant's anonymous alphanumeric project identification number. Participants also are provided with bleach, clean water, cotton, clean cookers, condoms, and other prevention materials at each visit.

As described in its protocols, it is the philosophy of the Hartford project that to be effective NEPs must be accepted and trusted by those in the target population. IDUs must be treated with understanding and in a nonjudgmental manner. The aim is to create a safe environment and foster trust and respect between those running the exchange and those who use the program. This means minimizing barriers by reaching out to IDUs where they are, maintaining strict confidentiality, not requiring personal identifying information that could arouse suspicion about the intentions of the project, and avoiding intrusive and lengthy questioning

of participants. Though evaluation must occur, the imperative to provide the service in a manner that is acceptable to users should take priority.

Evaluation Design

In light of the limitations of any single method for the collection of needle-exchange evaluation data and the range of questions that must be answered in the evaluation of NEPs, the Hartford NEP evaluation was designed to combine multiple approaches, including both qualitative and quantitative methods. During the first phase, the evaluation consisted of six quantitative components:

1. Short, structured intake interviews with all new NEP users at the time of their first exchange to determine their sociodemographic characteristics (e.g., ethnicity, gender, age, housing), drug history, HIV risk behaviors (especially needle cleaning, needle sharing, and condom use), and motivations for NEP use. All participants are given an easily reconstructed, unique identifier code for linking intake data with followup data to determine changes in risk behaviors over time. These unique identifiers were the same as those used in Hartford's NIDA Cooperative Agreement Project and thus, with client consent, allowed linkage of databases across studies.
2. Structured followup interviews at 5 to 10 months after intake to measure changes in HIV risk-behavior patterns.
3. Tracking of needles returned to the NEP to determine the average length of time project needles remain on the street (based on the hypothesis that shorter durations are associated with less needle sharing) and the consistency with which individuals return the needles they receive from the project (based on the hypothesis that higher consistency is associated with less needle sharing). As needles are distributed, they are computer scanned for their individual identification numbers (which are attached by project staff using preprinted coding tags). Consequently, the project can track all needles that have been handed out to a single participant over time. Computer tracking of NEP participants also is designed to alert program staff to implement the followup interview with regular participants.
4. Structured interviews with a random sample of over 1,200 IDUs recruited to participate in Project COPE (Community Outreach

Prevention Effort), a NIDA-funded AIDS street outreach project to (1) identify current NEP users, past NEP users (dropouts), and NEP nonusers; (2) assess self-reported motivations for NEP use, dropout, avoidance, and nonuse; and (3) assess user attitudes toward NEP.

5. Household surveys in both needle distribution and nondistribution areas of the city to determine changing community and service provider awareness of and attitudes toward the NEP. Community survey participants are drawn from two geographic areas: households within two blocks of (i.e., near) and households over six blocks from (i.e., distant) each of the three needle-exchange sites visited by the NEP van. Six blocks was selected because the project found that moving the van this distance could lead to a significant dropoff in the number of program users. Street blocks within the two six-block radiuses of exchange sites were numbered and a set of streets randomly selected (using a random numbers table). All dwellings on these selected streets likewise were numbered and a random set of households was selected for interviewing. Five households are randomly selected from both the near and distant areas for each of the three needle-exchange sites every 6 months. One adult member of each selected household is interviewed.
6. HIV-1 immunoassays of needles returned to the NEP to monitor the proportion of needles with detectable presence of HIV antibodies and to model the impact of the NEP on seroconversion. Laboratory assay is conducted on a random selection of 250 needles returned every 2 months. During collection periods, returned needles are placed in needle caddies, labeled by staff, and transported to the laboratory.

In addition, project ethnographers conduct field interviews with active IDUs about their use or nonuse and attitudes toward the NEP, ethnographic observations onboard and in the area around the van, informal interviews with NEP program users, and unstructured interviews with NEP staff. Onboard the van, staff ethnographers also conduct intake and followup interviews, thereby developing a full description of day-to-day NEP project operations.

Ethnography and the NEP

During the first phase of the evaluation, ethnography allowed for the collection of rich qualitative data that could not have been obtained otherwise. These data have been important to developing an

understanding of the functioning and impact of the NEP at both the individual and the community levels. Only through direct participation in the day-to-day activities of the exchange and through the observation of the interaction of clients with both their peers and the NEP staff has it been possible to contextualize the NEP within the IDU world and to develop a grasp of all of its influences on program users.

A starting place for ethnography has been the development of an observational profile of NEP users. While quantitative data provide an indication of their extent of drug use and other risk behaviors as well as some sociodemographic characteristics, only by actually interacting with clients onboard the van, listening to their concerns, and observing and recording their appearance and styles of social behavior can evaluators begin to discover the real-life people behind the project numbers. The physical appearance of NEP users, for example, including their state of cleanliness, the condition of their clothing, and the tiredness and fatigue or happiness on their faces, provide clues about their health and their emotional status. Moreover, as the following excerpts from the field notes of project ethnographers indicate, these observations reveal the often overlooked heterogeneity to be found among IDUs:

An older African American man (about 65) comes in [to the van], he is very well dressed and spotlessly clean. He is wearing a white shirt, a tie, a sweater, a light sport jacket, and a beret. Just by looking at him I would have never thought he injected drugs.

Client #4 is . . . in his early or mid-30s white, tall, green eyes, very handsome and extremely clean shaved (I can still smell the after-shave lotion), very preppie-like, wearing a tweed jacket, striped shirt, could pass for a young professor at a university.

An African American woman, about 45 comes in (I think she is a prostitute and could very well be a transvestite). She is wearing a very tight red spandex dress (mini-skirt), a black and blue basketball jacket, black pantyhose with several runs, and really high black high-heels. Her legs look very muscular and the structure of her face appears very masculine.

Another older African American woman (about 58) comes in, I saw her running up the street towards the van. She is very skinny and short, she is wearing jeans, a scarf around her head, her hair is dyed blond. She complains [that she has] a terrible toothache, and then says she has to run back out because she has to pick up her grandchild from school and then has to go to work (she works as a prostitute and gets some money working as a drug runner).

One of the new clients is an older Hispanic man (about 45), wearing several layers of very dirty clothes, probably hasn't taken a bath for a few days, his face and hair look very dirty. He looks very pale and is sweating profusely, maybe he is feeling sick because he hasn't had his drugs yet. He seems to be a nice guy, tells me he supports his habit by collecting empty soda cans and returning them for deposit. He works this way for 10 to 12 hours a day, but today he is just starting.

As Koester (1994a p. 52) has argued, paying attention to IDU heterogeneity is of considerable importance in AIDS prevention:

Individuals who inject drugs are almost always lumped together because of this single shared behavior. . . . Our experience working with IDUs suggests that public health efforts embracing this perception will be ineffective in slowing the spread of HIV. Instead, prevention programs must begin with the knowledge that intravenous drug users are a heterogeneous population. . . This diversity directly affects the ecology of HIV transmission and makes it imperative that we develop prevention strategies cognizant of these differences.

Another area of ethnographic observation on the van is the nature of the relationship between project clients and staff. By regularly and closely observing client and staff interactions, including the amount of time spent on the van, the topics addressed, and the emotional tone of the conversations, it is possible to track potentially important changes in client attitudes toward the NEP. While some project clients are known to staff prior to their accessing the exchange program, many come in as strangers, and the interaction initially is formal and business-like. If an

individual continues to use NEP services, interactions often gradually move beyond the routinized exchange of needles, the dissemination of other risk-reduction materials, and the referrals to treatment and enter into the arena of informal counseling and friendly chats in which daily life topics such as physical and emotional health, family issues, and money problems are discussed. As suggested by the following excerpt from project field notes, ethnographic observations of client and staff interactions suggest that over time the NEP can come to be an important part of a client's social network by providing a safe and friendly site for accessing needed social support.

Client #11 is ready to leave the van after exchanging his needles. Janine, a staff member who knows him, mentions that he is an excellent keyboard player. We start to talk about that and he tells us he has played for a long time, that he really loves it, and that his dream is to write jingles for TV commercials. Steve tells him that to do that he first has to quit drugs. Client #11 then says that he has other reasons to quit, especially his family. He goes on to say how hard it is for him to try to teach his children about right and wrong when he is so involved with drugs. He has a 10-year-old boy and three girls ages 12, 14 and 15. He says he is really worried about his son giving in to peer pressure and getting into a gang; because of this fear, he and his wife decided that she and the boy would go to live in another part of town for a while (to the south of Hartford). At present, #11 is living with his own mother and his 3 daughters in the north end of Hartford. He starts talking about how difficult it is to control his daughters, how the oldest one, who used to be an honor student, got involved with a boyfriend, and started to do badly at school. He mentions he is really worried about her getting infected with AIDS. He obviously seems to be very frustrated, and Steve, who has a 17-year-old daughter, gives him some advice. I listen to the conversation. It is amazing to see these two adult men talking, no longer like an IDU and a provider of HIV prevention services but simply like the two fathers that they are. The more they talk the clearer it is that they have gone through very similar experiences with their teenage daughters. They go on talking for a long time about the trials and tribulations of

raising a teenage daughter, and at the end the client thanks Steve for his advice. #11 says he really doesn't have anybody who he can talk to about these things, and Steve tells him to feel free to come in to talk to him whenever he feels like it.

An important product of the relationships that develop between NEP staff and program users is the significant level of program recruitment that is performed by satisfied program users. Ethnographers on the van have begun to record the number of new program users who are first brought to the van by those who have been using the NEP for some time, as seen in the following excerpt:

Client #46 is very familiar with the NEP protocol and the program and always brings people to the van. He has been in the program for about six weeks and has already helped to enroll eight of his friends. Today he comes with another friend, a young Hispanic guy who just keeps looking around. Client #46 tells him to go to the back of the van and to talk to me because I speak Spanish.

The Hispanic individual described in this excerpt did not bring any needles, could not get any new needles from the NEP, and consequently refused to be administered the intake interview and left the van somewhat upset. Two days later, however, he returned to the van with client #46. Again, he refused to participate in the intake interview. Twelve days later, he returned once more to the van with client #46. This time he finally enrolled in the program and subsequently became a regular NEP user.

Beyond observing clients and their interactions with staff, project ethnographers engage them in informal interviews. Commonly, these are initiated following the administration of intake and followup interviews and become regularized as clients return to the van over time. Clients often are no less interested in learning about the ethnographers than vice versa. For example, one ethnographer who is Columbian has a Spanish dialect that differs considerably from that of the mainly Puerto Rican Hispanic clientele of the NEP and has been the most frequent opening for client inquiry. These informal conversations provide the foundation for collecting attitudinal and life history data on program users as well as detailed information that can be used to check answers provided in the

structured interviews, as seen in the following excerpt recorded by a female ethnographer:

Client #4, a new intake, is a white, Italian male, 27 years of age. After the intake interview is over, he talks a little about the weather and then starts to talk about himself. He tells me his name and says he doesn't really care about anonymity. He starts talking about his situation and how badly he wants to get off drugs. He calls me "baby" a couple of times and then apologizes saying he means no disrespect, he is just used to doing it. He also apologizes a lot every time he uses swear words. I tell him it doesn't really bother me. He then tells me the story of his life in some detail and about the problems he is having with his girlfriend because of his addiction. . . . She gave him an ultimatum: either quit drugs or end their relationship. He explains how hard this has been for both of them especially since she is Black and there is so much racism around. He tells me about his mom who . . . has threatened to kill him if he goes on with this relationship. He comments that even though he has tried several times to quit drugs, he hasn't been able to. He says he has been on a waiting list for treatment about five times and "every time I am at this point when I want to turn my life around, get clean, marry my girlfriend and have kids with her, I end up in jail." . . . He begins to cry, then gets up and tells me he is now ready for more drugs. . . . He shakes my hand, thanks me for listening and leaves.

Ethnographic observations on the van also have allowed for the collection of data on behaviors that may have an impact on the spread of HIV among the target population. For example, observing the physical condition of the needles individuals bring for exchange provides a rough idea of how extensively they have been used. Also of importance are observational data on how people handle the used needles they bring to exchange and the sterile ones they receive from the project. The authors have observed clients carrying used and uncapped needles in their pockets, inside their sneakers, in purses, inside their underwear, and inside various containers such as pen and pencil boxes and flashlights. Observations about the way in which clients store and carry their needles provide clues on the importance these objects have for them and suggest

the care that must be taken to protect them not only from accidental loss but also from the police. Other observations have suggested that IDUs have special attitudes toward their needles and stylized ways of handling and referring to them, factors that may be important in proposing changes in needle-use practices.

Another issue addressed by ethnography is the source of the needles that are exchanged at the NEP van. While the main goal of the NEP is achieved by providing clients with sterile needles in exchange for their used ones, it is also important to understand where clients obtain the needles they turn in. Ethnographic observation of clients' behaviors and informal conversations with them indicate that a fair number of the needles brought in by the clients are collected by them from the streets, especially from yards adjacent to shooting galleries and from other sites where IDUs congregate to use drugs, such as isolated areas under bridges or in alleys. For example:

Client #2 came into the van about 10 minutes ago asking for an exchange but didn't have any used needles. Now he comes back with four needles he found on the streets. Out the window, I can see another client climbing over the fence into the front yard of a known shooting gallery. He goes very close to the building walls and starts looking for needles. After about 2 or 3 minutes, he finds one, cleans it a little with his shirt, and climbs over the fence again. Now he is waiting outside, he is smoking a cigarette; as soon as he finishes, he comes onto the van to exchange the needle he just found and two more he had with him.

These observations suggest that the NEP may be having yet another benefit, since it encourages people to pick up dirty needles from the streets, thus reducing the risk to pedestrians, including children, who may become infected if they handle or accidentally step on a needle that has been discarded by an IDU. Needles that are discarded on the street may come from various sources, including pharmacy purchases or illicit street vendors who traditionally have supplied drug users with needles (some of which, in the past at least, were believed to be repacked used needles).

In addition, ethnography has been important for identifying and helping to understand the various problems faced by the NEP. For example, one problem involves assuring adherence to project protocols by project staff.

While project protocols prohibit staff from touching used needles, the authors have recorded many instances when staff pick up needles returned by clients to see the identification bar code (which can be smudged or faded through client handling) or to dispose of the needles in a hazardous materials container (which project protocols require clients to do). On one occasion, this practice resulted in an accidental needle stick to a staff member. Failure to adhere to safety protocols could critically damage the program, regardless of its effectiveness in lowering AIDS risk among IDUs. Community interviews with IDUs also revealed and helped to eliminate the cause of another problem faced by the project—the tendency of clients to remove the bar code used by the project to track needles. Several IDUs noted that they did not understand the purpose of the bar code and that it was interfering with their ability to read the gauge on the side of the syringe (which they use to measure their drug dosage).

As suggested in the following excerpt, another contribution of ethnography to this evaluation involved revealing the effects of external factors on the ability of the project to reach clients.

The exchange has been very slow today. Only six regulars came in to exchange needles at the first stop. The weather is beautiful and we are expecting lots of people. It seems the low numbers may be due to the presence of the police. Client #4, a young Hispanic male, tells us that the previous night the police were arresting people who were carrying needles and syringes. He says that between 17 and 25 people were arrested. He was taken to the police station and kept there for 4 to 5 hours. He is very upset. . . He said he told the police the needles were given to him by the NEP and that we did it so they don't get infected. Nonetheless, they were arrested. He says people are scared. Steve is very upset and immediately tries to call somebody from the Health Department to deal with this issue.

Police harassment is frequently reported by clients. For example, one IDU interviewed in the project reported the following:

The other day I got stopped. . . right there on the corner and a lady cop came up to me and said, "you sure you ain't got no needles?" I say, "yeah, I got some needles

but I ain't got no drugs if that's what you're looking for." She said, "well, take them out." I took them out. She broke 'em and shit. She broke 'em. If they're legal, she's not supposed to do it, that's what I think.

Another external influencing factor is the immediate social environment in which the van is parked. For example, one exchange site is located in a mostly Hispanic neighborhood, on a side street on which many abandoned buildings and empty backyards are used as shooting galleries by both users and nonusers of the NEP services. Because the area also is an important commercial center, the NEP has had to contend with the opposition of some business owners who consider the presence of the NEP van a hindrance to their businesses. Project ethnographers have recorded the complaints of business owners and described their efforts to encourage police pressure on NEP users. Another van stop is located near a drug sales site operated by a local street gang. Uniform and plain clothes police keep a watchful eye on this site. As suggested by the following excerpt, the presence or absence of police at any given hour has a direct impact not only on the level of street action, but also on the influx of clients who use the services provided by the NEP.

There is a lot of action in the neighborhood today, lots of small kids are playing in the park (to the right of the van). Several women walk pushing baby strollers; an old man is sweeping the steps of the "purple house" to our left (where many of our clients live). The corner (gang territory) seems to be as busy as usual; it seems there are no police around today. For some reason there seems to be a lot of traffic today with many cars and buses going well over the speed limit and sounding their horns. All of a sudden the corner is totally empty, two cars (a cream Oldsmobile and a green station wagon) have just parked across from the liquor store. They must be policemen because the street reaction to their arrival was immediate.

The frequency of unruly clients, the nature of client complaints about the NEP voiced on the van or in the community, and staff handling of difficult or threatening clients are related process issues that can be monitored through ethnographic observation. For example, observational data suggest that clients tend to be in considerably better moods on the days that their welfare checks arrive. This has a corresponding impact on staff morale, given the close quarters on the van. Ethnography has been

found to be especially useful in the discovery of underlying associations and the development of hunches of this sort. Initial insights garnered through informal ethnographic observation and note-taking can be operationalized as hypotheses and verified through more systematic approaches designed to check the typicality, representativeness, or accuracy of informal findings (Bennett and Thaiss 1970). As Pelto and Pelto (1978, p. 69) note, ethnographers can ensure the objectivity and validity of their initial observations through systematic repeat observations of similar events or behaviors:

By structuring observations and systematically exploring relationships among different events-through interviewing, meticulous eyewitnessing, and perhaps administering “tests” [e.g., structured surveys]-participant observation can be converted to scientific use.

Through the discovery of potential factors that shape client moods and behaviors, ethnography can contribute to staff training and to procedures for avoiding staff burnout. Similarly, as indicated in the following excerpt, ethnography can help identify client values or preferences that influence their use of the NEP.

After we are done with the interview, Steve hands client #2 his new needle. The client finds another used one he is carrying on him, examines it, but decides not to exchange this second one. He explains that the needles that we provide are longer than the ones he likes. He says that if he uses the long ones he misses a lot. With the short ones, he says he almost always hits a vein on the first try. After this incident, I ask several clients about their opinions as to whether needle size matters to them. All but one expresses the same preference as client #2.

As this example suggests, after the initial discovery of a potential factor that may influence IDU utilization of the NEP (i.e., preference for a particular type or size of needle), the ethnographer initiated an informal field test to provide a gauge of the possible representativeness of the finding. After achieving a preliminary verification of typicality, it is then possible to operationalize the finding and formally test its distribution in the target population through a more systematic approach, such as by incorporating questions about needle preferences in the NEP intake

instrument or other client surveys. Agar and Stephens' (1975) study of street methadone use is an example from the drug literature of the productive use of a structured survey instrument to verify and test the representativeness of ethnographic findings. Conversely, ethnography can be used to clarify and interpret survey or other statistical information about a population. As Pelto and Pelto (1978, p. 140) emphasize:

Misplaced quantification is often worse than none at all. Quantification without clear conceptualization of the relevant population, careful selection of a representative sample from the population, and other operational precautions lead to error and mystification. Also, it is clear that many of these methodological precautions require extensive fieldwork-participant observation, interviewing, and other qualitative backup research-to give reality and meaning to the numbers and percentages.

Community interviews of IDUs by NEP project ethnographers also can indicate client-perceived barriers to using the needle exchange. For example, during one such interview an IDU commented that she had gone to the van to get a bottle of clean water to use in mixing her drugs. When told she would have to go through the lo-minute intake interview, she left the van. She later explained: "They want you to sit down, fill out papers. I ain't got time for that you know. So I just went and got off."

Other IDUs have complained about the hours of van operation. As one man noted: "I'm up til 5-6 in the morning. I damn sure ain't going to be waiting on a van at 9 o'clock in the morning. I'm going to be passed out somewhere until 4 in the afternoon."

Both of these individuals offer client-centered reasons for avoiding or minimizing use of the NEP, revealing issues that may not have been taken into consideration in designing the program. Ethnography is especially suited to gathering potentially critical information about how clients "interpret the world through which they move" (Agar 1980, p. 90). Failure to consider the clients' points of view, their understanding of events and behaviors and the meanings they derive from them, as well as indigenous knowledge, values, and past experiences, can and often does limit the usefulness of public health and substance abuse programs

(Partridge 1978). As Chambers (1985, pp. 6-7) stresses:

One of the great advantages of the fieldwork approach is that it encourages [researchers] to try to see the world in much the same way as the people they are studying. . . . This perspective is often called taking an *emic* or “native” point of view. . . . From this vantage point, [researchers] are often able to account for important differences between peoples which would otherwise be ignored or minimized.

Consideration of indigenous points of view draws attention to an important reflexive aspect of ethnography. Commonly, as they begin to form impressions about the behavioral patterns or attitudes of a community under study, ethnographers share their preliminary insights with members of the target group. This reflexive strategy provides an important check on initial impressions as well as a method for additional, often more detailed, data collection.

Ethnography: Phase 2

With support from NIDA, the evaluation of the Hartford NEP is being expanded to include several new components. A primary addition during this phase will be to compare the efficacy of the NEP in reducing AIDS risk behavior relative to Project COPE, which uses a community-based education and counseling approach to risk reduction among IDUs. In the next phase of the evaluation, project ethnographers will be involved in six major tasks:

- Conducting observations of 12 shooting scenarios (occasions of drug shooting in their natural context (e.g., among groups of people in shooting galleries or among individuals or partners in their homes)) every 6 months (for a total of 60 scenario observations). These scenarios will be selected so that half are done within one block of a NEP exchange site (hence, the van and the clientele it serves will be visible from respondents’ homes) and the other half are at least three blocks away from an exchange site (thereby allowing an examination of the impact of locational factors on needle-related risk). Following an observational methodology and using the data recording forms developed in the NIDA Needle Hygiene Study (and employed previously in the Hartford component of that research effort), ethnographers will observe and record detailed information on

(1) the number, characteristics, and relations among scenario participants; (2) the location, duration, and context of the scenario; (3) the movement of drugs and drug paraphernalia between scenario participants (e.g., participant sharing of drugs, cookers, rinse water containers, and syringes); (4) the use and nonuse of NEP needles (including sharing) and other project prevention materials (e.g., bleach); and (5) the degree of use of prevention strategies (e.g., duration of bleach cleaning, amount of bleach used, and efforts to distribute bleach throughout syringes).

- In observed shooting scenarios, (1) conducting unstructured interviews to elicit detailed information on drug, needle, and other drug paraphernalia procurement (e.g., source of materials, cost, frequency of acquisition, route of acquisition) among scenario participants; (2) observing relations among participants; (3) mapping of participant significant other networks (including information on the members of their networks with which they acquire drugs; inject drugs; share needles, cookers, cotton, and rinse water; and have protected and unprotected sex, as well as their explanations for which behaviors occur with particular members of their social networks); and (4) recording contextual factors that influence drug injection and related risk behaviors (e.g., times and conditions that may affect risk reduction efforts).
- In shooting scenarios and elsewhere, recruiting out-of-treatment IDUs for the development of a non-NEP, non-COPE user sample. Individuals identified in drug settings (i.e., not through the NEP or Project COPE) will be screened against NEP and COPE enrollment lists using the standard alphanumeric identification system (constructed from the first three letters of mother's first name, the first initial of participant's last name, and the month and year of birth). Individuals who meet sample criteria and agree to participate will be administered the NEP intake instrument (to gather sociodemographic and risk-behavior information), the COPE locator instrument (to assist with 6-month followup interview relocations), and a set of questions about knowledge of and attitudes toward NEP and COPE, reasons for nonuse of these two programs, and involvement in other local AIDS risk-reduction programs. Over the course of the project, 200 IDUs will be recruited for this research. Participants will be relocated 6 months after baseline interviewing for followup interviewing on subsequent involvement with NEP or COPE (or other prevention or treatment programs) as well as changes in attitudes or risk behavior.

- Conducting household surveys in both NEP exchange and nonexchange areas of Hartford to monitor changing community awareness of and attitudes toward the NEP. Community survey participants will continue to be drawn from two geographic areas: households within two blocks and households over six blocks from each of the exchange sites visited by the NEP van.
- Conducting individual structured interviews with NEP and Project COPE staffs concerning attitudes toward their respective projects, perceived efficacy of the project in lowering risk in the target population, perceived problems that interfere with project functioning, experience of the project work environment, and attitudes toward program participants. These interviews will elicit information about the degree of staff agreement or disagreement with a set of statements such as: “This project does a good job at finding the kind of individual who really needs AIDS prevention”; “The people who work on this project often find ways to goof off and take advantage of the project”; “The administrators of this project are out of touch with the day-to-day problems of project staff”; “I generally like the participants in this project.”
- Assisting outreach workers to relocate NEP and Project COPE participants for their 6-month followup interview.

CONCLUSION

As a methodological approach that permits the use of a range of concurrent and sequential techniques for understanding behaviors in natural context, ethnography is especially well suited to the study of complex issues like drug use, AIDS risk, and AIDS prevention among IDUs and other drug users (Agar 1973; Carlson et al. 1994; Connors 1992; Gamella 1994; Kane and Mason 1992; Koester 1994; Page et al. 1990; Singer, in press). (See also Singer and Baer 1995 for a discussion of important limitations of this approach.) This chapter has described a number of specific contributions of ethnography to the evaluation of needle exchange as an AIDS prevention strategy among IDUs, including producing (1) insights on IDU diversity; (2) understanding of the nature and effect of staff and client relationships; (3) information about the validity of self-report (e.g., revealing differences between what people report during structured interviews versus during informal, relaxed conversation or during observed behavior in natural contexts);

(4) opportunities to identify underlying connections between specific domains of behavior or groups of social actors (e.g., revealing possible factors that influence behaviors of IDUs that are either not recognized by them or are not reported to researchers); (5) opportunities for more nonthreatening and candid discussions of socially disapproved behaviors (e.g., the nonuse of bleach while injecting drugs despite frequent project distribution of bleach); (6) a means of studying the values and cognitive organizing systems used by social actors in developing and patterning cultural behaviors; (7) serendipitous discoveries of heretofore unknown or little understood issues, such as the social, environmental, and cultural factors that affect day-to-day operations, client use, and staff experience in the NEP van; and (8) a means for investigating and understanding problems that confront the day-to-day operations of needle-exchange site. This chapter has shown some of the specific contributions that ethnography is making to the evaluation of the Hartford NEP. For these reasons, as the number of needle-exchange programs increases, ethnography and ethnographic methods should become central methodological components of NEP evaluation design.

In making this recommendation, the authors stress the importance of triangulating (i.e., corroborating) (Webb et al. 1965) ethnographic data collected within the social environments in which AIDS-related risk behaviors occur with other types of NEP evaluation data that are not collected under natural social conditions (e.g., survey data collected in door-to-door interviews, structured client intake and followup interviews collected in office settings, and immunoassay findings from laboratory tests of returned needles). The authors also emphasize that ethnographic data are not inherently qualitative, nor is ethnography specifically a qualitative method. Ethnography refers to firsthand, immersion research that is conducted in natural settings in which the researcher(s) directly engages and to some degree participates in the everyday life of members of the group under study and attempts, among other things, to understand their frame of reference and understandings of reality. The term “natural settings” is used in contrast to laboratory or other experimental conditions constructed and to some degree controlled by the researcher. (Thus, a researcher-organized focus group in an institutional setting that is somewhat foreign to the daily lives of participants should be considered a qualitative method but not necessarily an ethnographic one, while observations of somewhat similar group discussions that emerge under natural conditions and in indigenous social environments would be considered ethnographic). A defining feature of ethnography, in other words, is fieldwork. It takes place, as Agar (1980, p. 195) emphasizes,

“on the informant’s turf.” While NEPs in the United States have tended to be initiated by community activists or public health workers rather than active IDUs, NEPs have come to be accepted as part of the natural cultural environment (Spradley and McCurdy 1975) of a large number of IDUs. Like shooting galleries, copping sites, shelters, soup kitchens, street AIDS outreach programs, and drug treatment programs, they have been incorporated into the cultural world of IDUs in many locales.

The qualitative aspects of ethnography are found in its emphasis on (1) situating the phenomena of concern within their natural local and extra-local social contexts (e.g., NEPs in relation to the activities of street gangs, police, drug dealers, and law-making government bodies); (2) developing observation-based descriptions of these contexts, the social groups who occupy them, and the daily social processes and relationships that unfold within them (e.g., the observational field notes recorded on the NEP van that have been cited throughout this chapter); and (3) attending to the cultural meanings, insider understandings, and signs and symbols used to express them in any given cultural context (e.g., the solicitation of IDU views of the NEP). In other words, like other qualitative approaches, ethnographic data consist, at least in part, of words (e.g., notes of field observations and informant responses during informal interviews) and images (e.g., ethnographic filming). As Miles and Huberman (1984, p. 215) indicate, “The hallmark of qualitative research is that it goes beyond how much there is of something to tell us about its essential qualities.”

Ethnographic data, however, also consist of numbers that can be analyzed through appropriate nonparametric statistics. For example, in the Hartford NEP, the authors have begun to collect information on the numbers of clients recruited to the program by existing program users relative to those who are recruited in other ways. Similarly, observational data on the movement and use of NEP needles by IDUs planned for the second phase of the evaluation will be used to produce quantitative data on risk frequencies. In other words, ethnography also can be a quantitative approach. Ethnographers are becoming increasingly more sophisticated in the collection of quantitative data in the field and the analysis of these data using established statistical techniques.

In short, rather than a qualitative method per se, ethnography is best considered a *blended* methodology that incorporates both qualitative and quantitative data collection and analysis, including both informal (e.g., participant observation) and formal (e.g., triad sorts) approaches

(Pelto and Pelto 1978). This blending is especially evident in the use of cognitive solicitation techniques (e.g., free lists, pile sorts, triad sorts) that collect data on insider's cognitive models that are potentially open to either qualitative or quantitative analysis. The distinctive feature of ethnography is its ability to allow the simultaneous collection and linkage of qualitative and quantitative data in natural social settings so as to explicate the nature of human behavior and relationships within their social context. It is for this reason that ethnography is of special use in NEPs or other AIDS program evaluations. The concern of such evaluation is with understanding the operation and impact of programs that are intended to become part and parcel of ongoing social interactions. Indeed, the use of ethnography in these evaluations supports a fundamental public health objective of AIDS prevention: to slow transmission of the virus by reducing the frequency of risk behavior. Through the application of ethnographic methods and analysis of ethnographic data, effective, socially acceptable, and practically adoptable techniques to achieve this objective can be developed.

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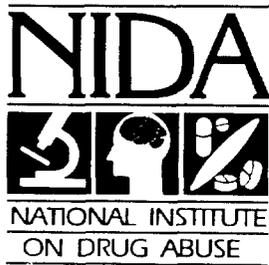
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