

Research methods

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Surveys on sexual health: recent developments and future directions

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The increasingly widespread adoption of the term sexual health reflects a move away from the medicalisation of this specialty. The focus has shifted from clinical practice to lifestyle and behaviour; from clinician to client, and from treatment to prevention. This article discusses these themes, identifying their implications for sexual health research. Recent times have seen, for example, a growing number of studies combining biological and behavioural measures conducted by interdisciplinary teams able to combine biomedical measurements of morbidity with insights into the subjective interpretations of symptoms and consequences. Considerable progress has been made, too, in mounting community based studies, and much has been achieved in gaining compliance and refining sampling methods. Integrated sexual health services, encompassing more than contraceptive or prophylactic service provision, have provided the impetus to investigation of the costs and benefits of coordinated family planning and genitourinary medicine services. Despite its broader focus, there remain opportunities for sexual health research to expand its remit. Studies to date may have focused too narrowly on pathological, to the neglect of health enhancing, consequences of sexual behaviour.

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Though there is much overlap, sexual health surveys may be distinguished from sexual behaviour surveys (reviewed by Fenton and colleagues¹) by the difference in key outcome variables: health versus behaviour. The increasing currency of the term sexual health reflects a determined shift in public health thinking. The concept contains clues to recent trends that have implications for research in this area. It marks a move away from the medicalisation of the speciality. Formerly, labels attached to this area of public health practice—sexually transmitted disease or venereal disease—carried connotations of disease and pathology. Traditional settings in which sexual health medicine was practised tended to focus on the disease category (for example, venereal disease clinic), somatic site (genitourinary clinic), or else were so euphemistically identified (as in “special clinic”) as to suggest something morally questionable. The term sexual health lifts the specialty out of the clinical domain, focusing on lifestyle and behaviour rather than clinical practice, shifting the balance to patient rather than practitioner, and to prevention rather than treatment.

The concept of sexual health encapsulates another recent development—to treat health related aspects of sexual behaviour holistically. Instead of controlling infection in one clinical setting and unwanted conception in another, the modern sexual health service increasingly offers “one stop shopping” in an integrated setting.

These trends are mirrored in research into this area. Empirical work is increasingly behaviourally rather than clinically focused, concerned with prevention as well as treatment, involving interdisciplinary teams of clinicians and social scientists, combining laboratory and

behavioural measures, and conducted in communities rather than clinics. Each of these trends will be discussed.

Combining biological and behavioural measures

Conducted separately, social science research on sexual health and STI surveillance both have shortcomings. A major limitation of social research is its reliance on self reports of symptoms of infection, which correlate poorly with laboratory evidence.^{2–5} At the same time, surveillance systems (where they exist) exclude cases diagnosed and treated outside the GUM service (notably in primary care and the private sector), and provide no measure of the burden of untreated STIs in the community. Sentinel surveillance—for instance, of antenatal clinic attenders or military conscripts, is invaluable in monitoring HIV epidemics but is unable to illuminate the underlying behavioural dynamics of disease transmission, the forces that sustain unsafe sex, the barriers to treatment seeking, or the consequences of infection for individuals and families.

Opportunities for triangulation, until recently, have been limited. Yet important technological developments are now beginning to facilitate a fusion of disciplinary perspectives. Advances have been made in STI screening, in the form of new non-invasive techniques for diagnosing past or current infection with STIs. In place of cervical or urethral swabs, reliable type specific antibody tests are now available and work is under way to develop antibody tests in urine, most notably for *Chlamydia trachomatis*. Ligase chain reaction (LCR) tests for genital *C trachomatis* have been evaluated on urine,^{6,7} and evidence has accumulated regarding the stability of the chlamydia LCR in

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the absence of a cold chain maintenance during storage and transport.

Polymerase chain reaction (PCR) tests are being developed for identifying gonococcal infection,^{5,7} and type specific antibodies to herpes simplex virus type 2 (HSV-2) have also been shown to be useful markers of sexual behaviours in STD clinic populations. HSV-2 has been proposed as a biological marker for comparing sexual behaviour between populations and for monitoring behaviour change over time.

Parallel with these technological developments, partnerships between clinical, epidemiological, and social scientists have increased in number. A prime example is the UNAIDS sponsored study of the determinants of the rate of spread of HIV in Africa conducted in four cities.⁸ Data collection included an initial ethnographic assessment; a census of sex workers; a survey of adults encompassing exceptionally detailed behavioural items, together with blood and urine samples; laboratory based diagnosis of HIV/STDs, including HIV-1 subtyping on a subsample; and a similar survey of sex workers.

A further example occurs in the work of Brown *et al.*⁹ Driven by the hypothesis that HIV transmission may be facilitated by genital lesions in men and women, the researchers set out to investigate possible non-infective causes of lesions. Vaginal examination by physicians revealed epithelial trauma caused by inserting irritants into the vagina, while anthropologists conducted focus group interviews to probe the meaning of such practices in women's sexual lives, producing important information in the context of prevention.

Thus, typically, the biomedical component of an interdisciplinary study defines the key outcomes of interest—for example, evidence of HIV/STD infection, while social scientists attempt to explain these results in terms of individual or community level behaviour and customs. But collaboration does not always take this form. In Masaka, Uganda, the anthropologist identified sexual networks and subsequently blood samples were obtained from 54 individuals, belonging to three different networks, in order to test the suitability of HIV sequence analysis to characterise different networks.¹⁰⁻¹²

Understandably, much of the interdisciplinary research on sexual health has been done in Africa but good examples exist from other low income regions. The huge influence on policy of the Giza study in Egypt¹³ and of Bang's pioneering work in central India¹⁴ stemmed largely from the interdisciplinary nature of the research. Both studies documented a high, but largely hidden, prevalence of biomedically measured gynaecological morbidity at the community level. Parallel ethnographic research provided telling insights into subjective interpretations of symptoms and into consequences. For instance, in India, no fewer than 12 local terms for vaginal discharge were identified, depending on colour, odour etc, and each carried different implications for perceived aetiology and appropriate treatment.¹⁵

Service related research

Recent years have seen a move towards providing generic sexual health services encompassing more than contraceptive or prophylactic service provision. Integrating family planning and STI services has become an increasingly high priority issue on international health policy agendas in the past decade.¹⁶

It is claimed that coordinating family planning and GUM services potentially broadens opportunities for screening and preventive health checks; requires fewer client-provider contacts, ensures continuity of care; minimises duplication of services; facilitates cost sharing; and maximises worker motivation.¹⁷ There is also a growing literature acknowledging the cost effectiveness of providing STI services with family planning.¹⁸

The policy agenda has stimulated empirical work on the feasibility and desirability of service integration and on the extent of overlap between the two services in terms of client needs.¹⁹⁻²² Studies have therefore investigated the proportions of GUM attenders who are at risk of pregnancy,²³⁻²⁵ and the proportions of those attending family planning clinics who are at risk of infection.²⁶ Research has also explored consumer views on a one stop service²⁷ and potential adverse outcomes for staff providers or clients.^{28,29}

The shift to community based studies

Community based research on sexual health encounters a host of problems and barriers that are largely absent from clinic based research. Ethical considerations are more complex, costs are high, and the logistical problems of transporting specimens to laboratories for analysis are insurmountable in many developing country settings. A further critical consideration is the level of participation. In conventional health interview surveys, participation rates are usually around 90% in low income countries but much lower at 60-70% in Europe and North America. When a clinical component is added or biological specimens are required, participation can drop dramatically. Much depends on the characteristics of the study population, the degree of community involvement in the project, the intrusiveness of the procedures and their location (for example, at home or at the nearest clinic). Experience has varied widely and, no doubt, many sexual health surveys remain unpublished because of very low participation. However, there have been many striking successes. Participation rates of around 90% have been reported in Egypt, India, and Nigeria.^{13,30,31} Large prospective studies in Masaka, Mwanza, and Rakai have achieved sufficiently high participation to allay fears about the representativeness of findings.³²⁻³⁴ The general lesson is encouraging: if trust between research team and community can be established, acceptable participation can be achieved.

A related development has been the increased use of nationally representative samples of the general adult population. Since 1985, Macro International Inc, with funding from the US Agency for International Development, has

sponsored over 100 national demographic and health surveys in low income countries. Typically, samples have been restricted to females in the reproductive age span, 15–49 years, but about 20 surveys have also collected data from subsamples of males. In response to the HIV pandemic, the sexual health content of recent surveys has expanded beyond their traditional emphasis on fertility regulation.

An important boost to the fielding of national surveys on sexual health was provided by the then global programme on AIDS in the late 1980s. By 1996 over 30 surveys had been conducted, mostly in Africa, Europe, and North America.^{35–37} Common themes included HIV related knowledge, sexual behaviour, and condom use. Many surveys included questions on recent STI symptoms and treatment and a minority inquired about HIV testing and results.

The obvious limitation of nearly all these national surveys is the lack of biological data on infection. As field based methods for collecting specimens become cheaper and less intrusive, the inclusion of biological markers of disease in national surveys is becoming more justifiable and feasible, particularly in countries with severe, generalised HIV/STI epidemics. The huge additional complexities of adding biological components³⁸ may be outweighed by gains in understanding disease transmission and accurately identifying priority groups.

For many groups of potential interest to sexual health researchers (for example, vagrants and other highly mobile individuals, homosexual and bisexual men, injecting drug users, street children, prostitutes and clients), representative general population surveys are inappropriate. Such groups are often missing from conventional sampling frames (such as electoral registers) willingness to participate may be low, and, as such groups comprise only minute fractions of the population, general samples would in any case yield insufficient numbers of subjects to sustain statistical analysis. Instead, investigators have devised imaginative methods of generating samples of individuals in their “natural habitats.” In the case of socially stigmatised groups, gaining access, trust, and cooperation have been the key to sound study design.

Success has been achieved by working in harness with outreach and rehabilitation schemes; enrolling representatives of the study community in the research team; and creating special services, such as clubs for street children or clinics for long distance truck drivers. Networks of friends and acquaintances have been used for subject recruitment (the snowballing technique). That stalwart of commercial market research, the exit interview, has been adapted, for instance, in investigations of sex workers’ clients, a particularly elusive and uncooperative category. In most studies of this type it is impossible to demonstrate that the achieved sample is representative but, undoubtedly, willingness to reach beyond the clinic represents real progress.

Future directions

Sexual health researchers have increasingly appropriated a broad area of empirical investigation formerly in the separate domains of research into sexually transmitted diseases and fertility regulation. Yet the focus may still be too limited. The investigative gaze could profitably shift away from the current near exclusive emphasis on individual risk factors, towards social contextual determinants of sexual health status. More attention should be paid, for example, to cultural attitudes and social norms which enhance or hinder the implementation of effective preventive interventions and services in this area.

A wider issue relates to the fact that attention is paid chiefly to adverse, as opposed to benign, outcomes of sexual behaviour. In determining health status, sexual pleasure and enjoyment may be as important as the number of partners or condom use. Links between health and marital or relationship status are well established.³⁹ For instance, married men enjoy better health than those who are separated or single.^{40–41} The mechanisms at work here are inadequately understood, but sexual dissatisfaction and dysfunction are well documented reasons for relationship breakdown.

Sexual health research also has tended to exclude older people, despite the demand for data in the context of therapeutic advances in the treatment of dysfunction, and the association between chronic disease, sexual function, and quality of life. The headlong pursuit of data on risk behaviours and risk reduction strategies to the neglect of affective aspects of sexual conduct is too limited an approach to do justice to the range of intersections between sexual behaviour and health. Sexual health researchers need a freer hand in defining their remit.

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