

RESEARCH METHODS

The application of qualitative research methods to the study of sexually transmitted infections

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Sex Transm Infect 2002;**78**:87–89

Qualitative methods have gained support in health sciences research and have a role to play in STI studies. This article reviews the main techniques used by qualitative researchers, with illustrations taken from the field of STIs.

Qualitative research aims to describe social phenomena and behaviour through the means of rich contextual data. Unlike much quantitative data, numeration is not its objective. Rather, qualitative research seeks to explore and explain the world through observation, by appreciating the subjective experiences of social actors and by unearthing data that are not easily accessed by quantitative means. Not so much how many, as how and why. The value of such a perspective has gained acceptance and favour in social behavioural health related research.^{1–4} Qualitative research has demonstrable utility in the field of sexually transmitted infections (STIs) and HIV/AIDS research, where many of the social phenomena being studied are personal, intensely private, and sometimes illicit. However, it is beyond the remit and scope of this paper to describe any such studies in detail. Rather, its main objective is to provide a brief overview of qualitative methods and approaches, with particular reference to the study of STIs.

RANGE OF METHODS

As in any qualitative or quantitative study, the chosen method (or more often, combination of methods) will depend upon the research objectives and available resources. For instance, to gain real insight into a target population the qualitative researcher might wish to spend many months as an ethnographer, participating in the lifestyles and daily activities of the group. However, this may not always be possible and a more pragmatic and eclectic research strategy might be adopted. Qualitative researchers use a spectrum of methods and tools, often within the context of the same study. A number of excellent textbooks are available,^{5,6} but for now I will briefly introduce some of the most popular methods in current use.

Semistructured interviews

Semistructured interviews are especially suited to the study of STI knowledge, attitude, and behaviour, as well as exploring lifestyle and contextual issues. Where little is known about a certain issue then a semistructured question provides data that may subsequently lead to coding in a larger scale quantitative study. The use of open ended

questions allows the respondent to elaborate on their experience or attitudes. The structure and sequencing of questions are predetermined, though the interviewer will be encouraged to use probes. These probes are commonly included in an interview guide and interviewers need specific training in the timing and delivery of probes. The respondent's answers are recorded verbatim as, unlike demographics or other simply coded variables, much of what interests us about STIs requires more subtle and expansive answers. For instance, semistructured interviews were used in a New York City study of ethnically diverse heterosexual men's attitudes towards the female condom.⁷ Similarly, semistructured interviews were favoured in exploring women's accounts of choosing and using specialist services for sexual health in the East Midlands of England.⁸

In-depth interviews

In-depth interviewing takes this one step further by focusing in considerable detail on the life experience and social behaviour of selected individual respondents. A topic guide will often be used to guide (but not necessarily to structure) the interview. A skilled in-depth interviewer will allow the respondent to describe and explore their experiences and thoughts while guiding them towards particular topics of interest to the research. Quirk and Rhodes⁹ gathered detailed accounts of condom use, thereby identifying the phenomenon of "unsafe protected sex." In-depth interviews are often only loosely structured in order to allow the respondent a free rein to expand on the topics in question. Using this method, a study in Morocco was able to unearth the conceptualisation and indigenous understanding of STIs which centred on the Moroccan Arabic notion of "berd" (or "the cold").¹⁰ In-depth interviews are usually tape recorded and transcribed verbatim. From such interviews themes emerge which can be compared and contrasted across cases, such as the discourses around "safe sex" and STIs among Chilean, Turkish, and second generation Greek women living in Melbourne, Australia¹¹ or among healthcare workers in STI clinics in South Africa.¹² The data collected from in-depth interviews are often analysed thematically, with specific examples used as illustrative material. In order to preserve uniqueness and social context, in-depth interviews can be presented individually as *case studies* or as *narratives*.⁶ The main difference between the case study and the narrative is that analysis of the latter will often include the interplay between the interviewer and the respondent.

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Accepted for publication
18 February 2002

Focus groups

Focus groups shift the emphasis away from the individual and use the dynamic of the collective discussion to gain research insights and augment our understanding of a topic. Whereas the individual semistructured or in-depth interview is primarily concerned with individual behaviour, the focus group is more interested in data collected, and issues explored in the context of the group discussion. A study in Uganda used them in order to better understand and elicit the psychosocial factors influencing compliance with sexual partner referral for STIs at a hospital outpatient clinic.¹³ The optimal number for a focus group is around eight people. The main skill of the facilitator of the focus group is to guide the discussion according to key questions without dominating events. Focus groups are used at a number of different stages of the research process. They can be used as a preliminary tool to help develop questions and key topic areas for a structured or semistructured questionnaire. Focus groups can help explore or expand on topics or issues that arise during the course of a study. They can also be used in a confirmatory sense towards the end of a study, by presenting the draft results of a project to the study population to see if it concurs with their beliefs and experiences. One such confirmatory focus group comprised members of the target group and peer educators, and was used to reflect on the results of a process evaluation of a health promotion intervention targeting a public sex venue in London.¹⁴

Ethnography

Ethnography or participant observation adds a unique dimension to qualitative research by observing and interpreting the social meanings of the everyday lives and actions of the target population. As the term suggests, participant observation means that the researcher directly observes the behaviour and activities of the group under study. This commonly entails gaining the trust and confidence of research subjects and is invariably a time consuming activity. However, the rich contextual data that result are invaluable, both in confirming and validating self reports and also in describing the venues and situations in which social action takes place. This is particularly important for STI/AIDS, where precise and detailed descriptions of the location and context of high risk behaviour are needed to inform community level interventions. A number of studies of high risk groups, such as injecting drug users and commercial sex workers, have used ethnographic and participant observation methods. Work in Holland graphically described the high risk practices of front and back loading when preparing illicit drugs for injection,¹⁵ while similar ethnographic research in Chicago, USA, identified typologies of “shooting galleries” frequented by street drug users.¹⁶ The work of Bernard and McKeganey in Glasgow, Scotland,¹⁷ illustrates the potential and value of participant observation among commercial sex workers.

THE PRACTICAL APPLICATION OF QUALITATIVE METHODS IN STI RESEARCH

A recent review article chronicled the contribution of qualitative research to the study of HIV/AIDS.¹⁸ Since the 1980s, qualitative research has deepened our understanding of cultural and contextual lifestyle issues^{19, 20}; risk and risk negotiation around sex and drug injecting^{21–23}; sensitive areas, such as HIV status and sexual identity disclosure^{24, 25}; and the attitudes towards risk and sexual health of healthcare workers and target populations.^{26, 27}

Even such a cursory review of the STI and HIV/AIDS literature shows that qualitative research has practical application and value in developing, evaluating, and refining STI interventions. In this applied context, qualitative research can be used in the study of social aspects of STIs in formative, process, and outcome evaluation. The first sets the scene, the second examines service delivery, the third assesses results.

Formative evaluations

Qualitative research methods can be employed in formative evaluations, especially when the objective is to describe the setting and context for a new intervention or treatment regimen. In this case qualitative data can be collected from the target population to better understand their profiles, needs, and help seeking related experiences. A study in Glasgow of women attending either for an STI check or family planning used semistructured interviews to better understand the implications for screening policy of diagnoses of *Chlamydia trachomatis*.²⁸ Qualitative methods can help plan the scenes or settings for intervention, especially if the intervention is to be community based or mobile, where the precise location of the service is crucial. A qualitative formative evaluation in Louisiana, USA, responded to an outbreak of syphilis by collecting data from people at risk in order to assess the willingness to participate in syphilis screening, treatment, and antibiotic prophylaxis. The results reported support for community based interventions, especially a mobile health bus, as opposed to the intervention taking place in a local bar or in their homes.²⁹ Rapid assessments and mapping exercises are particularly useful at the formative evaluation stage and have been used in developing HIV harm reduction interventions, notably in resource poor settings.³⁰

Process evaluations

Research and monitoring of service delivery is an important aspect of STI treatment, whether it is community or clinic based. By using a multi-indicator approach, qualitative methods can complement quantitative and monitoring research to address the three key questions often asked in process delivery—Is the service being delivered? Is it being delivered as planned? Is it reaching the target population? Interviews with both staff and clients can gain insight into the barriers and facilitators of service delivery, as well as gaining measures of satisfaction, such as around HIV testing.³¹ A study of a peer led STI health promotion intervention targeting men who have sex with men, used a multi-indicator approach for the process evaluation.¹⁴ A self completed questionnaire survey was complemented by in-depth interviews with peer educators and clients, focus groups, and participant observation sessions at the public sex venue where the intervention was being delivered.

Outcome evaluations

Outcome evaluation has been seen primarily as the preserve of quantitative research. In recent years there has been support for the promotion of randomised controlled trials in social behavioural research in STIs.^{32, 33} However, qualitative research can contribute at this stage of evaluation, by providing complementary and supplementary data. During “Project Respect,” a multicentre randomised controlled trial of HIV prevention counselling, qualitative methods (mainly observational) were used to assess quality assurance of the delivery of the respective arms of the trial.³⁴ As described above, confirmatory focus groups can be held with the target groups to assess preliminary research results. Similarly, qualitative methods can be used in process evaluations to accompany and inform outcome evaluations. Small scale qualitative research projects can be appended to an outcome evaluation to explore interesting or conflicting findings that are not well resolved or explained by recourse to the quantitative data alone.

Analysis of qualitative data

Qualitative research commonly results in many pages of texts, transcripts, and field notes. As in any area of research, the theoretical perspective of the researcher will determine the preferred form of analysis. Some will be primarily interested in the use of language and the creation of texts, and may favour content or discourse analysis.⁵ Others will seek to

interrogate the data for themes, by means of inductive analytical approaches, such as grounded theory. Grounded theory encourages the researcher to create "categories" (themes) and "subcategories" (subthemes) directly from the data.³⁵ The contention behind this form of analysis is that the inductive approach ensures that any category or subcategory is "grounded" in original data. Grounded theory analysis of qualitative data is now commonly used in social behavioural research in the health sciences. One such example is of a focus group study of partner assessments and high risk sexual encounters among STI clinic patients in southern California.³⁶ In recent years a number of computer packages have been developed for qualitative data management, retrieval, and analysis based on the principles of "grounded theory," such as NUDIST³⁷ and Atlas.ti.³⁸ Grounded theory also encourages more rigour in sampling. Whereas qualitative research, by its very nature, rarely claims to be representative, grounded theory suggests "theoretical sampling." This admonishes the researcher, when recognising gaps (or needed points of clarification) in the data, to seek out informants with the required characteristics who might provide such additional information. One of the key concepts of an inductive approach to qualitative research is that of "saturation."³⁵ Put simply, "saturation" encourages the qualitative researcher to continue to collect data until no new themes, categories, or subcategories emerge. In practice, this often means at that point when the same themes are repeated, with no new ones coming to the surface. Often in qualitative research this inductive approach to sampling is more relevant than that of sample size.

Reliability and validity issues should not be ignored and an overreliance on self reported data as the sole source of information should be avoided. Indeed, one means to check reliability is through "triangulation," where a number of sources are used for data collection. This can combine quantitative sources (such as clinic records or other databases) with qualitative methods. It is also advisable for more than one researcher to analyse transcripts and texts, so that resultant themes can be compared and discussed.

CONCLUSION

Qualitative research has much to offer the study of STIs. It can complement quantitative approaches, as well as provide unique insights into complex social behavioural research questions that can help to develop and refine interventions. This is perhaps most pertinent in the context of community based initiatives that target difficult to access populations. While we need to move towards greater rigour in the application and interpretation of qualitative research, we should also continue to explore its range and potential. The older traditions of anthropology have led to exciting contemporary developments in visual representations of research data, alongside the use of new technologies,³⁹ while medical researchers are rediscovering the value of the narrative.⁴⁰ All in all, qualitative research methods represent a powerful tool for those engaged in STI research.

REFERENCES

- 1 Pope C, Mays N. Reaching the parts other methods cannot reach: an introduction to qualitative methods in health and health services research. *BMJ* 1995;**311**:42-5.
- 2 Mays N, Pope C. Rigour and qualitative research. *BMJ* 1995;**311**:109-12.
- 3 Day S. Choosing and using services for sexual health: women's views. *Sex Transm Inf* 2001;**77**:305-8.
- 4 Malterud R. Qualitative research: standards, challenges, and guidelines. *Lancet* 2001;**358**:483-8.
- 5 Bernard H. *Social research methods*. London: Sage, 2000.
- 6 Denzin N, Lincoln Y. *Handbook of qualitative research*. London: New Left Books, 1975.
- 7 Seal DW, Ehrhardt AA. Heterosexual men's attitude toward the female condom. *AIDS Educ Prev* 1999;**11**:93-106.
- 8 Dixon-Woods M, Stokes T, Young B, et al. Choosing and using services for sexual health: a qualitative study of women's views. *Sex Transm Inf* 2001;**77**:335-9.
- 9 Quirk A, Rhodes T, Stimson GV. 'Unsafe protected sex': qualitative insights on measures of sexual risk. *AIDS Care* 1998;**10**:105-14.
- 10 Manhart LE, Diamly A, Ryan CA, et al. Sexually transmitted diseases in Morocco; gender influences on prevention and health care seeking behaviour. *Soc Sci Med* 2000;**50**:1369-83.
- 11 Gifford SM, Bakopanos C, Dawson MT, et al. Risking for protection: discourses around 'safe sex' among Chilean, Turkish and second-generation Greek women living in Melbourne, Australia. *Ethn Health* 1998;**3**:95-116.
- 12 Reddy P, Meyer-Weitz, van den Borne B, et al. The learning curve: health education in STI clinics in South Africa. *Soc Sci Med* 1998;**47**:1445-53.
- 13 Nuwaha F, Faxedid E, Neema S, et al. Psychological determinants for sexual partner referral in Uganda: qualitative results. *Int J STDs AIDS* 2000;**11**:156-61.
- 14 French R, Power R, Mitchell S. An evaluation of peer-led STD/HIV prevention work in a public sex environment. *AIDS Care* 2000;**12**:225-34.
- 15 Grund J, Kaplan C, Adriaans N, et al. Drug sharing and HIV transmission risks: the practice of frontloading in the Dutch injecting drug user population. *J Psychoactive Drugs* 1991;**23**:1-10.
- 16 Ouellet L, Jimenez A, Johnson W, et al. Shooting galleries and HIV disease: variations in places for injecting illicit drugs. *Crime Delinquency* 1991;**37**:64-85.
- 17 Bernard M, McKeganey N. *Sex work on the streets, 1996*. Buckingham: Open University Press.
- 18 Power R. The role of qualitative research in HIV/AIDS. *AIDS* 1998;**12**:687-695.
- 19 Martin M, Rissmiller P, Beal J. Health-illness beliefs and practices of Haitians with HIV disease living in Boston. *J Assoc Nurses AIDS Care* 1995;**6**:45-53.
- 20 Caparara A, Seri D, De Gregorio G, et al. The perception of AIDS in the Bete and the Baoule of the Ivory Coast. *Soc Sci Med* 1993;**36**:1229-35.
- 21 Donovan C, Mearns C, McEwan R, et al. A review of HIV-related sexual behaviour of gay men who have sex with men. *AIDS Care* 1994;**6**:605-17.
- 22 Cohen E, Navaline H, Metzger D. High risk behaviours for HIV: a comparison between crack-abusing and opioid abusing African-American women. *J Psychoactive Drugs* 1994;**26**:233-41.
- 23 Capelhorn J, Saunders J. Factors associated with heroine users' AIDS risk-taking behaviours. *Aust J Public Health* 1993;**17**:13-17.
- 24 Bernard M. Violence and vulnerability: conditions of work for streetworking prostitutes. *Social Health Illness* 1993;**15**:683-705.
- 25 Moneyham L, Seals B, Demi A, et al. Experiences of disclosure in women infected with HIV. *Health Care Women Int* 1996;**7**:209-11.
- 26 Watt R, Croucher R. Dentists' perception of HIV/AIDS as an occupational hazard: a qualitative investigation. *Int Dent J* 1991;**41**:259-64.
- 27 Corby N, Wolitski R, Thornton-Johnson S, et al. AIDS knowledge, perception of risk and behaviours among female sex partners of infection drug users. *AIDS Educ Prev* 1991;**3**:353-66.
- 28 Duncan B, Hart G, Scoular A, et al. Qualitative analysis of psychosocial impact of diagnosis of chlamydia trachomatis: implications for screening. *BMJ* 2001;**322**:195-9.
- 29 Kahn RH, Moseley KE, Johnson G, et al. Potential for community-based screening, treatment and antibiotic prophylaxis for syphilis prevention. *Sex Transm Dis* 2000;**27**:188-92.
- 30 Rhodes T, Stimson GV, Fitch C, et al. Rapid assessment, injecting drug use, and public health. *Lancet* 1999;**354**:65-8.
- 31 Beardsell S, Coyle A. A review of research on the nature and quality of HIV testing services: a proposal for process-based studies. *Soc Sci Med* 1996;**42**:733-43.
- 32 Oakley A, Fullerton D, Holland J. Behavioural interventions for HIV/AIDS prevention. *AIDS* 1995;**9**:479-86.
- 33 Stephenson J, Imrie J. Why do we need randomised controlled trials to assess behavioural interventions. *BMJ* 1998;**316**:611-13.
- 34 Crosby R, Newman D, Kamb ML, et al. Misconceptions about STD—protective behaviour: project RESPECT study Group. *Am J Prev Med* 2000;**19**:167-73.
- 35 Glaser B, Strauss A. *The discovery of grounded theory: strategies for qualitative research*. Chicago: Aldine, 1996.
- 36 Hoffman V, Cohen D. A night with Venus: partner assessments and high-risk sexual encounters. *AIDS Care* 1999;**11**:555-66.
- 37 Richard T, Richards L. The NUD*IST qualitative data system. *Qual Soc* 1991;**14**:307-25.
- 38 Muhr T. Atlas/ti—a prototype for the support of text interpretation. *Qual Soc* 1991;**14**:349-71.
- 39 Pink S. *Doing visual ethnography*. London: Sage, 2001.
- 40 Greenhalgh T, Hurwitz B. Narrative based medicine: why study narrative? *BMJ* 1999;**318**:48-50.