

Conceptualization and measurement of homosexuality in sex surveys: a critical review

Modos de conceitualizar e medir homossexualidade em pesquisas sobre sexualidade: uma revisão crítica

Stuart Michaels ¹
Brigitte Lhomond ²

Abstract

This article reviews major national population sex surveys that have asked questions about homosexuality focusing on conceptual and methodological issues, including the definitions of sex, the measured aspects of homosexuality, sampling and interviewing technique, and questionnaire design. Reported rates of major measures of same-sex attraction, behavior, partners, and sexual identity from surveys are also presented and compared. The study of homosexuality in surveys has been shaped by the research traditions and questions ranging from sexology to the epidemiology of HIV/AIDS. Sexual behavior has been a central topic at least since Kinsey. Issues of sexual attraction and/or orientation and sexual identity have emerged more recently. Differences in the treatment of men and women in the design and analysis of surveys as well as in the reported rates in different surveys, in different countries and time periods are also presented and discussed. We point out the importance of the consideration of both methodological and social change issues in assessing such differences.

Homosexuality; Sexual Behavior; Sexuality

Introduction

Research on homosexuality has always been shaped by views of homosexuality as a social problem. Changes in the conceptualization and measurement of homosexuality cannot be separated from changes in broader social, political, or moral concerns. In this essay, we are concerned with the quantitative study of homosexuality using surveys. By the late 1980s, HIV/AIDS gave rise to a large number of population-based surveys on sexual behavior that devoted substantial attention to homosexuality, especially male homosexuality. To understand the issues and problems that arise in surveys, we will briefly examine the precursors to this recent work and then compare some of the major national surveys of the early 1990s as well as several more recent national surveys. There is another tradition of survey research focused on homosexuality based on non-probabilistic samples of persons drawn from gay and lesbian circles. This work, while important, is quite different and is beyond the scope of the present article (for a review of such surveys before HIV/AIDS see Pollak ¹, and for an example from the United States see Bell & Weinberg ²).

There are several earlier articles that have focused on homosexuality rates across national surveys. For example, Rogers & Turner ³ review male homosexuality rates in surveys of the U.S. population from 1970 to 1990. Sandfort ⁴ has

¹ Center for Gender Studies, University of Chicago, Chicago, U.S.A.
² Laboratoire d'Analyse des Systèmes de Santé, Université Lyon I, Villeurbanne, France.

Correspondence

S. Michaels
Center for Gender Studies,
University of Chicago,
5733 S. University Ave,
Room 300, Chicago,
IL 60637, U.S.A.
stuartm@uchicago.edu

done this for rates in European surveys from the early 1990s in a large number of countries (see also Kontula ⁵).

In this article, using a purposively selected set of representative sample national population surveys on sexual behavior from different countries on diverse continents, we attempt the following: (1) attend to variations in methodology over time and especially in the conceptualization and formulation of questions and (2) examine surveys that provide a broader geographic and therefore socio-cultural coverage. The review includes surveys from North America, Europe, South America, and Australia. It also covers a wider time span: from the pioneering Kinsey work of the late 1940s/early 1950s to a selection of surveys in the United States and Europe from the early 1970s, to the first major national surveys that resulted from concerns about HIV/AIDS and conducted in the early 1990s, and finally some more recent surveys from South America and Australia.

Early history of sex surveys

A major precursor to modern surveys on homosexuality grew out of late 19th century sexology. Early sexologists had an essentially clinical and psychiatric vision of homosexuality, conceiving it as a mental illness. In 1903, for the first time (to our knowledge), Magnus Hirschfeld, a German physician, co-founder in 1897 of the first homosexual rights movement, the Scientific Humanitarian Committee (WHK), launched quantitative surveys whose goal was to determine the percentage of homosexual men in Germany. Hirschfeld studied two samples, 3,000 students in a technical school and 5,000 metalworkers. He asked a single question: were they attracted to women, men, or both men and women. "*Among the students who answered the inquiry, 1.5% were homosexuals and 4.5% bisexuals. Of the 5,000 metalworkers 1.15% were homosexuals and 3.19% bisexuals*" ⁶ (p. 59). Hirschfeld believed in a basically constant proportion of homosexuals, no matter what country, culture, or historical period. This belief was linked to his definition of homosexuality as a natural category, intermediate between men and women, in essence a "third sex" ⁷. His search for a number was also tied to the political efforts of the WHK to overturn paragraph 175 which criminalized sexual relations between men in Germany at the time ⁸.

Kinsey and the origins of modern sex surveys

Fifty years later, Kinsey, a biologist, revolutionized sex research by embarking on a project to collect the "sexual histories" of men and women in the United States. Kinsey's work grew out of a concern about the lack of solid empirical data on sexual practices, concerns about the role of sexual satisfaction in marriage, and moral and legal prohibitions on sexual practices outside procreative sex in marriage. His first interviews were collected in 1938 and consisted of 300 to 500 items on lifetime sexual practices. These data were collected and published in two volumes. *Sexual Behavior in the Human Male* was published in 1948. The second parallel volume, *Sexual Behavior in the Human Female* was published in 1953. Homosexuality was not the central focus of this research, but it was treated for the first time as of equal importance to other forms of sexual behavior. While Kinsey's work may be seen as an inheritor of liberalizing traditions of sexology, it went further than any of its predecessors in its morally neutral treatment of homosexuality ⁹. It also became the reference for all later sex surveys of the general population.

Kinsey's approach to the study of sexuality in general and homosexuality in particular was fundamentally behavioral and quantitative. The unit of quantification for Kinsey was the orgasm. The central question was how sexual acts were distributed over the course of life and in the population. Homosexuality was viewed as one behavior among many (along with nocturnal emissions, masturbation, coitus within, before, and outside marriage, non-coital sexual acts, especially oral sex, and sexual contacts with animals).

Kinsey and his collaborators conceived homosexuality as a characteristic of acts, not persons. Rather than conceive of the world as consisting of two separate species, heterosexuals and homosexuals, that is, normal and deviant individuals, they emphasized a continuum of variation between individuals, allowing them to estimate which proportion of the population had a given mixture of homosexual and heterosexual experience. To measure this they developed a scale, the Heterosexual-Homosexual or H-H scale, which ranged from 0 to 6, from exclusively heterosexual to exclusively homosexual, with five interior categories for persons with a combination of heterosexual and homosexual experiences and feelings in any given time period or even over the course of their lives. It is often forgotten that in order to ac-

count for everyone, there was also a category X for persons with no sexual attraction or experience (for further discussion of the Kinsey scale, see Gagnon 10).

Kinsey's findings on homosexuality (along with other stigmatized behaviors from masturbation to extra-marital sex) provoked much negative reaction, including intense methodological scrutiny. In particular, their work was vulnerable to criticism for its sampling methodology, since rather than drawing a probabilistic sample of the population, all respondents were volunteers recruited by the research group 11. However, they did interview segments of the population that are usually ignored by general population surveys: criminals and delinquents, jail and prison inmates, prostitutes, etc. Instead of a standardized questionnaire, the small number of highly trained interviewers used innovative techniques such as varying the wording of questions and presuming the universality of stigmatized and illegal practices such as masturbation, homosexuality, and sex with prostitutes, by typically asking about the age when respondents first engaged in such behavior rather than whether they ever had. Even though there were serious flaws in sample selection in their studies and despite the rapid development of improved sampling and its application during this period, few other sexual behavior surveys from 1953 until the onset of AIDS included any (let alone extensive) questions on homosexual activity. To our knowledge, there are only three national surveys from this period based on representative samples that allow estimating rates of homosexual experience in a population: Simon et al. 12 in France, concerned primarily with contraception and reproduction with a single question on homosexual experience; a survey carried out by the Kinsey Institute in 1970 but not published until much later, primarily focused on sexual attitudes, especially toward homosexuality 13,14, and a Finnish survey in 1971 which was only published in English as part of the report on the 1992 FINSEX survey 15. In all three of these national surveys homosexuality is treated as an addendum to a focus on heterosexual behavior.

Sex surveys in the context of AIDS

With the appearance of AIDS in the early 1980s, the need for information on sexual practices provided a new legitimacy to sex surveys, especially large-scale national surveys of the general population. In addition, for the first time, homosexuality became a major question in sex

surveys of the general population, since one of the main motivations for financing such surveys has been the sexual transmission of HIV.

Table 1 lists the major national surveys of adults that have included questions about homosexuality, including for comparison purposes the non-probabilistic Kinsey surveys and the three surveys from the early 1970s mentioned above. Major national surveys were conducted in France 16, Great Britain 17, and the United States 18 in the early 1990s. A decade later surveys were carried out in Chile 19, Brazil 20, and Australia 21,22. Most surveys included a combination of face-to-face interviews and self-administered questionnaires, to increase reporting rates of sensitive questions on sexual experience. The French and Australian surveys were conducted by telephone, and thus all questions were asked verbally. Only the Brazilian survey asked all the questions face-to-face.

Conceptualization and definition of homosexuality in surveys

Before turning to specific measurement issues in surveys, we must look at the conceptualization of (homo)sexuality. At the most general level, we consider what constitutes "sex". In addition, there is a distinction between sexual acts and sexual partners, even though these two are closely interrelated. These considerations are quite general and apply to all forms of sexuality, although they tend to take on particular shadings in the context of homosexuality. Beyond behavior, there are psychological or cognitive aspects of sexuality such as sexual desire and identity.

In the context of homosexuality, the distinction between sexual acts or experiences and sexual identity becomes particularly important. While it might seem that they are closely interrelated, in practice they do not overlap perfectly 18,23. Depending on the social and cultural context, a homosexual identity may exist quite independently from behavior, e.g., persons may self-identify as homosexual but not currently or even ever have engaged in homosexual behavior; conversely, persons may engage in homosexual activity without identifying as homosexual. Depending on the research question, behavior or identity may be the most important variable of interest. For example in the context of HIV/AIDS prevention, from an epidemiological perspective behavior may be the focus, whereas in the context of developing prevention policy and campaigns the issue of self-identity may play an important role.

What constitutes a sexual act? What makes a particular activity sexual? (see Michaels & Gi-

Table 1

Sexual behavior surveys with questions on homosexuality (adults).

Survey/Reference	Publication year	Country	Population		Sampling	Type of interview	Date of data collection
			Age range	Sample size			
Kinsey et al. ³² (males)	1948	USA	8+	5,300	Non probability	Face-to-face	1938-1947
Kinsey et al. ³³ (females)	1953	USA	2-90	5,940			
Klassen et al. ¹³	1989	USA	16+	3,018	Probability (national)	Face-to-face and self-administered	1970
Simon et al. ¹²	1972	France	20-65+	2,625	Quotas (national)	Face-to-face and self-administered	1970
Kontula & Haavio-Mannila ¹⁵	1995	Finland	18-54	2,188	Probability (national)	Face-to-face and self-administered	1971
NATSAL (Wellings et al. ¹⁷)	1994	Great Britain	16-59	18,876	Probability (national)	Face-to-face and self-administered	1990-1991
ACSF (Spira et al. ¹⁶)	1993	France	18-69	4,820 long form out of 20,055	Probability (national)	Computer-assisted telephone	1991-1992
NHSLs (Laumann et al. ¹⁸)	1994	USA	18-59	3,432	Probability (national)	Face-to-face and self-administered	1992
FINSEX (Kontula & Haavio-Mannila ¹⁵)	1995	Finland	18-74	2,250	Probability (national)	Face-to-face and self-administered	1992
Ministerio de Salud ¹⁹	2000	Chile	18-69	5,047	Probability (national)	Face-to-face and self-administered	1998
Ministério da Saúde ²⁰	2000	Brazil	16-65	3,600	Probability (national)	Face-to-face	1997-1998
ASHR (Smith et al. ²¹)	2003	Australia	16-59	19,307	Probability (national)	Computer assisted telephone	2001-2002

ami ²⁴ for a parallel discussion of these questions primarily in a more normative and heterosexual context). One might argue that when dealing in the realm of the normative, i.e., the heterosexual, that “penile-vaginal intercourse” is the paradigmatic form of sex with another person. For example, the concept of first (heterosexual) sex, of the loss of “virginity” is usually conceived in terms of this act. Of course, in the context of sex with a person of the same sex, it is precisely this act that is impossible. Heterosexuality is the norm in the societies where these surveys have been done, an often unmarked, universalized norm and hence the formulation to the question of “first sex” is often assumed to mean first heterosexual intercourse.

There are a number of other candidates for defining aspects of a sexual act: arousal, genital contact, penetration, and orgasm. There are also certain activities which seem to be strongly associated with the sexual, e.g., kissing, especially deep or tongue kissing, and manual stimulation of certain body parts, especially the breast, what in Kinsey’s day was called “petting”. In surveys of young people (a full discussion of which is beyond the scope of this article), these aspects of sexuality are often exam-

ined in greater detail. Since the sex life of youth is shorter and formative of later experiences, researchers have focused on how it begins, with what kind of acts, in what kind of relationships. For example, first tongue kiss and first body and genital caresses are considered as stages in the entry into sexuality and examined in themselves ²⁵. The types of relationships in which young people engage, e.g., one in which you are in love with someone (“*namoro*” in Portuguese) or a “one-night stand” (“*ficar*” in Portuguese) are analyzed ²⁶. The gender of the partners with whom such acts or relationships take place is also examined. What is defined as the first sexual relation, for the respondent and/or for the researchers, is an important question that needs to be investigated with some care ²⁷. Usually the details and context of these sexual acts are not taken into account for adults.

There is no generally agreed or common definition of what constitutes a sexual act or sex partner in the different sex surveys we have examined. There are also differences in the degree to which surveys provide an explicit definition of sex or sex partner. Some are extremely precise, while others allow respondents to decide themselves or to apply their own definition.

Definition of "sex"

The 1992 *U.S. National Health and Social Life Survey* (NHSL) ¹⁸ focused on sex partners dividing questions about sexual behavior into sections devoted to primary partnerships (marital or cohabitational partners), partners in the previous year, and total lifetime partners. Questions about first sex were asked later in a section dealing with childhood and adolescence. The primary definition of sex appears at the beginning of the section on recent partners (previous year) and defines "sex or sexual activity" as "mutually voluntary activity with another person that involves genital contact and excitement/arousal, i.e., feeling really turned on, even if intercourse or orgasm did not occur" ¹⁸ (p. 622). Since partners are enumerated in this section, homosexuality is not mentioned directly and instead is inferred from the partner's gender.

In the *British National Survey of Sexual Attitudes and Lifestyles* (NATSAL) ¹⁷, the first sexual behavior question is about "sexual experience" in a Kinsey scale format and is asked in the face-to-face portion of the questionnaire on a card which is handed to the respondent. It defines "sexual experience" as "any kind of contact with another person that you felt was sexual (it could be just kissing or touching, or intercourse or any other form of sex)" ¹⁷ (p. 402). This question is used to determine whether or not respondents receive the self-administered portion of the questionnaire detailing sexual partners and activities.

The French ACSE, or *Analyse des Comportements Sexuels en France* ¹⁶, does not give a definition of sex but instead simply asks respondents whether they have ever had sexual contact ("*rapport sexuel*") and respondents who say no are asked whether they have ever made love or had sexual relations ("*fait l'amour ou eu des relations sexuelles*"). For those who respond affirmatively to either of these questions, a question about the gender of the first partner is asked, then a question using a Kinsey-type scale about attraction to and then a question about the gender of lifetime sex partners. The latter question then serves as a filter as to whether the respondent receives questions about homosexual (and heterosexual) partners and practices.

Even though the 1992 Finnish sex study, FINSEX, was carried out in the AIDS era, it largely replicated the questions from a 1971 study conceived in a very different era. Homosexuality therefore plays an extremely minor role. All the main sex questions presume heterosexuality. Only at the very end of quite detailed ques-

tions about first (heterosexual) sex partners and practices and those of subsequent life are several questions about homosexuality asked. At this point, there is a question about sexual attraction, formulated in terms of "orientation of your sex drive" in the 1971 version, and then a question about ever having had "*sexual experiences (arousing, fondling) or intercourse with a person of your own sex*" ²⁸ (p. 275).

The Brazilian ²⁰ and Chilean ¹⁹ surveys are similar. Both ask initial questions about having had sexual relations, which are defined as "sex with penetration, vaginal, oral, or anal" and the sex of the first sex partner. Both surveys also asked questions about intimate contact (caresses) with another person.

The Australian survey defined sexual experience much as in the British survey ²¹. Sexual experience is examined in relation to the sex of partners using a version of a six-point Kinsey-type scale.

The question of homosexual desire or attraction

Unlike questions about homosexual behavior, with their variations and complexity in the definitions of sexual behavior, questions about sexual attraction are practically identical in almost all surveys. The most common form of this question is a Kinsey-type scale of attraction using a five-point scale varying from attracted only to persons of the opposite sex to attracted only to persons of the same sex. The question is worded in terms of males (or men) and females (or women). The British, Chilean, and Australian surveys include a sixth category of not being attracted to anyone. There is some variation in when the question is asked. The question on attraction is usually asked before questions about behavior, but in the U.S. and the Chilean surveys it appears later in the questionnaire.

Sexual identity

Some surveys ask a question about self-identification as heterosexual, homosexual, or bisexual. In national surveys, this question only began to appear in the 1990s, since the issue of sexual identity is relatively recent and a product of the development of visible, organized gay/lesbian communities and movements which emerged in a major way in the late 1960s or 1970s. A typical version is found in the U.S. survey: "do you think of yourself as heterosexual, homosexual, bisexual or something else?" ¹⁸. Still, several major AIDS-era surveys do not ask such a question. It does not appear in the French or

British surveys, for example. In France, such a question has only been asked thus far in surveys of homosexual populations, as if they were the only people who have to define themselves in terms of sexual orientation. Interestingly, the Chilean survey includes such a question.

Time period and numbers of partners

One of the central issues in HIV/AIDS-era surveys is the number of sex partners. Usually such questions are framed in terms of specific time periods. These surveys have usually adopted the following time periods: lifetime, 5 years, 1 year, and occasionally shorter time spans such as a week or a month. One reason for using shorter time spans is to enhance recall and accuracy of reporting. Number and sex of partners can only be understood sociologically in conjunction with information on numbers of relationships and their duration, data which is often missing from surveys. This is particularly important for understanding persons who have had partners of both sexes over their lifetime, the case for the majority of respondents who have had homosexual experiences.

Treatment of men and women

Despite the AIDS impetus behind the national surveys since the 1980s and the primary concern with male homosexuality, men and women are mostly treated comparably. Questionnaires generally ask the same questions of both sexes. Data analysis on homosexuality in the primary reports from these surveys usually treats men and women in parallel. This is definitely the case in the main national surveys from the early 1990s, the British, French, and U.S. surveys. In the main scientific report on the British and U.S. surveys^{17,18}, men and women are analyzed together and included in parallel in the same tables. In the French survey, on the other hand, the first detailed analysis of data on homosexuality only considered men's behavior^{29,30}. The first article that analyzed the French data on homosexual behavior of women was a comparative analysis with the U.S. survey³¹.

Homosexuality rates reported in national surveys

Table 2 presents key summary data on reported rates for various aspects of homosexuality from all the national surveys we have discussed in this article. We selected 6 measures: attraction to persons of the same sex, four separate measures of homosexual experience defined in

terms of time period, and finally for those surveys which include it, the distribution of self-identification measures.

Interestingly, in spite of Kinsey's recognition of a psychic dimension when measuring the balance of heterosexuality and homosexuality, when ones actually examines what is tabulated and quantified in his publications, the primary focus is on "overt" sexual behavior. In the volume on male sexuality, the first statistic listed when discussing homosexuality rates is that 37% of men had had at least one homosexual experience "*to the point of orgasm between adolescence and old age*"³² (p. 650). The comparable figure for women in Kinsey's second volume is 13%³³.

A detailed analysis was finally published in 1989 with the data on male homosexual behavior from the 1970 Kinsey Institute national survey¹⁴. All of the sexual behavior questions were asked via self-administered forms and thus had much missing data. The 1989 analysis used sophisticated statistical methods of data imputation to minimize the impact of the missing data. It found that "*20.3 percent of adult men in the United States in 1970 had sexual contact to orgasm with another man at some time in life; 6.7 percent had such contact after age 19; and between 1.6 and 2.0 percent had such contact within the previous year*"¹⁴ (p. 338). Unfortunately, the data from the women respondents is not reported in this detailed analysis. The raw percentages on the questions in the survey are reported separately for men and women in Klassen et al.¹³. The lifetime percentage for women appears to be about 7%, with about 2.5% reporting such an experience after age 19.

Interestingly, lifetime rates from the Kinsey research and the 1970 survey are much higher than the rates reported in other surveys. These rates have often been attributed to the sample design. But another explanation is that these higher rates reflect historical changes in sexual behavior. It may be that youthful homosexual behavior has actually declined since the 1980s due to a confluence of factors including increasing rates of youthful heterosexual behavior, the impact of AIDS, and the impact of increased public attention to homosexuality due both to AIDS and the emergence of a politically active and publicly visible gay movement and community. Youthful sexual experiences between persons of the same sex, male or female, may be avoided because it would be thought to indicate a homosexual identity or orientation. Comparing data from two German surveys on adolescent sexuality collected twenty years apart, Schmidt and his colleagues found a sig-

Table 2

Rates of reporting of homosexuality (adults).

Survey/Reference	Country	Year of survey	Any attraction to persons of the same sex (%)		Same sex sexual experience or contact (%)		Same sex sexual partner(s) in life time (%)		Same sex sexual partner(s) in past 5 years (%)		Same sex sexual partner(s) in past year (%)		Self-identification (homosexual/bisexual/heterosexual)	
			Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Kinsey et al. 32/ Kinsey et al. 33	USA	1948 1953	-	-	37*	13*	-	-	-	-	-	-	-	-
Fay et al. 14	USA	1970	-	-	20.3**	-	-	-	-	1.6-2.0**	-	-	-	-
Simon et al. 12	France	1970	-	-	-	-	5	2	1	1	1	0	-	-
Kontula et al. 28	Finland	1971	7.6***	7.7***	-	-	-	-	-	-	-	-	-	-
NATSAL (Wellings et al. 17)	Great Britain	1990-1991	5.5	4.5	5.2-6.1	2.7-3.4	3.5	1.7	1.4	0.6	1.1	0.4	-	-
ACSF (Spira et al. 16)	France	1991-1992	4.6	6.6	-	-	4.1	2.6	1.4	0.4	1.1	0.3	-	-
NHSLS (Laumann et al. 18)	USA	1992	6.3	4.0	-	-	6.9	3.2	4.1	2.2	2.8	1.2	2.0/0.8/ 96.9	0.9/0.5/ 98.6
FINSEX (Kontula et al. 28)	Finland	1992	6.8	6.0	-	-	4.2	4.2	-	-	-	-	-	-
Ministerio de Salud 19	Chile	1998	0.6	0.6	-	-	0.5	0.1	-	-	-	-	0.3/0.1/ 99.2	0.1/0.1/ 99.2
Ministério da Saúde 20	Brazil	1997-1998	-	-	-	-	-	-	2.5	2.5	-	-	-	-
ASHR (Smith et al. 21)	Australia	2001-2002	6.8	12.8	5.9	8.6	5.0	5.7	3.0	3.0	1.9	1.5	1.6/0.9/ 97.4	0.8/1.4/ 97.7

* "Overt contacts to the point of orgasm" (Kinsey et al. 33; p. 475);

** Men 21 and older, with imputation of missing data 14;

*** "Orientation of sex drive".

nificant decline in reported homosexual behavior for boys between 1970 and 1990 (18% versus 2%), but a stable rates for girls (6%) 34. However when one examines the two French surveys, collected twenty years apart, the percentages of lifetime homosexual behavior for both men and women are very close. The Simon survey and the ACSF use very different methodologies, with the former asking only a single question about homosexual relations at the end of a questionnaire that is primarily concerned with reproductive behaviors, whereas the latter, motivated by HIV/AIDS, reserves an important place for questions concerning homosexuality from the very beginning of the interview.

Rates of homosexual behavior in surveys in the HIV/AIDS era are generally similar, with a few interesting and potentially important differences. Since homosexuality in all these societies receives substantial social disapproval, one concern is the accuracy of reporting of such behaviors, and such rates have generally been considered to be lower bound estimates. One may wonder about the reasons for these variations. For example, the behavior rates for

both men and women in the NHSLS are consistently higher than all the other surveys from the early 1990s. One might ask whether this is due to differences in behavior in the United States as compared to Britain, France, and Finland. Or is this due to national differences in the ease of talking about one's own homosexual experiences that might affect responses in surveys? Still further, are these differences due to a combination of methodological differences in questionnaire design and wording? The Finnish survey, by replicating the framework and questions from 1971, presumes heterosexuality and treats homosexuality as an afterthought. The British, French, and U.S. questionnaires were designed to treat sex with persons of the same sex as a parallel, equivalent, and expected alternative to sex with persons of the other sex. However, the French and British surveys both ask a single question in a Kinsey-type scale about the sex of lifetime partners, which then serves as a filter. Respondents who say they have never had a same-sex sexual experience are asked no further questions about homosexual contacts. On the other hand, in the U.S. survey there is no single filter question

about sex of partners. Instead, at different points in the questionnaire, respondents are asked to enumerate their partners and their gender. Whatever the reason, there are somewhat higher rates of lifetime, five-year, and past-year reporting of same-sex partners in the U.S. survey.

The Finnish survey stands out as the only survey from the 1990s that produced equivalent rates of lifetime same-sex sexual partners for men and women. All of the other surveys in this group produced rates for men that were approximately double the rates reported by women. Again, one can only wonder if this is due to a greater degree of gender similarity in behavior in Finland or whether it is an artifact of survey design. A similar question arises in comparing the Chilean and Brazilian survey results. The Chilean survey found extremely low rates of reporting of homosexuality. Less than 1% of men and women on all of the various dimensions report any same-sex attraction, behavior, and identity. The Brazilian survey found a more substantial rate of same-sex partners in the previous five years, a rate that was the same for men and women. The Australian survey, which is also the most recent, found relatively high homosexuality rates. Strikingly, it is the only survey to find higher rates for women than men for both sexual experience/contact and for lifetime partners.

Discussion

Developing surveys on homosexuality and analyzing their findings cannot be separated from social and political dynamics that go beyond narrow scientific and technical issues³⁵. For example, questions about homosexuality rates at a given time and in a given country are almost inevitably contested. The stakes are different for different segments of society: gay men and lesbians themselves, policymakers, political leaders, religious leaders, etc. While it is often difficult to separate scientific and social concerns, researchers need to pay close attention to conceptual and methodological issues in the design and analysis of surveys. The authors hope that this review will contribute to such a process.

The relationship between methodological issues in surveys such as sampling, interviewing modes, and formulation of questions on rates of self-reported homosexual feelings and experiences is a complex and unresolved question. Thus, determining to what extent observed differences in homosexuality rates are due to reporting versus actual practices will de-

pend in part on careful attention to what is being compared, e.g., sexual attraction, identity, or behavior, and the structuring of questionnaires. Attention should also be given to less easily quantifiable and replicable aspects of survey design and execution such as interviewer training and framing and organization of the interview, e.g., explanation of the purposes of the research in gaining cooperation by respondents and insuring maximum privacy and confidentiality. Subtle differences in language and ordering of questions are also important.

What is the relationship between the social context surrounding homosexuality in a given society and the different rates of persons who say they have engaged in homosexual behavior? Evidence points to variation in rates due to changes in the historical and cultural context such as changes in homosexual behavior from the 1940s to 1970s compared to the HIV/AIDS period. We also find much lower rates in recent surveys in Latin America compared to North American, Australian, and European surveys. Are these due to differences in reporting, or do they reflect differences in practices? In surveys that have examined the relationship between respondents' socio-demographic characteristics and observed rates of same-sex behavior, overall, for both men and women, one finds higher rates among the more educated, the unmarried or divorced, those without children, and those living in larger cities³¹. These social and demographic factors are associated with a greater social liberalism and a greater degree of independence and freedom from social pressures, especially those associated with marriage and family. It is difficult to separate the degree to which these factors facilitate higher rates of reporting homosexual behavior from the degree to which they facilitate homosexual behavior itself. In addition, inequalities between men and women, which are found everywhere (although in different forms in different societies), condition the possibilities for homosexual expression by men and women. Heteronormativity, the social pressure to conform to norms of heterosexuality especially as regards marriage, reproduction, and family, is stronger for women than men, which may explain the widely observed higher rates of self-reported homosexual behavior by men. However it should be noted that gender differences in rates of reporting of same-sex attraction is much less marked. Further longitudinal and comparative research is needed that carefully controls for methodological differences in order to distinguish actual behavior differences in various populations and societies. In addition, to ad-

vance our understanding, we need a precise analysis of the relations between the sexes as well the social conditions underlying the possibilities of homosexual expression in different countries.

Resumo

O artigo traz uma revisão das principais pesquisas nacionais sobre sexualidade que apresentam perguntas sobre homossexualidade, com foco nas questões conceituais e metodológicas sobre as definições de sexo, os aspectos de medição da homossexualidade, as técnicas de amostragem e de entrevistas e o formato do questionário. As taxas de declaração sobre atração pelo mesmo sexo, comportamento, parceiros e identidade também são apresentadas e comparadas. O estudo da homossexualidade em inquéritos populacionais foi moldado com base em tradições de investigação e questões provenientes desde a sexologia até a epidemiologia do HIV/AIDS. O comportamento sexual é assunto central nas pesquisas sobre sexualidade desde Kinsey. Os temas sobre atração sexual, identidade e/ou orientação sexual surgem mais recentemente. São abordadas e discutidas as diferenças no tratamento de homens e mulheres na formulação e análise das pesquisas, assim como as taxas de respostas em diferentes pesquisas, em distintos países e momentos históricos. Ressaltamos a relevância de que sejam consideradas tanto mudanças metodológicas quanto sociais para interpretar as diferenças constatadas.

Homossexualidade; Comportamento Sexual; Sexualidade

Contributors

The two authors of this article made fully equal contributions to it, sharing equally in its conception and execution.

References

1. Pollak M. Les vertus de la banalité. *Le Débat* 1981; 10:132-43.
2. Bell AP, Weinberg MS. Homosexualities: a study of diversity among men and women. New York: Simon & Schuster; 1978.
3. Rogers SM, Turner CF. Male-male sexual contact in the U.S.A.: findings from five sample surveys, 1970-1990. *J Sex Res* 1991; 28:491-519.
4. Sandfort T. Homosexual and bisexual behaviour in European countries. In: Hubert M, Bajos N, Sandfort T, editors. *Sexual attitudes and HIV/AIDS in Europe. Comparisons of national surveys*. London: UCL Press; 1998. p. 68-105.
5. Kontula O. Bi- and homosexuality in the National Surveys in Europe. In: Digoix M, Festy P, editors. *Same sex couples, same sex partnerships, and homosexual marriages: a focus on cross-national differentials*. Paris: Institut National d'Études Démographiques; 2004. p. 211-23. (Documents de Travail, 124).
6. Wolff C. Magnus Hirschfeld, a portrait of a pioneer in sexology. London: Quartet Books; 1986.
7. Lhomond B. Mélange des genres et troisième sexe. In: Hurtig MC, Kail M, Rouch H, editors. *Sexe et genre*. Paris: Editions du CNRS; 1991. p. 109-14.
8. Lauritsen J, Thorstad D. The early homosexual rights movement (1864-1935). New York: Times Change Press; 1974.
9. Robinson P. The modernization of sex. New York: Harper & Row; 1976.
10. Gagnon JH. Gender preference in erotic relations: the Kinsey scale and sexual scripts. In: Whirter MC, Sanders SA, Reinisch JM, editors. *Homosexuality/heterosexuality: concepts of sexual orientation*. New York: Oxford University Press; 1990. p. 177-207.

11. Cochran WG, Mosteller F, Tukey JW. Statistical problems of the Kinsey report on sexual behavior in the human male. Washington DC: American Statistical Association; 1954.
12. Simon P, Gondonneau J, Mironer L, Dourlen-Rollier AM. Rapport sur le comportement sexuel des Français. Paris: Julliard/Charron; 1972.
13. Klassen AD, Williams CJ, Levitt EE, O'Gorman HJ. Sex and morality in the U.S.: an empirical enquiry under the auspices of the Kinsey Institute. Middletown: Wesleyan University Press; 1989.
14. Fay RE, Turner CF, Klassen AD, Gagnon JH. Prevalence and patterns of same-gender contact among men. *Science* 1989; 243:338-48.
15. Kontula O, Haavio-Mannila E. Sexual pleasures. Enhancement of sex life in Finland, 1971-1992. Aldershot: Dartmouth; 1995.
16. Spira A, Bajos N; Le Groupe ACSE. Les comportements sexuels en France. Paris: La Documentation Française; 1993.
17. Wellings K, Field J, Johnson AM, Wadsworth J. Sexual behaviour in Britain. London: Penguin; 1994.
18. Laumann EO, Gagnon JH, Michael RT, Michaels S. The social organization of sexuality: sexual practices in United States. Chicago/London: University of Chicago Press; 1994.
19. Ministerio de Salud, Gobierno de Chile. Estudio nacional de comportamiento sexual. Primeros analisis, Chile 2000. Santiago: Gobierno de Chile/ANRS; 2000.
20. Ministério da Saúde. Comportamento sexual da população brasileira e percepções do HIV/AIDS. Brasília: Ministério da Saúde; 2000.
21. Smith AMA, Rissel CE, Richters J, Grulich AE, de Visser RO. Sex in Australia. The rationale and methods of the Australian Study of Health and Relationships. *Aust N Z J Public Health* 2003; 27:106-17.
22. Grulich AE, de Visser RO, Smith AMA, Rissel CE, Richters J. Sex in Australia. Homosexual experience and recent homosexual encounters. *Aust N Z J Public Health* 2003; 27:155-70.
23. Michaels S. The prevalence of homosexuality in the United States. In: Cabaj RP, Stein TS, editors. Textbook of homosexuality and mental health. Washington DC: American Psychiatric Press; 1996. p. 43-63.
24. Michaels S, Giami A. Sexual acts and sexual relationships: asking about sex in surveys. *Public Opin Q* 1999; 63:401-20.
25. Lagrange H, Lhomond B, editors. L'entrée dans la sexualité. Le comportement des jeunes dans le contexte du sida. Paris: La Découverte; 1997.
26. Heilborn ML, Aquino E, Bozon M, Knauth D, organizadores. O aprendizado da sexualidade: um estudo sobre reprodução e trajetórias sexuais de jovens brasileiros. Rio de Janeiro: Garamond; 2005.
27. Lhomond B. Qu'est ce qu'un rapport sexuel? Remarques à propos des enquêtes sur les comportements sexuels. *Mots* 1996; 49:106-15.
28. Kontula O, Haavio-Mannila E, Suoknuuti H. The tables of all questions of the 1992 and the comparable questions of the 1971 survey. Helsinki: Kansanterveyslaitoksen Laitokset; 1994.
29. Messiah A, Mouret-Fourme E. Homosexualité, bisexualité. *Eléments de socio-biographie sexuelle. Population* 1993; 5:1354-77.
30. Messiah A, Mouret-Fourme E; The French National Survey on Sexual Behavior Group. Sociodemographic characteristics and sexual behavior of bisexual men in France: implications for HIV prevention. *Am J Public Health* 1995; 85:1543-6.
31. Lhomond B, Michaels S. Homosexualité/hétérosexualité: les enquêtes sur les comportements sexuels en France et aux USA. *Journal des Anthropologues* 2000; 82/83:91-111.
32. Kinsey AC, Pomeroy WB, Martin CE. Sexual behavior in the human male. Philadelphia: Saunders; 1948.
33. Kinsey AC, Pomeroy WB, Martin CE, Gebhard PH. Sexual behavior in the human female. Philadelphia: Saunders; 1953.
34. Schmidt G, Klusmann D, Zeitzschel U, Lange C. Changes in adolescents' sexuality between 1970 and 1990 in West Germany. *Arch Sex Behav* 1994; 23:489-513.
35. Lhomond B. Le sens de la mesure. Le nombre d'homosexuel/les dans les enquêtes sur les comportements sexuels et le statut de groupe minoritaire. *Sociol Soc* 1997; XXIX:65-73.

Submitted on 15/Jun/2005

Final version resubmitted on 05/Dec/2005

Approved on 19/Jan/2005