Best Practices for Asking Questions about Sexual Orientation on Surveys

Created by the Sexual Minority Assessment Research Team (SMART),
a multidisciplinary and multi-institutional collaboration

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About

In 2003 the Ford Foundation began funding a multi-year project that sought to increase the quantity and quality of data on gay, lesbian, and bisexual people, and, by extension, on heterosexual people. Over a five-year period, many researchers participated in the expert panel funded by the grant, thus contributing to the knowledge embodied in this report. This multidisciplinary expert panel pooled decades of knowledge and experience, conducted new methodological research, and met with many survey specialists to identify the best scientific approaches to gathering data on sexual orientation. This panel, known collectively as the Sexual Minority Assessment Research Team (SMART), met regularly to discuss these data issues. By "sexual minority," we mean people who are attracted to or have had experience with same-sex sex partners, or someone who identifies as lesbian, gay, or bisexual.

This document is the culmination of the work of this expert panel. The following individuals drafted sections of the report, met to discuss and refine the drafts, and revised and commented on later drafts:

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Table of Contents

Executive Summary of Recommenations i

1. Measuring Sexual Orientation on Surveys: Why Ask 1

2. Measuring Sexual Orientation on Surveys: What to Ask 6

3. Measuring Sexual Orientation on Surveys: How and Where to Ask 17

4. Considerations: Age and Sexual Orientation 24

5. Racial/Ethnic and Cultural Considerations in Collecting Data on Sexual Orientation 28

6. Considerations: Collecting Data on Transgender Status and Gender Nonconformity 33

7. Best Practices for Analyses of Sexual Orientation Data 38

Abbreviations Used 46

Additional Resources 47

Executive Summary of Recommenations

INTRODUCTION: WHY ASK QUESTIONS ON SEXUAL ORIENTATION

Health, economic, and social surveys have always had to adapt to changing demands and changing times. In recent years, public policy debates have heightened the need for high quality scientific data on the sexual orientation of adults and young people in the United States. Discussions of civil rights, program evaluation, public health, and the delivery of human services must rely on sound facts and analyses that come from survey research, but often those facts are not available in the context of gay-related policy issues because lesbian, gay, and bisexual (LGB)[1] people cannot be identified in surveys without specific questions pertaining to sexual orientation.

Fortunately, several private and some publicly funded surveys in the United States have begun to ask questions that allow identification of dimensions of sexual orientation, which has allowed researchers to identify the important role of sexual orientation as a predictor of health, social, and economic outcomes. Indeed, the failure to account for sexual orientation effects may lead to inaccurate scientific conclusions about targeting health interventions or identifying health risk factors, for example.

Asking questions on sexual orientation is not only necessary for scientific, practical, and policy purposes, but the recent research documented in this report demonstrates that it is also possible to include such questions on surveys without sacrificing data integrity or respondent retention. This report addresses the questions that arise once researchers have decided to include sexual orientation questions, including what to ask, where to ask it, and how to analyze the data, all in the context of a diverse population. The report outlines some "best practices" for actually putting the decision to ask sexual orientation questions into practice.

The report presents the findings from a multi-year effort of an expert panel of scholars from several disciplines in the health and social sciences, including economics, sociology, psychology, epidemiology, public health, and political science. Thanks to a generous grant from the Ford Foundation, we have had the opportunity to conduct original methodological research, analyze newly available sources of data, discuss issues with administrators and researchers in statistical agencies, and meet to cull all of those experiences into this document.

WHAT TO ASK

Questions on existing large-scale surveys have varied widely, and we have learned a great deal from the different survey experiences about the types of questions that have worked and how to avoid problems. Conceptually, sexual orientation has three major dimensions, and below we present the recommended item for each dimension that draws on our research and experiences with using these items:

[1] A list of all abbreviations is available on page 46.

- *Self-identification: how one identifies one's sexual orientation (gay, lesbian, bisexual, or heterosexual)*

  Recommended Item: Do you consider yourself to be:
  a) Heterosexual or straight;
  b) Gay or lesbian; or
  c) Bisexual?

- *Sexual behavior: the sex of sex partners (i.e. individuals of the same sex, different sex, or both sexes).*

  Recommended Item: In the past (time period e.g. year) who have you had sex with?
  a) Men only,
  b) Women only,
  c) Both men and women,
  d) I have not had sex

- *Sexual attraction: the sex or gender of individuals that someone feels attracted to.*

  Recommended Item:
  People are different in their sexual attraction to other people. Which best describes your feelings? Are you:
  a) Only attracted to females?
  b) Mostly attracted to females?
  c) Equally attracted to females and males?
  d) Mostly attracted to males?
  e) Only attracted to males?
  f) Not sure?

We also recommend that sexual orientation be asked separately from marital status and cohabitation in surveys. However, for all surveys – including those that do not directly ask about sexual orientation – we recommend that the marital status and cohabitation questions include response options that take into account the diversity of families and the changing legal circumstances of sexual minority individuals and households. At a minimum, we recommend that all marital status questions allow a response option for "living with a partner" and, ideally, that a complete household sex roster for adults and children be available for researchers to maximize the usefulness of this information.

HOW AND WHERE TO ASK

The next issue concerns making decisions about how to conduct the survey—the mode—and where to place the questions. The researcher's concern is often that respondents either will not answer sensitive questions like sexual orientation or will answer with an inaccurate response. The choice of an appropriate mode of data collection will mitigate these problems. In particular, enhancing the privacy of the survey environment appears to encourage respondents to answer sensitive questions, including those related to sexual orientation, and to report accurately. Careful placement, mode adaptations, and interviewer training may improve the quality of sexual orientation data that is collected by a given survey by providing for a level of privacy that is sufficient to encourage accurate responses.

Survey mode: When possible, we recommend placing sexual orientation-related questions on self-administered portions of a survey. This method could involve inclusion of a subset of questions on a paper-and-pencil self-administered questionnaire (as done in the General Social Survey) or inclusion on a self-administered computer-assisted interview (as done in the National Survey of Family Growth).

Interviewer training: We recommend that training be provided to interviewers who will ask questions about a dimension of sexual orientation. Training should explain the reason(s) the question has been added and should review any clarifying language to be provided about response categories and privacy protection of responses.

Placement of questions: We recommend that the placement of questions on sexual orientation be tailored to meet the needs and goals of each survey. For general public health surveys that include questions about HIV related behaviors, sexual behaviors, or reproductive behaviors, we recommend including questions about recent (e.g. within the past year or within the past five years) and lifetime same-sex sexual behavior with other questions related to sexual behavior or at the end of the relevant module. For other surveys (except school-based classroom surveys of adolescents which are discussed below), we recommend including a direct sexual orientation identity question at the end of the standard "Demographics" section. For surveys with a strong reason to include multiple measures of sexual orientation (e.g. mental health), we recommend including a battery of questions about same-sex sexual attraction, same-sex sexual behavior, and sexual orientation identity. For surveys that include a self-administered component for "sensitive" topics, we recommend including sexual orientation identity, attraction, and behavior questions in that section.

AGE CONSIDERATIONS

What to Ask: Sexual orientation questions have been asked on large-scale school-based surveys of adolescents around the world since the mid-1980's. Because physical sexual maturity, sexual orientation, and sexual relationships most commonly develop during the adolescent years, all of the sexual orientation questions have limitations that should be considered. Because many adolescents are not sexually experienced, questions that focus on gender of sexual partners will likely misclassify the majority of adolescents with respect to sexual orientation. Attraction is generally a better measure for adolescent populations, except in studies specifically focused on sexual health and sexual risks, although a significant proportion of younger adolescents may not have experienced sexual attractions yet.

Survey mode: Adolescence is also the time when sexual orientation-based harassment is the most prevalent, so the stigma associated with specific identity labels may reduce response rates or increase false responses, unless care is taken to ensure privacy and anonymity during survey administration.

Placement of questions: Care should be taken that any sexual orientation question not be placed next to sexual abuse questions. Doing so may yield higher non-response rates. Careful consideration must also be given to survey mode in regard to placement, since many paper-and-pencil surveys of young people place their demographics questions at the beginning of the survey. Placement of sexual orientation questions in the demographics section will mean that most students are still on the same page when the sexual orientation question is viewed, possibly making it more difficult to ensure privacy or anonymity.

RACIAL/ETHNIC AND CULTURE CONSIDERATIONS

The context of racial/ethnic diversity leads to additional methodological considerations related to the cross-cultural equivalence of sexual orientation measures. These considerations are relevant for studying not only racial/ethnic diversity within sexual minority groups, but also sexual diversity within racial/ethnic minority groups.

What to ask: Sexual orientation survey items should be culturally appropriate, relevant, acceptable, and compatible with the respondent's understanding of the construct that the question is intended to measure. However, differences in how sexuality is understood in different racial/ethnic populations underscore the difficulties in generalizing sexual orientation as a social construct and raise questions about cultural equivalence. Also, more research is needed to better understand how attraction and behavior are mapped onto sexual orientation identities. Therefore, when possible we recommend that surveys assess multiple dimensions of sexuality, such as measures of sexual behavior, sexual attraction, and self-identity. When measuring sexual diversity within racial/ethnic minority groups, researchers might also consider including additional response options for sexual orientation identity terms, such as two-spirit, same gender loving, homosexual, down low, or queer, that may turn out to be more relevant for non-white populations.

Sampling: Given differences in population sizes and constructions of sexuality across race/ethnicity and culture, we cannot employ the same set of assumptions about LGB people of color as we do with white LGB communities when determining sampling strategies or devising sampling frames. In some studies, the likelihood of being recruited and the willingness to participate in studies may vary by race/ethnicity. In sampling strategies to study sexual minorities, the careful choice of screening questions when developing sexual minority samples is crucial, and questions that capture a broad range of individuals with same-sex behavior as well as LGB identities may result in a more racially and ethnically diverse sample. Choices of sampling frames and sampling methods should also be attentive to methods that will reduce the likelihood of under-representation of some racial/ethnic groups.

Data analysis issues: An additional consideration when analyzing data on racial/ethnic minority LGB concerns the need to understand factors that mediate the choice of identity categories, particularly discrimination and acculturation.

COLLECTING DATA ON TRANSGENDER STATUS AND GENDER NONCONFORMITY

This report primarily addresses survey questions on sexual orientation, which includes sexual identity, sexual behavior, and sexual attraction. However, the social and political community for LGB people also includes transgender people who would remain invisible on surveys even with a question on sexual orientation. As an umbrella term, transgender refers to people whose gender expression defies social expectation. More narrowly, the term transgender describes a smaller group of people who experience incongruence between birth sex and gender identity.

The health and well-being of transgender people may be among the poorest in the United States. Our lack of knowledge about how to identify transgender respondents on general population surveys hinders efforts to improve the health and socioeconomic status of this marginalized community. While this report cannot make specific recommendations on transgender-related measurement given our current level of methodological knowledge, we describe various measurement approaches and related issues and considerations in an effort to further research on transgender health and welfare.

ANALYSIS OF SEXUAL ORIENTATION DATA

Responsible analyses of sexual orientation data must be cognizant of several important factors that have been observed to potentially distort or misrepresent important nuances. Most importantly, a growing body of research analyzing associations between sexual orientation and a wide variety of social and health outcomes suggests that the best research requires several important practices:

- *Careful consideration of differences among non-heterosexual responses*: Several studies provide evidence that sexual minority respondents can be quite different in their demographic composition and social, health, or economic outcomes. Whenever the size of the sub-groups allows, bisexuals should be separated from lesbian and gay respondents and men and women should be considered separately. In some cases, those who do not respond to sexual orientation questions, select other, or select "I don't know" should not be considered LGB.
- *A thorough understanding of how survey methodologies can affect reliability and validity of responses:* Survey mode, skip patterns, and survey goals will influence reporting of minority sexual orientations.
- *Separate subgroup analyses of outcomes:* Evidence also suggests substantial differences in characteristics of sexual minorities across a variety of demographic sub-groupings. Researchers should always be aware that attributes attributed to the LGB community are largely associated primarily with white LGB individuals since they represent the largest racial/ethnic grouping within the population.
- *Taking contextual issues into account:* Researchers should try to provide appropriate context for their research to aid in the interpretation of results.
- *A clear understanding of time frames:* Researchers should be cautious when analyzing data collected over relatively long periods of time. Social norms may have changed over the period of time data was collected and the willingness of individuals to report same-sex experiences or LGB identities has increased over time. When relying on questions about past sexual behavior, researchers should be cognizant of the issues associated with asking questions about long reference periods. For example, more variation in sexual behavior and attraction may arise from longer time frames and responses to such time frames require longer recall.
- *Recognition of potential sources of measurement error*: Researchers should consider the possibility of false positives, since errors made by those in a large population (e.g. heterosexuals) potentially misclassify individuals into a very small population (e.g. sexual minorities).

1. Measuring Sexual Orientation on Surveys: Why Ask

Much of our knowledge about the family, health, economic, educational, and social status of people in the United States comes from survey data. The incidence and qualitative experiences of poverty, illness, unemployment, or income across racial, ethnic, and gender lines are routinely measured through survey questions. Further, survey data are particularly important for assessing the need for public policies that address racial, ethnic, gender, or group disparities in important health and social outcomes, and data are necessary to evaluate the impact of those policies.

However, we have much less information about whether and how life experiences differ by sexual orientation, creating a large scientific gap between what we know and what we need to know. In recent years, public policy debates have heightened the need for high quality scientific data on the sexual orientation of adults and young people in the United States. In ongoing public discussions about lesbian, gay, and bisexual (LGB)[2] policy issues, the practical importance of good data that accurately describe the lives of same-sex couples, their children, and single LGB people has become increasingly obvious. Discussions of civil rights, program evaluation, public health, and the delivery of human services must rely on sound facts and analyses that come from survey research, but often those facts are not available in the context of gay-related policy issues because LGB people cannot be identified in surveys without specific questions pertaining to sexual orientation.

Health, economic, and social surveys have always had to adapt to changing demands and changing times. For example, as family structures have changed, government and private surveys in the United States have added questions and responses that allow the study of unmarried, cohabiting different-sex couples. Adding sexual orientation questions is simply one more adaptation to the changing world that surveys are designed to study, in this case a world with an increasingly visible LGB population. Other countries are already recognizing this need and are ahead of the United States in asking sexual orientation questions. Canada and the United Kingdom, in particular, are beginning to routinely include sexual orientation questions in a wide range of government surveys.

Fortunately, several private and some publicly funded surveys in the United States have begun to ask questions that allow us to identify some dimensions of sexual orientation. Sexual orientation dimensions include sexual identity (thinking of oneself as lesbian, gay, bisexual, or heterosexual), sexual behavior (the sex of one's sex partners), sexual attraction (the psychological feeling of attraction or desire), or romantic partnership (having a same-sex spouse or unmarried partner) (Gagnon and Simon, 1973).

In the process of asking such questions on a variety of surveys, we have learned important lessons that strengthen the scientific case for including sexual orientation questions in more surveys:

[2] A list of all abbreviations is available on page 46.

- Sexual orientation questions do not threaten respondents' willingness to participate in a survey. Respondents are not more likely to break-off their participation on surveys when they encounter a sexual orientation question (Case, et al., 2006).[3]
- Respondents are willing to answer questions about sexual orientation. Response rates on such questions are higher than rates for much more commonly included questions, such as income (e.g. Conron, Mimiaga, and Landers, 2008).
- Over time, respondents have become more likely to indicate that they may have a lesbian, gay, or bisexual sexual orientation. For instance, Census Bureau surveys have found a steadily increasing number of individuals who report having a same-sex unmarried partner (Gates, 2007).
- Large numbers of researchers have analyzed these data whenever the surveys become available, indicating enormous scientific demand for data on sexual orientation.
- Perhaps most important, as the next paragraph details, these studies clearly indicate that sexual orientation is often an important predictor of health and social outcomes. Therefore, the failure to control for sexual orientation may lead to inaccurate conclusions about targeting health interventions or identifying risk factors, for example.

Indeed, recent research suggests that the need to know more about LGB people cuts across many areas of policymaking and research:

- *Families:* Understanding American families and households requires the ability to identify the many forms that families take in the United States. LGB people form committed family relationships, and many LGB individuals and couples are raising children. For instance, in Census 2000, one third of female same-sex unmarried partner couples and a fifth of male couples report the presence of "their own children under 18" living in their households (Simons and O'Connell, 2003). Gates and Ost (2004) demonstrate the geographic diversity of families headed by same-sex couples.
- *Health Disparities:* The national health objectives set forth in Healthy People 2010 mandate that the Department of Health and Human Services (DHHS) monitor and eliminate health disparities between different segments of the population. A growing body of research suggests that measures of mental and physical health may differ between heterosexual people and LGB people (e.g. Diamant, et al., 2000; Dean, et al., 2000; Cochran, 2001; Mays and Cochran, 2001; Cochran, Sullivan, and Mays, 2003), and earlier work led to the inclusion of sexual orientation in the list of disparities to be eliminated (DHHS, 2000). In addition, LGB people in couples appear to be much more likely to be uninsured than are married heterosexual people (Ash and Badgett, 2006), which may lead to or exacerbate some of the observed health differences.
- *Business operations*: Businesses ask for information about LGB people to make important decisions. Employers who want to maintain competitive compensation packages by adding domestic partner coverage seek data on how many people will sign up for such benefits (see Ash and Badgett, 2006), how many of their competitors offer such benefits, and how large will the tax impact be for the employer and employees. Human resource managers need better information for planning, including developing information to inform diversity training and workplace climate policy. Companies that want to define and locate the LGB market must largely rely on data from convenience samples, which usually lead to overestimates of the size and affluence of the gay market (Badgett, 2001).

[3] In addition, researchers affiliated with the National Survey of Family Growth and the National Epidemiologic Survey on Alcohol and Related Conditions have provided the same finding about the lack of break-offs to one or more authors of this report.

- *Employment and earnings*: Getting an accurate picture of the economic standing of individuals and families in the United States means understanding the possible differences in employment outcomes of population subgroups, like LGB people. An expanding body of research using the General Social Survey (GSS) and the Census has found that gay men (or men with same-sex partners) earn less than heterosexual men, while lesbians often appear to earn somewhat more than heterosexual women (Allegretto and Arthur, 2001; Badgett, 1995; Black, Makar, Sanders, and Taylor, 2003; Blandford, 2003; Klawitter and Flatt, 1998). Such findings have potential public policy implications with respect to outlawing employment discrimination based on sexual orientation.
- *Youth and education*: Educating and raising healthy young people requires understanding the challenges faced by sub-groups of youth, including LGB young people. A series of papers using Youth Risk Behavior Survey (YRBS) data have demonstrated that LGB young people face pressure and prejudice in schools and from peers, and rates of certain risk behaviors, such as suicide attempts, are more common among LGB youth (Remafedi, 1990; Garofalo, 1998).

Unfortunately, at the same time that the need for data on sexual orientation has grown, the limitations of existing American data have also become clearer. With only a small number of surveys that include questions on sexual orientation, the potential for research that can be generalized to the larger population is limited. For example, there is evidence that analyses of couples may give biased predictions if readers attempt to apply findings to non-coupled individuals. We have inadequate data with which to ask and answer important questions about gay-related employment, education, and health issues for LGB individuals and their families. We have many more questions than answers.

In the absence of survey data from probability samples, in particular, scholars, policymakers, and the general public run the risk of falling back on stereotypes and myths about the experiences and social situations of LGB people. While researchers have developed more sophisticated data collection methods than simple convenience sampling (e.g. stratified sampling, social network driven sampling, venue sampling, etc.), there is no substitute for full probability sampling when attempting to generalize from a smaller group to the larger population.

As later sections of this report document, recent scholarship has shown that:

- Questions on sexual orientation can be constructed with conceptual clarity regarding the distinct dimensions of sexuality: sexual identity, sexual behavior, and desire or sexual attraction.
- The choice of an appropriate dimension of sexual orientation should be tailored to survey populations and purposes.
- Through good survey design, researchers can minimize the potential response biases resulting from geographic, cultural, and age differences among survey respondents.
- Knowledge about the validity and reliability of sexual orientation questions is comparable to that of other sociodemographic measures.

In other words, asking questions on sexual orientation is not only <u>necessary</u> for scientific, practical, and policy purposes, but is also <u>possible</u> to include such questions on surveys without sacrificing data integrity or respondent retention. Putting those two pieces together presents a compelling case for adding sexual orientation questions to many existing and future surveys.

This report addresses the questions that arise once researchers have decided to include sexual orientation questions, including what to ask, where to ask it, and how to analyze the data, all in the

context of a diverse population. Here we outline some "best practices" for actually putting the decision to ask sexual orientation questions into practice.

The report presents the findings from a multi-year effort of a team of scholars from several disciplines in the health and social sciences, including economics, sociology, psychology, epidemiology, public health, and political science. Thanks to a generous grant from the Ford Foundation, we have had the opportunity to conduct original methodological research, analyze newly available sources of data, discuss issues with administrators and researchers in statistical agencies, and meet to cull all of those experiences into this document.

REFERENCES

Allegretto, S., and M. Arthur. 2006. "An Empirical Analysis of Homosexual/Heterosexual Male Earnings Differentials: Unmarried and Unequal?" *Industrial and Labor Relations Review* 54(3): 631-46.

Ash, M. and M.V.L. Badgett. 2006. "Separate and Unequal: The Effect of Unequal Access to Employment-Based Health Insurance on Same-sex and Unmarried Different-sex Couples." *Contemporary Economic Policy* 24 (4): 582-599.

Badgett, M. V. L. 1995. "The Wage Effects of Sexual-Orientation Discrimination." *Industrial and Labor Relations Review* 48(4): 726-39.

-- 2001. *Money, Myths, and Change: The Economic Lives of Lesbians and Gay Men.* Chicago: University of Chicago Press.

Black, D., H. Makar, S. Sanders, and L. Taylor. 2003. "The Effects of Sexual Orientation on Earnings." *Industrial and Labor Relations Review* 56(3): 449-469.

Blandford, J. 2003. "The Nexus of Sexual Orientation and Gender in the Determination of Earnings." *Industrial and Labor Relations Review* 56(4): 622-642.

Case, P., S.B. Austin, D.J. Hunter, W.C. Willett, S. Malspeis, J.E. Manson, D. Spiegelman. 2006. "Disclosure of Sexual Orientation and Behavior in the Nurses' Health Study II: Results from a Pilot Study." *Journal of Homosexuality* 51(1): 13 – 31.

Cochran, S.D. 2001. "Emerging issue in research on lesbians' and gay men's mental health: Does sexual orientation really matter?" *American Psychologist* 56: 931–947.

Cochran, S. D., J.G. Sullivan, and V.M. Mays. 2003. "Prevalence of mental disorders, psychological distress, and mental health service use among lesbian, gay, and bisexual adults in the United States." *Journal of Consulting and Clinical Psychology* 71: 53-61.

Conron, K.J., M.J. Mimiaga, and S.J Landers. 2008. A Health Profile of Massachusetts Adults by Sexual Orientation Identity: Findings from the 2001-2006 Massachusetts Behavioral Risk Factor Surveillance System Surveys. Report prepared for the Massachusetts Department of Public Health, November 2008. Available at

http://www.mass.gov/Eeohhs2/docs/dph/health_equity/sexual_orientation_disparities_report.pdf.

Dean L., I.H. R.L Meyer, R.Sell, V. Sember, D.J. Silenzio, and Bowen, et al. 2000. "Lesbian, gay, bisexual, and transgender health: Findings and concerns." *Journal of the Gay and Lesbian Medical Association* 4:101–151.

U.S. Department of Health and Human Services. 2000. *Healthy People 2010*. Washington, DC: US Government Printing Office.

Diamant A.L., C. Wold, B.A. Spritzer, and L. Gelberg. 2000. "Health behaviors, health status, and access to and use of health care: a population-based study of lesbian, bisexual, and heterosexual women." *Archives of Family Medicine* 9 (10): 1043-51.

Gagnon, J., and W. Simon. 1973. *Sexual Conduct: The Social Sources of Human Sexuality*. Chicago: Aldine.

Garofalo R., R.C. Wolf, S. Kessel, J. Palfrey, and R.H. DuRant. 1998. "The association between health risk behaviors and sexual orientation among a school-based sample of adolescents." *Pediatrics* 101:895–902.

Gates, G.J. 2007. "Geographic Trends Among Same-Sex Couples in the U.S. Census and the American Community Survey." *The Williams Institute*.

Gates, G.J. and J. Ost. 2004. *The Gay and Lesbian Atlas*, Urban Institute Press, Washington, DC.

Klawitter, M., and V. Flatt. 1998. "The Effects of State and Local Antidiscrimination Policies on Earnings for Gays and Lesbians." *Journal of Policy Analysis and Management* 17(4): 658-86.

Mays, V. M. and S.D. Cochran. 2001. "Mental health correlates of perceived discrimination among lesbian, gay, and bisexual adults in the United States. *American Journal of Public Health* 91: 1869-1876.

Remafedi, G. 1990. "Study group report on the impact of television portrayals on gender roles of youth." *Journal of Adolescent Health Care* 11:59-61.

Simons, T. and M. O'Connell. 2003. *Married-couple and unmarried-partner households: 2000*. Washington, D.C.: U.S. Census Bureau.

2. Measuring Sexual Orientation on Surveys: What to Ask

Questions about sexual orientation have been asked on large-scale and population surveys in recent decades. The earliest inclusion of sexual orientation questions for school-based youth in the U.S., for example, was in 1986, in the Minnesota Adolescent Health Survey (Remafedi et al., 1992), followed by the Massachusetts and Seattle Youth Risk Behavior Surveys in 1995 (Reis & Saewyc, 1999), and the National Longitudinal Survey of Adolescent Health (ADD Health Wave 1) in 1995 (Russell & Joyner, 2001);). In Canada, the first questions were asked in 1992 in the Adolescent Health Survey of British Columbia (Peters, et al., 1993). Other countries have followed, including a recent effort in the United Kingdom (Haseldon and Joloza, 2009). Similarly, population surveys of adults have included measures of orientation since the same era (Cochran & Mays, 2000).

The questions on these large-scale surveys have varied widely, however, and we have learned a great deal from the different survey experiences about the types of questions that have worked and where there have been problems. This section will discuss what to ask.

CONCEPTUALLY, SEXUAL ORIENTATION HAS THREE MAJOR DIMENSIONS

Sexual attraction: the sex or gender of individuals that someone feels attracted to. Sexual attraction is the main construct included in definitions of sexual orientation that have been put forth since the late 1800s (Sell, 1997). This dimension is important for young people and others who are not sexually active (Saewyc, Bauer, Skay et al., 2004). Some argue that attraction is the very essence of sexual orientation that is important for psychological, developmental, and a host of other types of studies such as those in public health focused on suicide ideation and attempts (Cochran & Mays, 2000; Russell & Joyner, 2001).

Sexual behavior: the sex of sex partners (i.e. individuals of the same sex, different sex, or both sexes). Not all of those with same-sex attraction engage in sexual activity with partners of the same sex at all or only with partners of the same sex (Laumann et al, 1994; Saewyc et al., 2004; Saewyc et al., 2009). The behavioral dimension has been important for studies on sexual and other health topics (Pathela et al., 2006). Further, the earliest sets of questions included in surveys used the behavioral dimension, and experience with these questions is quite extensive.

Self-identification: how one identifies one's sexual orientation. While the conventional responses (gay, lesbian, bisexual and straight/heterosexual) seem to work for the vast majority of people in Western cultural settings, there are a small number of people who prefer other labels (e.g. same-gender loving, queer). Self-identification varies over time for some individuals and is heavily influenced by socio-cultural factors.

Self-identification is not always in concordance with sexual behavior or attraction (Laumann et al, 1994; Saewyc et al., 2004). Sizeable numbers of people reporting only same-sex attraction and/or behavior self-identify as heterosexual or bisexual. Similarly, sizeable numbers of those who identify as gay or

lesbian report some sexual partners of a different sex and/or some level of attraction to different sex partners. Some people may not be currently sexually active, yet have an orientation identity when asked. Self-identification is particularly important for social, political and economic studies (Pathela et al, 2007).

The discordance between these three dimensions might be due to a number of factors: stigma, laws and legal risks in some countries, cultural values and meanings, developmental change, partner selection opportunities, and even economic considerations. Other possible reasons for difference can include measurement error or variation in the time periods asked about or implied. For example, consider a question about the sex of sexual partners in the past 5 years asked of a bisexual-identified woman who has been in a committed relationship for more than 10 years. The responses might suggest she is lesbian if she has a same-sex partner, or heterosexual if she has a different-sex partner, but her attractions may be to both sexes. Similarly, asking only about the sex of sexual partners of someone who is currently not sexually active will eliminate them from a study of sexual orientation, even if they have clear attractions and identity.

STUDY AIMS SHOULD DICTATE "WHAT TO ASK"

If one thinks of sexual orientation as a latent construct, then each measurement of the construct, whether attraction, behavior, identity, or relationship status, is likely to identify a somewhat different group of individuals. Although the great majority of the population is consistent in their responses (e.g. reports attraction to the different sex only, has had sex only with different sex partners, identifies as heterosexual, and reports being currently or formerly married), there will be some variation. When formulating study designs and measurement strategies, being cognizant of these variations can improve the outcome. When there is a need to explore sexual orientation most broadly—for example, to answer questions about the prevalence of same-sex sexuality in a given population—the best course of action is to measure all three dimensions.

Realistically, however, in many instances the burden on respondents will be too great to include them all. Also, study aims may preclude the need to measure all three dimensions. For some studies, only self-identification may be important e.g. economic or political studies where self-identification is the construct of main relevance. For other studies it may be less useful. For example, for health surveys that address sexual health issues, the behavioral dimension may be most important.

RECOMMENDED SURVEY ITEMS AND THEIR RATIONALE

In this section, we focus on items for surveys of adults. Because of the numbers of surveys of adolescents that might include sexual orientation questions, however, see Section 4 for a discussion of questions that are more appropriate for young people.

A. Self-Identification

Recommended Item:

> Do you consider yourself to be:
> a) Heterosexual or straight;
> b) Gay or lesbian; or
> c) Bisexual?

Discussion:

Formal testing/evidence: This question was developed by researchers at the National Center for Health Statistics (NCHS).[4] It has undergone cognitive testing at the NCHS. This version was created using the word "consider" to match the format of common questions assessing race and ethnicity, which do not use the words race or ethnicity in the question but rather allow the person to figure out what the question is assessing through the offered response categories (e.g. Do you consider yourself to be: 1) Hispanic or Latino, or 2) Not Hispanic or Latino?).

This question provides a clear option that is generally comprehensible by adults and it focuses only on identity self-labels rather than including another dimension such as attraction or behavior. Gay/lesbian and bisexual are kept separate, allowing the potential of combining or disaggregating by orientation. This separation makes it more useful than a common variant in some research, a yes/no question "Are you gay, lesbian or bisexual?" Some ethnic or cultural groups, however, use different terms for identity. For example, American Indians and Aboriginal Canadians may prefer the term "Two Spirit," and some Latino cultures only define the receptive male partner as homosexual or gay. A further discussion of translating terms and the inclusion of culturally-specific terms is covered in Section 5. As best practice, we recommend not including "sexual orientation" or "identity" in the stem of the question because the term "sexual orientation" is confusing to many respondents, just as the terms race and ethnicity pose problems when included in the stem of a question.

Definitions of terms: We do not recommend providing definitions for terms used in the question except in some instances when a respondent does not understand the question. Be aware, however, that definitions of an identity term will inevitably make reference to either attraction or behavior, or both, and that can be a limitation. If the survey includes an attraction definition, it is clearer to use "men attracted to men, women attracted to women, attracted to both men and women" rather than using terms like "attracted to same-sex and different-gender", or "same-sex and different-sex."

The problem of "false positives" (identifying as gay, lesbian or bisexual when the term heterosexual would have been appropriate) vs. "false negatives" (identifying as heterosexual when gay, lesbian or bisexual would have been more appropriate): Evidence to date suggests that there is a slight risk of both (Saewyc et al., 2004). Stigma may repress self-reporting of LGB status, but misunderstanding the terms increases the rate of self-report to some extent. Some people do not know what the terms "heterosexual" and "bisexual" mean. Some heterosexuals do not believe they have a sexual orientation or have not thought about the issue (Katz, 1995).

Use of "other" as a response category: Some people with same-sex attraction or behavior prefer to use less conventional labels (other than gay, lesbian or bisexual) to describe their sexual orientation and would therefore choose an "other" category if it was offered. However, when sampling from the general population, this subpopulation is very small, and these people most likely would choose the terms gay, lesbian or bisexual if they were the only terms offered. Some respondents might use "other" because they are not sure which category to choose (see below).

[4] Dr. Randall Sell and Dr. Kerith Conron worked with a team at NCHS to test the suggested question. Dr. Kristen Miller, Director of the Questionnaire Design Research Laboratory, designed and oversaw the testing. A manuscript discussing the findings is under review for publication.

A major problem with using an "other" category is that the data on those individuals is often discarded, which can reduce the sample size and lower the power in a study. This decision reflects the fact that it is generally impossible to categorize the respondent's sexual orientation based upon the selection of this category, even if the survey includes an open-ended follow-up response. Furthermore, recoding of open-ended responses is very time intensive and unlikely to be undertaken by many surveys or analysts. We recommend not including "other" in population surveys.

Use of "not sure" as a response category: While some people are not sure because they are undecided, evidence indicates that the majority of people who choose a "not sure" category are doing so because they did not understand the question (Sell, Wells, and Wypij, 1995). Studies of adolescents have also suggested there is a risk of response set bias with a "not sure" option (Saewyc et al., 2004). To avoid these challenges but still include a not sure category (which may be especially appropriate for adolescents, as their orientation is unfolding), it would be useful to include two "not sure" options, "I am not sure yet," and "I am not sure what this question means." (Saewyc et al., 2004). We recommend not including a "don't know" or "not sure" category for adult surveys. However, in surveys conducted by interviewers over the phone or face-to-face, it is appropriate to allow the interviewer to code "not sure" when it is offered by the respondent.

Use of a "prefer not to answer" response category: This response may be provided to respondents who are uncomfortable answering a sexual orientation question. However, like use of the "other" category, these data are often discarded. We recommend not including this response category unless it is included on most other questions (for example, as a corner button in a computer screen survey). By including this option on this question and not others (such as race and age questions), the sexual orientation question is inappropriately singled out.

B. Sexual Behavior

Recommended Item:

In the past (time period e.g. year) who have you had sex with? a) Men only, b) Women only, c) Both men and women, d) I have not had sex

Discussion:

Terms to use: "Sex" or "sexual experience" is an inclusive term that implies a broad range of behaviors (e.g. oral sex, kissing, touching), behaviors that many people engage in. "Sexual intercourse" is not used because it is a narrow term, implying vaginal intercourse only and should be avoided in questions. Sometimes a more precisely-defined term is appropriate for the study.

Defining what is meant by "sex:" The general consensus is not to define the term "sex," but to allow respondents to use their own definition. We recognize that some people will interpret the term sex very broadly (e.g. kissing) while others may define it very narrowly (e.g. vaginal intercourse which results in orgasm for the male) (Miller, 2002). As a result, there are problems with allowing respondents to use their own definition, but providing a definition is more likely to

confuse than help a respondent. If the study is focused on sexual risk behaviors, however, it would be better to include different questions about specific behaviors, rather than a more all-encompassing term such as "sex."

Response order: When possible, such as when using personal interviews rather than a self-administered questionnaire, it is better to vary the response option order by the sex of the respondent, placing the different sex option first. For self-administered questionnaires, it may be better to place the "I have not had sex" option first, and if possible, vary the order of the other items in the surveys. If men are listed first all the time, this ordering may elicit some false positives among male respondents, as respondents tend to see the first answer as the default. Likewise, always including women first might generate false positives among women.

Time interval for reporting: The overall purpose of the study should guide the researcher in the choice of an appropriate time interval. A broad time period for reporting sexual behavior such as "ever" or "lifetime" captures some respondents who only experiment with same-sex sexuality in their adolescent years and go on to engage only in different-sex sexual activity as adults and/or to identify as heterosexual. The time period of "adulthood" would exclude individuals with only experiences in adolescence but may still be too long an interval for some studies. "Five years" may be the best interval for capturing most adults who only occasionally have same-sex partners. "Twelve months" would exclude many with only occasional same-sex or different-sex partner choice as well as those with no sex partners in the last year, and may misclassify those in long-term monogamous partnerships with one sex or the other.

Other Acceptable Items:

Have you ever (or in the past X time interval) had sex with a female?
- Yes
- No

Have you ever (or in the past X time interval) had sex with a male?
- Yes
- No

Discussion:

These items break the above single question into two items that may be easier for some individuals to answer. The main advantage of this set of questions over the previous single item question is that these questions avoid the problems that can arise with response order-caused errors that may occur with the previous proposed question. As discussed earlier, an "ever" question used with adults may be less useful unless the time periods are modified to specify a different period. Again, we recommend that researchers take into account the study purpose and population before final selection of items.

Other Acceptable Items:

During the past (INSERT TIME INTERVAL), with how many different male partners have you had sex?

None
One
Two
Three
Four
Five
6 or more

During the past (INSERT TIME INTERVAL), with how many different female partners have you had sex?

None
One
Two
Three
Four
Five
6 or more

Discussion:

The advantage of this approach is that it yields semi-continuous data. This additional data is helpful when sexual risks are a focus of the research, and the number of different partners is an important consideration for risk of sexually transmitted infection or pregnancy. The question is somewhat limited, though, in that it does not provide a measure of frequency of sexual behavior, so someone who has had sex with one partner once in the year and someone who has had sex with the same partner 365 days of the year will score the same on these measures (Sell, 1996).

C. Sexual Attraction

Recommended Item:

People are different in their sexual attraction to other people. Which best describes your feelings? Are you:

Only attracted to females?
Mostly attracted to females?
Equally attracted to females and males?
Mostly attracted to males?
Only attracted to males?
Not sure?

Discussion:

This item is taken from the National Study of Family Growth. It is important to include each of these response categories since many people are attracted in varying degrees to people of both genders. As with the sexual behavior question, it is advisable to reverse the response categories when giving the item to men and women. For men “only attracted to females” should be the first response and for women the first response category should be “only attracted to males.”

Other Acceptable Item:

Are you sexually attracted to men? Yes No Are you sexually attracted to women? Yes No

Discussion:

This approach allows the researcher to assess the absence of sexual attraction because respondents can say no to both. This set of questions may simplify the task for respondents and also avoids the problems inherent with the response ordering discussed with the previous question. This approach is important for adolescents, since some teens feel no sexual attraction until mid- or late-adolescence (Saewyc et al., 2004).

D. Marital Status, Partnership, Cohabitation, and Sexual Orientation

Marriage, partnership, and cohabitation questions can allow researchers to identify same-sex couples and are relevant in many kinds of studies e.g. household consumption patterns, mental health, or sexual risk taking. Marital status captures legal relationships, partnership questions allow respondents to identify romantic relationships, and cohabitation questions ask about living arrangements of adults. These questions measure overlapping but distinct types of relationships for both same-sex and different-sex couples. These questions also serve an important role in current research on sexual orientation, since researchers have also used the sex of partnered couples who are identified in these ways as a proxy for sexual orientation, especially when surveys have not asked directly about sexual orientation.

While surveys have used a variety of approaches to measure the diversity of people's relationships, as of this point there is no consensus about the best approach. This section highlights a handful of important issues for survey researchers to consider when crafting marital status and cohabitation questions for the purposes of increasing data quality on sexual orientation.

Using partnership questions to measure sexual orientation: Several major surveys that have <u>not</u> asked direct questions about sexual orientation have changed their marital status questions and response options to include "living with partner" (and related categories) to capture the overall rise in non-marital cohabitation in the U.S. These surveys have provided a wealth of information for research on sexual orientation because researchers can use information on household sex composition to create samples of individuals in same-sex cohabiting relationships who are very likely to be gay and lesbian couples (Black et al. 2000; Carpenter 2004).

Examples of these approaches include: 1) major U.S. household surveys such as the Decennial Census and Current Population Surveys that identify "unmarried partners" on the household roster as a possible relationship-to-householder option (Black et al. 2000, Ash and Badgett 2006, and others); 2) other countries' household surveys, such as the Canadian Census, that permit identification of same-sex "common-law" marriages and "same-sex spouse" (Carpenter 2008);

and 3) individual-level public health data such as Behavioral Risk Factor Surveillance System (BRFSS) that include "member of an unmarried couple" as a marital status response option and also include a complete household sex roster of adults (Carpenter 2005).

However, using marital status and cohabitation information to identify sexual minorities[5] have well-known and significant limitations: 1) single sexual minorities cannot be identified if direct questions about sexual orientation are not asked; 2) bisexual individuals cannot be identified solely by relationships or household sex composition; 3) sexual minorities who are widowed/divorced/separated are likely to be missed; and 4) sexual minority couples who consider themselves to be married – and indeed in some states may be legally married – are likely to be wrongly coded as heterosexuals (sometimes explicitly so, as in Census 1990; see Gates et al. 2008 for a detailed description of this issue).

Another problem concerns getting information from two variables-- sex and household roster (or perhaps marital status)--to determine sexual orientation. Even minor measurement problems with one of these variables in the larger population can create relatively large measurement problems in the sexual minority sample (see the false positive discussion above).

Identifying the legal status of relationships: Traditional marital status questions will not allow researchers to identify same-sex domestic partnerships since many individuals in these partnerships either cannot get legally married (in most states in the U.S., for example) or choose not to marry for a variety of reasons. However, in states or countries that allow same-sex couples to marry, an increasing number of same-sex couples are getting married (Gates, Badgett, and Ho, 2008).

Carpenter and Gates (2008) discuss these issues and provide several recommendations for demographers and survey researchers regarding data collection on sexual orientation and marital status. They recommend that surveys collect information for each individual in the household on sex, relationship to respondent, sexual orientation, cohabitation, dating relationships, and current and former legal marital status. Specifically, they recommend: 1) separately measuring marital status from both partnership and cohabitation; 2) separately measuring current and former legal marital status; 3) adding a civil union/registered domestic partner response to marital status questions; 4) collecting a household sex roster of adults and children in the household as a check on data quality; 5) asking specific questions about the characteristics of the respondent's partner (e.g. sex, age, current/former legal marital status); 6) collecting a detailed partnership and cohabitation history for each respondent; and importantly 7) collecting samples large enough to meaningfully describe gay and lesbian partnership experiences. We note, however, that questions about new legal statuses, such as civil unions, have not yet been fully tested. Informal reports from other countries suggest that adding a separate option for new legal statuses might create a large false positive problem for unmarried heterosexual couples, in particular, since the number of couples reporting such statuses far exceeds actual registrations.

[5] By "sexual minority," we mean broadly someone who is attracted to or has had experience with same-sex sex partners, or someone who identifies LGB.

Best practice:

We recommend that sexual orientation be asked separately from marital status and cohabitation in surveys. However, for all surveys – including those that do not directly ask about sexual orientation – we recommend that the marital status and cohabitation questions include response options that take into account the diversity of families and the changing legal circumstances of sexual minority individuals and households. At a minimum, we recommend that all marital status questions allow a response option for "living with a partner" and, ideally, that a complete household sex roster for adults and children be available for researchers to maximize the usefulness of this information.

E. Should there be a lead-in to sexual orientation questions?

In general, we do not recommend a lead-in statements or introduction to sexual orientation questions. Lead-ins to questions can highlight and stigmatize the question; they send the message that this is a sensitive question, or a question that may cause discomfort. However, some people will want to know why a question is being asked and how it is relevant to a survey's purpose. Should a respondent challenge the item in a telephone or in-person interview, there are several options for responses that could be considered:

a. "It is our responsibility to monitor the health of all citizens, we ask these questions of all respondents."
b. "For completeness we ask a variety of questions…."
c. "We are all members of social groups and we want to find out how membership in these groups is important to our lives."

F. Question order

If the survey includes more than one sexual orientation question, we make no recommendation as to which order is more effective for identity, behavior, or attraction questions. However, take care that questions about sexual orientation or same-gender sexual behavior do not directly follow a question about sexual violence or sexual abuse. Studies of placement in self-administered surveys among adolescents found higher non-response rates when the questions came after an abuse question (Saewyc et al., 2004). We discuss broader placement issues in the next section of the report.

OTHER RECOMMENDATIONS

- Always pilot-test the questions when they are being used in new populations or are being asked in new settings, as questions may perform differently in different situations.
- In longitudinal studies, be sure to ask the questions in each wave of data collection to better capture changes in sexual orientation or in relationships over time.
- Keep in mind that as time goes on, surveys will need to modify measurement approaches relevant to sexual orientation, especially the self-identification element. In this respect, sexual orientation resembles race, a construct that has evolved over time and has consequently required major modifications in its measurement.

REFERENCES

Ash, M. and M.V.L. Badgett. 2006. "Separate and Unequal: The Effect of Unequal Access to Employment-Based Health Insurance on Same-sex and Unmarried Different-sex Couples." *Contemporary Economic Policy* 24 (4): 582-599.

Black, D., G. J. Gates, S. Sanders, and L. Taylor. 2000. "Demographics of the Gay and Lesbian Population in the United States: Evidence From Available Systematic Data Sources." *Demography* 37:139 – 54.

Carpenter, C. 2004. "New Evidence on Gay and Lesbian Household Incomes." *Contemporary Economic Policy* 22:78–94.

-- 2005. "Self-Reported Sexual Orientation and Earnings: Evidence from California." *Industrial and Labor Relations Review* 58(2): 258-273.

-- 2008. "Sexual Orientation, Work, and Income in Canada," *Canadian Journal of Economics* (2008) 41(4): 1239-1261.

Carpenter, C. and G. J. Gates. 2008. "Gay and Lesbian Partnership: Evidence from California." *Demography* 45(3): 573-590.

Cochran, S.D. and V.M. Mays. 2000. "Relation between psychiatric syndromes and behaviorally defined sexual orientation in a sample of the US population." *American Journal of Epidemiology* 151(5): 516-523.

Gates, G.J., M.V.L. Badgett, and D. Ho. 2008. "Marriage, registration, and dissolution by same-sex couples in the U.S." *The Williams Institute.*

Haseldon, L. and T. Joloza. 2009. "Measuring Sexual Orientation: A Guide for Researchers." Office for National Statistics, United Kingdom.

Katz, N. 1995. *The Invention of Heterosexuality.* Dutton.

Laumann E.O., J.H. Gagnon, R.T. Michael, and S. Michaels. 1994. *The Social Organization of Sexuality: Sexual Practices in the United States*. Chicago: Univ. Chicago Press

Miller, K. 2002. "Cognitive Analysis of Sexual Identity, Attraction and Behavior Questions." Working Paper Series, No. 32. Centers for Disease Control and Prevention, National Center for Health Statistics, Office of Research and Methodology.

Pathela P., S. Blank, R.L. Sell, and J.A. Schillinger. 2006. "The Importance of Both Sexual Behavior and Identity." *American Journal of Public Health* 96(5):765.

Peters, L., A. Murphy, R. Tonkin, R. Milner, and D. Cox. 1993. *Adolescent health survey: Province of British Columbia.* Burnaby, BC, Canada: The McCreary Centre Society.

Reis, E. and E. Saewyc. 1999. *83,000 Youth: Selected findings of eight population-based studies as they pertain to anti-gay harassment and the safety and well-being of sexual minority students.* Seattle, WA: Safe Schools Coalition. Available at http://www.safeschools-wa.org/ssc_reports.htm.

Remafedi G., M. Resnick, and R. Blum, et al. 1992. "Demography of sexual orientation in adolescents." *Pediatrics* 89: 714-721.

Russell, S.T. and K. Joyner. 2001. "Adolescent sexual orientation and suicide risk: evidence from a national study." *American Journal of Public Health* 91(8): 1276-1281.

Saewyc, E.M., G.R. Bauer, C.L. Skay, L.H. Bearinger, M.D. Resnick, E. Reis, and A. Murphy. 2004. "Measuring sexual orientation in adolescent health surveys: Evaluation of eight school-based surveys." *Journal of Adolescent Health* 35: 345e.1-e.16, on-line at http://www.journals.elsevierhealth.com/periodicals/jah/issues

Saewyc, E.M., Y. Homma, C.L. Skay, L. Bearinger, M. Resnick, and E. Reis. 2009. "Protective factors in the lives of bisexual adolescents in North America." *American Journal of Public Health* 99: 110-117.

Sell, R.L. 1996. "The Sell Assessment of Sexual Orientation: Background and Scoring." *Journal of Lesbian, Gay and Bisexual Identity* 1(4):295-310.

-- 1997. "Defining and Measuring Sexual Orientation: A Review." *Archives of Sexual Behavior* 26(6):643-58.

Sell RL, J.A. Wells, D. Wypij. "The Prevalence of Homosexuality in the United States, the United Kingdom, and France: Results of Population-Based Surveys." *Archives of Sexual Behavior*. 1995;24(3):235-248.

3. Measuring Sexual Orientation on Surveys: How and Where to Ask

Deciding what to ask is the first key task when constructing a survey instrument that includes sexual orientation questions. The next issue concerns making decisions about how to conduct the survey—the mode—and where to place the questions. Decisions about mode are likely to be driven by a broad range of concerns, including available technologies, the study's budget, and study goals. Although the inclusion of sexual orientation questions is unlikely to affect the mode chosen in most studies, the mode is likely to affect the response to sexual orientation questions. Careful placement and mode adaptations may improve the quality of sexual orientation data that is collected by a given survey by providing for a level of privacy that is sufficient to encourage accurate responses.

MODE OF DATA COLLECTION

Surveys typically choose from among various modes that range from an interviewer asking questions in a face-to-face interaction with a respondent to a completely self-administered questionnaire. New and old technologies give researchers a wide variety of options, including paper and pencil or web-based self-administered questionnaires (SAQ), paper and pencil personal interviews (PAPI), computer-assisted personal interviews (CAPI), audio self-administered questionnaires from tape recorders (audio-SAQ), computer assisted self-administered interviews (CASI), audio computer-assisted self-administered interviews (ACASI), and telephone audio computer-assisted self-interviewing (T-ACASI) (Tourangeau and Smith, 1996).

In general, questions related to sexual orientation are considered "sensitive" questions, both by participants and by survey administrators. These questions ask about behaviors and self-understandings that survey respondents might feel uncomfortable about revealing because of fear of social stigma or discrimination or because those behaviors or statuses create personal discomfort. Tourangeau and Smith define a sensitive question as one that "raises concerns about disapproval or other consequences (such as legal sanctions) for reporting truthfully or if the question itself is seen as an invasion of privacy" (Tourangeau and Smith, 1996).

Survey administrators need to be aware that LGB individuals are socially stigmatized, and disclosure of a gay, lesbian, or bisexual orientation (or same-sex sexual behavior or attraction) can have meaningful negative consequences for individuals with respect to workplace, family, and social outcomes. Therefore, respondent privacy should be the guiding principle in thinking about sexual orientation questions and reminders or specific information about how this data will or will not be protected may be warranted. This concern for privacy, however, must be tempered with a realization that some individuals will need some guidance to accurately answer the questions if they are unsure or unfamiliar

with the concepts and terms. There may be tradeoffs between privacy and the need for guidance in some cases.

With respect to the design and administration of the survey, the researcher's concern is often that respondents either will not answer the question or will answer with an inaccurate response. The choice of an appropriate mode of data collection will mitigate these problems. In particular, enhancing the privacy of the survey environment appears to encourage respondents to answer sensitive questions, including those related to sexual orientation, and to report accurately (measured by reporting higher levels of same-sex sexual behavior and attraction).

Best practice:

When possible, we recommend placing sexual orientation-related questions on self-administered portions of a survey. This method could involve inclusion of a subset of questions on a paper-and-pencil self-administered questionnaire (as done in the General Social Survey) or inclusion on a self-administered computer-assisted interview (as done in the National Survey of Family Growth).

Several studies suggest that self-administered questionnaires enhance respondents' sense of privacy and their willingness to report sensitive information:

- *ACASI vs. CAPI vs. CASI:* Tourangeau and Smith found that using ACASI increased reporting of the number of lifetime sex partners when compared with the other modes. However, they found no differences in item response rates by mode, only increased reporting of a stigmatized or unpopular choice.
- *ACASI vs. Paper-and-Pencil SAQ:* Turner, et al., found that young men were more likely to report sexual contact with another man in the ACASI interview than a paper and pencil SAQ.
- *T-ACASI vs.CAPI :* Villarroel, et al. (2006), found that using a telephone audio computer-assisted self-interviewing (T-ACASI) technology increased reporting of attraction to someone of the same-sex and same-sex sexual experiences when compared with telephone interviews by a human interviewer.

Some of these modes might involve other trade-offs that researchers will want to consider (see Gribble, et al., 1999). For instance, one drawback of the T-ACASI method was a higher degree of survey break-off than with a human interviewer. Paper and pencil SAQs do not allow for complex skip patterns or for consistency checks, and they require a degree of literacy and comprehension that might be problematic for some respondents. Paper and pencil SAQs may also result in higher levels of nonresponse on sexual orientation questions. Modes that enhance privacy by reducing interviewer guidance might reduce accuracy even though response rates are higher. Finally, shifting from a CAPI mode to a CASI mode for a sexual orientation question runs the risk of drawing attention to the sexual orientation question in a way that makes respondents more uncomfortable than they would otherwise be (Taylor, 2008).[6]

We also recognize that the costs of ACASI or other advanced data collection methods may be prohibitive. If, for example, a survey is conducted by telephone only, there may still be ways to increase response rates and data quality regarding sexual orientation. One recommendation is that individuals

[6] Tests in the United Kingdom discussed below make this point.

be able to report same-sex sexual attraction, behavior, or a minority sexual orientation in a telephone survey without having to say aloud the sexual orientation labels (e.g. by instead stating the response option "A", "B", "C", etc., or by pressing numbers on the telephone for various response options). We also recommend that, where possible, the interviewer record information on the setting and circumstances of the interview (e.g. whether another person was present in the room when the respondent answered, who that person was, etc.). Similar approaches can be used for in-person interviews; response cards are routinely used for sensitive questions, and this same method can also be used for sexual orientation questions. As with telephone surveys, it should be made clear to the respondent that only the correct response option needs to be indicated (e.g. "A", "B", etc.). These additional steps should help increase data quality in light of the historical stigma associated with reporting same-sex sexual attraction, same-sex sexual behavior, or a minority sexual orientation.

INTERVIEWER TRAINING (FOR MODES INVOLVING INDIVIDUAL INTERVIEWERS, SUCH AS TELEPHONE AND IN-PERSON INTERVIEWS)

It used to be said that questions about sexual orientation could not be asked on surveys because of the difficulty in asking the question. Although we now know this is not the case, the concern often arose in part because of possible bias, reluctance, or discomfort in asking a question on the part of interviewers.

Limited published evidence exists about the difficulty interviewers may have in reading questions about sexual orientation. One revealing study indicates the potential scope for large interviewer effects. The Office for National Statistics in the United Kingdom conducted a series of trials of sexual orientation questions to study which questions and procedures would work best in household surveys in that country (Taylor, 2008). In the first trial, the interviewers were told to omit the sexual orientation module under certain circumstances related to respondents and interview conditions: lack of privacy, inability to use the laptop, or unwillingness to answer. Interviewers ended up skipping the question in 15% of interviews, with higher rates among those over 75 years old (41% skipped), those of Asian heritage (27%), those who were widowed (34%), and those with low levels of educational attainment (27%). In the second trial, interviewers reported reasons for skipping the sexual orientation question, and the reasons often went beyond privacy concerns or the inability to use a laptop. They often cited their belief that it was inappropriate to ask older people or that they had received a negative or confused reaction from respondents. Interviewers also reported that respondents asked for further explanation in some circumstances, suggesting the need for training with the appropriate responses to such requests.

In addition to the experience from the United Kingdom, we have increasing information available about how to ask these difficult questions in the United States. In addition, research cited earlier describes the use of alternative methods of asking sensitive questions (such as ACASI) that don't require a live interviewer to ask the question each time. These systems have been used specifically to ask sensitive questions regarding sexual behavior, illicit drug use, abusive situations, and abortion (see Barbara and Doctor, 2007).[7]

One solution to the problem of interviewer effects is to properly train interviewers on how to ask the question. Training of interviewers may entail several different aspects. First, it is important to contextualize for interviewers the reasons for asking the question so it does not seem arbitrary or

[7] See for example the Research Triangle Institute web site at http://www.rti.org/page.cfm?objectid=B4634C77-0F07-45CC-96B00E2C2CF7D766

capricious to an interviewer. Second, it is necessary to normalize the process of answering the questions. Finally, some form of practice is useful to ensure interviewer comfort.

Typically a telephone or face-to-face interviewer is trained on asking all the questions in an interview guide from start to finish. Therefore, it would be unusual to single out questions about sexual orientation for specific or separate training. However, in some situations, interviewers may implement the same survey from year to year and only be briefed on new questions each year. The addition of a question on sexual orientation may stand out as a new question that requires some level of special attention.

Giving the interviewers some background information about why such a question is part of the survey (or has been added) helps provide context for the interviewer when asking the question (see, for example, Haseldon and Joloza, 2009). It would be surprising if many people understood much about health disparities affecting LGB persons and, therefore, the value that collecting such information might provide. Similarly, some interviewers may assume that this information is "too personal" to disclose if they view homosexual activity as a highly stigmatized behavior. An interviewer may also want to know how to reply to a respondent who asks, "Why do you need to know that?" Therefore, training should help the interviewer be able to give a brief answer to that question. Further, the training should help interviewers understand that the survey team has decided that it is important to collect this information and it is the interviewers' professional responsibility to collect it. Interviewers should be prepared, if asked, to reiterate the privacy protections afforded a respondent and whether the survey data is confidential or anonymous.

After providing some information about the reason for collecting the information, most of the training should be directed at normalizing the question. In other words, whatever interviewers may feel about asking this question, they need to be able to ask it in a way that implies no bias, shame, discomfort, or prejudice to the interviewee that could affect answers to the questions. Some of the ways to do this are to emphasize interviewers' professionalism, talk about question placement, conduct role playing or practice examples, and give interviewers some background material and responses to respondent questions.

While placement is discussed more fully below, information about placement may help to both contextualize and normalize asking this question for interviewers. For example, if there are questions about sexual behavior or sexually transmitted diseases on the survey, trainers could point out that asking a question about sexual orientation should not seem out of place. For a more general survey, having the sexual orientation question as part of a general demographic section conveys the idea that this is just another characteristic of the individual, like gender or race/ethnicity, and trainers could point out that such questions allow us to compare groups of people who share similar characteristics or concerns.

Role playing is a useful method for normalizing the asking of a difficult question. The process of having an interviewer say the question to another person can help them overcome any hesitancy, difficulty with the words, vocal expressions that may communicate bias, or anything else that might convey stigma or reluctance to the interviewee. This method would also allow interviewers to be more specific about any concerns or difficulties they have with the question. Having a group of people all ask the question in a training session is another way of reducing individual fear about asking it and instead making it seem like something that everyone does.

Openly discussing sexual orientation questions also gives interviewers the opportunity to share with their peers stories of their own stereotypes being challenged during interviews, such as an example of an interview of a 75-year old man who had same-sex experiences in his twenties. Through such stories from their peers, interviewers might begin to see the variations in sexual orientation that exist, and they might not be so quick to code an answer based on their stereotyped expectations when a respondent struggles to come up with an immediate answer.

Providing high quality training on these questions depends upon finding qualified trainers. If experienced trainers are not available, a substitute would be training materials that provide background on the growing number of places where this question is asked, what refusal rate may be expected, and the lack of survey break-off among respondents being asked these questions.

Best practice:

We recommend that training be provided to interviewers who will ask questions about same-sex sexual attraction, same-sex sexual behavior, or sexual orientation identity. Training should explain the reason(s) the question has been added and should review any clarifying language to be provided about response categories and privacy protection of responses.

PLACEMENT

In addition to deciding the mode of data collection for sexual orientation questions on large surveys, a closely related issue concerns the optimal placement of questions. That is, should the sexual orientation questions come toward the beginning, middle, or end of the survey? Should they be included in a separate section? What types of questions should lead into and out from the sexual orientation questions? In general, we recommend that placement decisions be driven by survey goals and survey content, with placement decisions also being sensitive to expectations of respondents. Respondents might be more likely to understand the need for sexual orientation questions when they are placed in a relevant context, such as in groups of questions about relationships, sexuality, AIDS prevention, reproductive health, love, social support, or discrimination. While there is little direct research on these placement issues, we can provide an overview of some important considerations with respect to question placement

First, we note that the placement of the question may be directly related to survey mode. Surveys that use ACASI for sensitive topics should include the sexual orientation related questions in this module where available (as in the National Survey of Family Growth), and as such these questions will generally be in a stand-alone module. For most other surveys, however, placement of questions regarding sexual orientation should vary according to survey content. Many surveys, for example, ask questions about HIV-related sexual behaviors (such as condom use and numbers of sexual partners) but do not ask directly about same-sex sexual behaviors (e.g. BRFSS). It would be straightforward to add direct questions about same-sex sexual behaviors in these modules, particularly since a “lead-in” statement can clarify the reason for the questions to follow (i.e. for HIV prevention). Indeed, this approach has been successfully used by the Los Angeles County Health Surveys (LACHS) and state BRFSS efforts (e.g. Connecticut) and both U.S. and Canadian school-based surveys.

An alternative approach taken by some large surveys when using sexual orientation identity questions is to place the identity question within the module concerning standard demographic characteristics such

as race or citizenship. Surveys such as the 2001 California Health Interview Survey (CHIS), the Canadian Community Health Surveys, and the U.K.'s Integrated Household Survey trials have successfully used this approach. These surveys typically place the sexual orientation identity question toward the end of the demographics section, presumably to reduce concerns about drop-off (though the multiple year experience of the CHIS indicates there is no differential drop-off after sexual orientation questions). Careful consideration must be given to survey mode in this respect, since many paper-and-pencil surveys of young people place their demographics questions at the beginning of the survey, which will mean that most students are still on the same page when the sexual orientation question is viewed, and this may make it more difficult to ensure privacy or anonymity.

Note that the two broad approaches described above permit identification of same-sex sexual behavior (using the "HIV-Related behaviors" approach) and a minority sexual orientation identity (using the "demographics" approach) but do not easily permit identification of same-sex sexual attraction, which research has shown is more prevalent than either same-sex sexual behavior or a minority sexual orientation (Laumann et al. 1994). In some cases, however, same-sex sexual attraction may be the relevant construct of interest, particularly in identifying risk factors for mental health conditions. An alternative way to obtain sexual attraction information is to ask a "sexual orientation" module that includes distinct questions about attraction, behavior, and orientation. National Epidemiologic Survey on Alcohol and Related Conditions II (NESARC II) and NSFG both take these types of approaches in modules placed at the end of each survey. We have no recommendation regarding the optimal order in which to ask multiple aspects of sexual orientation, though most surveys that ask about more than one aspect of sexual orientation in the same section generally ask about self-reported identity last.

Best practice:

We recommend that the placement of questions on sexual orientation be tailored to meet the needs and goals of each survey. For general public health surveys that include questions about HIV related behaviors, sexual behaviors, or reproductive behaviors, we recommend including questions about recent (e.g. within the past year or within the past five years) and lifetime same-sex sexual behavior with other questions related to sexual behavior or at the end of the relevant module. For other surveys (except school-based classroom surveys of adolescents), we recommend including a direct sexual orientation identity question at the end of the standard "Demographics" section. For surveys with a strong reason to include multiple measures of sexual orientation (e.g. mental health), we recommend including a battery of questions about same-sex sexual attraction, same-sex sexual behavior, and sexual orientation identity. For surveys that include a self-administered component for "sensitive" topics, we recommend including sexual orientation identity, attraction, and behavior questions in that section.

CONCERNS ABOUT SKIP PATTERNS

Survey administrators should consider several other important logistical issues in addition to mode, interviewer training, and placement that relate broadly to "how" and "where" to ask sexual orientation questions. One broad recommendation is that it is important to pay attention to skip patterns. Large surveys typically have fairly complicated skip patterns that result in people getting to and from the sexual orientation questions in different ways. These patterns should not unintentionally skip people out of a series of sexual orientation identity questions. For instance, if a survey asks first about sexual behavior and then about sexual identity, it is important that sexual abstainers are not skipped out of the

entire section, since people who do not exhibit sexual behavior are still likely to report a valid sexual identity response.

Another concern regarding skip patterns is the potentially stigmatizing nature of some of the questions surrounding sexual orientation questions. Some surveys might lead individuals into, for example, a sexual violence module based on sexual behavior responses. This could result in some people being asked about sexual orientation immediately after questions about sexual violence or other unrelated topics, which would not be recommended. Careful attention to all the possible skip patterns that lead into the sexual orientation questions is therefore warranted.

REFERENCES

Barbara, A. and F. Doctor. 2007. *Asking the Right Questions 2: Talking with Clients about Sexual Orientation and Gender Identity in Mental Health, Counseling and Addiction Settings,* http://www.camh.net/Publications/Resources_for_Professionals/ARQ2/arq2.pdf

Gribble, J.N., H. G. Miller, S.M. Rogers, and C.F. Turner. 1999. "Interview Mode and Measurement of Sexual Behaviors: Methodological Issues." *The Journal of Sex Research* 16(1).

Haseldon, L. and T. Joloza. 2009. "Measuring Sexual Orientation: A Guide for Researchers." Office for National Statistics, United Kingdom.

Laumann, E.O., J.H. Gagnon, R.T. Michael, and S. Michaels. 1994. *The Social Organization of Sexuality: Sexual Practices in the United States*. Chicago: Univ. Chicago Press

Taylor, T. 2008. "Developing survey questions on sexual identity: Report on National Statistics Omnibus Survey trials 1 and 2". Data Collection Methodology – Social Surveys, Census and Social Methodology Division, Office for National Statistics (United Kingdom).

Tourangeau, R. and T.W. Smith. 1996. "Asking Sensitive Questions: The Impact of Data Collection Mode, Question Format, and Question Context." *Public Opinion Quarterly* 60: 275-304.

Villarroel, M.A., C.F. Turner, E. Eggleston, A. Al-Tayyib, S.M. Rogers, A.M. Roman, P.C. Cooley, and H. Gordek. 2006. "Same-Gender Sex in the United States: Impact of T-ACASI on Prevalence Estimates." *Public Opinion Quarterly* 70(2): 166-196.

4. Considerations: Age and Sexual Orientation

The age of the population being surveyed is an important consideration when designing a questionnaire. Because sexual orientation questions have been included on surveys of adolescents for more than twenty years, much is known about how and when to ask questions of adolescents. The earliest inclusion of sexual orientation questions in surveys was for school-based youth in the U.S. In 1986, the Minnesota Adolescent Health Survey included sexual orientation questions (Remafedi et al., 1992), followed by the Massachusetts and Seattle Youth Risk Behavior Surveys in 1995 (Reis & Saewyc, 1999), and ADD Health Wave 1 in 1995 (Russell & Joyner, 2001). In Canada, the first questions were asked in 1992 in the Adolescent Health Survey of British Columbia (Peters, et al., 1993). Other countries have followed, including a recent effort in the United Kingdom (Haseldon and Joloza, 2009).

Less is known about surveying older adults, as few population-based surveys ask questions about sexual orientation of older adults. The 2002 National Survey of Family Growth only asked questions about sexual orientation to adults ages 18-44. The California Health Interview Survey only administers questions about sexual orientation to adults ages 70 and younger.

This section is designed to address the unique considerations associated with designing surveys targeting adolescents and older adults.

ADOLESCENTS AND COLLECTING SEXUAL ORIENTATION DATA: WHAT TO ASK

Sexual orientation questions have been asked on large-scale school-based surveys of adolescents around the world since the mid-1980's. There are a number of issues to keep in mind when surveying adolescents, in particular, in order to ensure the most useful and reliable data. Because physical sexual maturity, sexual orientation, and sexual relationships most commonly develop during the adolescent years, all of the orientation questions have limitations that should be considered. For example, in most countries fewer than half of adolescents under the age of 17 are sexually experienced, so questions that focus on gender of sexual partners—a sexual orientation measure based on behavior—will likely misclassify the majority of adolescents with respect to sexual orientation. For the same reason, it can be problematic to use sexual behavior-focused definitions as clarifiers for identity labels. Attraction is generally a better measure for adolescent populations, except of course in studies specifically focused on sexual health and sexual risks. Even so, a significant proportion of younger adolescents may not have experienced sexual attractions yet. Adolescence is also the time when sexual orientation-based harassment is the most prevalent, so the stigma associated with specific identity labels may reduce response rates or increase false responses, unless care is taken to ensure privacy and anonymity during survey administration. In some cognitive processing studies, young people were less familiar with the term heterosexual than with gay or lesbian (Austin, Conron, Patel & Freedner, 2007). When surveying adolescents about sexual orientation, it is important to keep in mind their experiences and how those experiences may impact the ways that they understand questions.

If survey constraints allow, the best course for studies of adolescents may be to measure attraction plus one of the other dimensions, either self- identification or behavior. However, the purpose of the study should always guide final decision-making. In studies of adolescents, self-identification is often not the best choice. If only one dimension can be measured in studies of adolescents, attraction may be a better choice because many adolescents are yet to be sexually active (Saewyc et al., 2004).

A. Self-Identification

Recommended Item:

Do you consider yourself to be: a) Heterosexual or straight; b) Gay or lesbian; or c) Bisexual?

Discussion:

Formal testing/evidence: This question provides a clear option that is generally comprehensible by adolescents and it focuses only on identity self-labels rather than including another dimension such as attraction or behavior.

B. Sexual Behavior

Recommended Item:

In the past (time period e.g. year) who have you had sex with? a) Men only, b) Women only, c) Both men and women, d) I have not had sex

Discussion:

Terms to use: The broad terms "sex" or "sexual experience" imply a broad range of behaviors (e.g. oral sex, kissing, touching) in which many people engage. As noted above, "sexual intercourse" is not used because it is a narrow term, implying vaginal intercourse only. "Sex" might be interpreted differently by individuals, however (Austin, Conron, Patel, and Freedner, 2006). For adolescent surveys, using a more precisely defined term may be a problem. Specifically asking about penile, vaginal, oral, or anal sex in adolescent surveys may cause some school districts or parent groups to become uncomfortable with researchers using these terms with young people. Including such precise terms can result in school districts or youth services delivery sites refusing to participate. Researchers should test the acceptability of the question content first.

Defining what is meant by "sex:" Not defining the term "sex" may be problematic with adolescents, as some youth do not know if "oral sex" means kissing, or what anal sex is. If the study is focused on sexual risk behaviors, however, it would be better to include different questions about specific behaviors, rather than a more all-encompassing term such as "sex."

Time Period: When surveying adolescents, "ever" is an appropriate time length because the majority of respondents are not sexually experienced. The resulting sample may be very small

without an accompanying self-identification or attraction question, however, since the majority of adolescents are not sexually experienced.

C. Sexual Attraction

Recommended Item:

> People are different in their sexual attraction to other people. Which best describes your feelings? Are you:
> Only attracted to females?
> Mostly attracted to females?
> Equally attracted to females and males?
> Mostly attracted to males?
> Only attracted to males?
> Not sure?

Other Acceptable Item:

> Are you sexually attracted to men?
> Yes
> No
>
> Are you sexually attracted to women?
> Yes
> No

Discussion:

This second approach allows the researcher to assess the absence of sexual attraction because respondents can say no to both. In addition, this approach is important for adolescents, since some teens feel no sexual attraction until mid- or late-adolescence (Saewyc et al., 2004). This set of questions may simplify the task for respondents and also avoids the problems inherent with the response ordering discussed with the recommended question.

ADOLESCENTS AND COLLECTING SEXUAL ORIENTATION DATA: HOW AND WHEN TO ASK

For large-scale school-based surveys of adolescents, pencil and paper may still be considered the most cost-effective and relatively efficient way of gathering representative anonymous data. In such cases, it becomes important that classrooms have enough space for students to complete the survey in relative privacy, or other strategies are used to prevent others from looking at answers (cover sheets, cardboard screens, etc.).

Placement of questions also becomes an important issue. In some youth surveys, the question is placed near sexual behavior questions, either just before or just after. However, these questions are unfortunately close to sexual abuse or sexual assault questions. Studies of placement in self-administered surveys among adolescents found higher non-response rates when the questions came after a sexual abuse question (Saewyc et al., 2004). Care should be taken that any sexual orientation question not be placed next to abuse questions.

Careful consideration must also be given to survey mode in regard to placement, since many paper-and-pencil surveys of young people place their demographics questions at the beginning of the survey. That placement will mean that most students are still on the same page when the sexual orientation question is viewed, possibly making it more difficult to ensure privacy or anonymity.

CONSIDERATIONS FOR COLLECTING SEXUAL ORIENTATION DATA OF OLDER ADULTS

Many of the surveys that include sexual orientation questions are focused primarily on middle-aged adults, and questions are often designed with this group in mind. Very few population-based surveys include sexual orientation questions for adults over ages 70. As a result, there is little understanding of how older adults understand and respond to questions about sexual orientation. At least one study has found that older respondents do not understand the term heterosexual (Haseldon and Joloza, 2009). It may be that terms like heterosexual, homosexual, straight, and gay are not part of everyday language for older respondents. As a result, older respondents may select "Other" or not respond. Researchers should be cautious when analyzing older age cohorts in surveys designed for middle-aged results.

REFERENCES

Austin, S.B., K.J. Conron, A. Patel, and N. Freedner. 2007. "Making sense of sexual orientation measures: Findings from a cognitive processing study with adolescents on health survey questions." *Journal of LGBT Health Research*, 3(1), 55-65.

Haseldon, L. and T. Joloza. 2009. "Measuring Sexual Orientation: A Guide for Researchers." Office for National Statistics, United Kingdom.

Peters, L., A. Murphy, R. Tonkin, R. Milner, and D. Cox. 1993. *Adolescent health survey: Province of British Columbia.* Burnaby, BC, Canada: The McCreary Centre Society.

Reis E. and E. Saewyc. 1999. *83,000 Youth: Selected findings of eight population-based studies as they pertain to anti-gay harassment and the safety and well-being of sexual minority students.* Seattle, WA: Safe Schools Coalition. Available at: http://www.safeschools-wa.org/ssc_reports.htm.

Remafedi G., M. Resnick, and R. Blum, et al. 1992. "Demography of sexual orientation in adolescents." *Pediatrics* 89: 714-721.

Russell, S.T. and K. Joyner. 2001. "Adolescent sexual orientation and suicide risk: evidence from a national study." *American Journal of Public Health* 91(8): 1276-1281.

Saewyc, E.M., G.R. Bauer, C.L. Skay, L.H. Bearinger, M.D. Resnick, E. Reis, and A. Murphy. 2004. "Measuring sexual orientation in adolescent health surveys: Evaluation of eight school-based surveys." *Journal of Adolescent Health* 35: 345e.1-e.16, on-line at http://www.journals.elsevierhealth.com/periodicals/jah/issues

5. Racial/Ethnic and Cultural Considerations in Collecting Data on Sexual Orientation

Asking well-constructed questions about sexual orientation allows researchers to better understand the diversity of families and lives of the people living in the United States. The complexity of our communities is expressed in intersections between racial/ethnic diversity and sexual diversity, creating different life experiences for racial/ethnic minority lesbian, gay, bisexual, and transgender (LGBT) people when compared with white LGBT people, for example.[8] Accordingly, the context of racial/ethnic diversity leads to additional methodological considerations related to the cross-cultural equivalence of sexual orientation measures and highlights the need to collect better data on sexual orientation to study these interactions. This section of the report outlines some issues related to measurement that are relevant for studying not only racial/ethnic diversity within sexual minority groups, but also sexual diversity within racial/ethnic minority groups. The latter of these two approaches, in particular, entails additional consideration and thought about the assessment and measurement of sexuality.

MEASUREMENT

Differences in relationships and sexual practices around the world call into question the cross-cultural equivalence of sexual orientation as a social construct, independent of how the construct is operationalized or how well items intended to measure the construct have been linguistically translated. Cultural differences in response patterns may lead to observations that are artifacts of questionnaire design, differences in item interpretation, and interviewer effects.

Along these lines, the context of cultural diversity raises issues about what questions are asked on surveys and how they are asked. Foremost, sexual orientation survey items should be culturally appropriate, relevant, acceptable, and compatible with the respondent's understanding of the construct that the question is intended to measure. However, differences in how sexuality is understood in different racial/ethnic populations underscore the difficulties in generalizing sexual orientation as a social construct and raise questions about cultural equivalence. In particular, using only measures related to identity and excluding other dimensions of sexuality, such as desire and behavior, may potentially lead to under-representing sexual minorities among non-white or non-U.S.-born populations.

As noted in earlier sections of this report, we know that individuals might report same-sex sexual behavior or attraction without having a LGB identity (e.g. Laumann et al. 1994, McKirnan et al. 1996, Centers for Disease Control 2000). In addition, research demonstrates that categories of sexual

[8] Although considerations for collecting data on transgender status and gender nonconformity are specifically addressed in Section 6, the issues discussed in this Section also should be considered when working with transgender communities.

orientation identities that have been historically developed in gay white contexts may be less culturally relevant among non-white groups (Carballo-Diéguez 1989, Chauncey 1994, McKirnan et al. 1996, Centers for Disease Control 2000, Zea et al. 2003, Ford et al. 2004, Wolitski et al. 2006). For example, there are no culturally equivalent words for "gay" in Spanish and in most Asian languages (Carballo-Diéguez 1989, Sullivan 2001, Zea et al. 2003). Previous studies have also found that Black and Latino men who have sex with men (MSM) were less likely to identify as gay compared to white MSM (McKirnan et al. 1996, Centers for Disease Control 2000). A more recent study found that of participants who reported engaging in same-sex behaviors, whites were more likely to identify as LGB compared to other racial/ethnic groups. Similarly, foreign-born participants were less likely to identify as LGB compared to U.S.-born participants (Chae et al., in press).

Findings from another recent study suggested considerable heterogeneity in responses to items assessing sexual orientation and behavior among Latino and Asian Americans (Chae & Ayala, 2009). In fact, among participants who reported having engaged in same-sex behaviors, a majority did not identify as LGB. In addition, this study found several socio-demographic correlates of LGB identification, including ethnic ancestry or national origin, gender, and socioeconomic factors. The authors also reported that U.S.-born Latino and Asian sexual minorities were more likely to identify as LGB, suggesting that the adoption of an LGB identity may be less salient in defining the sexualities of those who are foreign born. This finding is concordant with previous research suggesting that constructions of sexuality may differ from mainstream US conceptualizations among racial/ethnic minorities, and in particular, in populations that are predominantly foreign-born (Carballo-Diéguez 1989, McKirnan et al. 1996, Centers for Disease Control 2000, Zea et al. 1999, Wolitski et al. 2006).

These studies show that how sexual orientation is measured will determine the composition of the heterosexual and non-heterosexual groups implied by the measures used. Indeed, studies of large population-based samples may have systematically misclassified segments of some sexual minority groups as being in a heterosexual identity category or as having an unknown identity. The implications of different racial/ethnic group mappings of behavior or attraction onto sexual identities are important for several reasons. First, as suggested here, research findings of health disparities or economic differences between LGB-identified individuals and heterosexual-identified individuals might not be applicable to all racial/ethnic sub-groups. Second, the sexual orientation disparities or differences might be even larger if measured using a different measure of sexual orientation that captured a more racially/ethnically diverse group. Third, larger studies of samples of sexual minorities, broadly defined, will need to be carefully constructed to avoid excluding some racial/ethnic groups.

SAMPLING

Given differences in population sizes and constructions of sexuality across race/ethnicity and culture, we cannot employ the same set of assumptions about LGBT people of color as we do with white LGBT communities when determining sampling strategies or devising sampling frames. For example, in studies aimed at recruiting LGBT participants, there may be stark racial/ethnic differences in the likelihood of being recruited into studies or willingness to participate. These concerns might be pronounced for racial/ethnic minority LGBT people who are more attached to their racial/ethnic communities, those who are less likely to reside in or socialize in mainstream LGBT areas or contexts, as well as those who do not identify as LGBT. Moreover, distrust that is rooted in histories of human subjects abuses – often expressed by communities of color toward researchers – complicate assumptions inherent in random sampling methods within large population-based surveys.

In many sampling strategies, careful choice of screening questions when developing sexual minority samples is crucial. Questions that capture a broad range of individuals with same-sex behavior as well as LGB identities may result in a more racially and ethnically diverse sample. For example, the California Lesbian, Gay, Bisexual, and Transgender Tobacco Use Survey - 2004 used screening questions that asked for LGB-identified individuals as well as people who have had sex with people of the same-sex (Bye, et al, 2005).

Patterns of residential segregation may bias samples drawn from strategies that take advantage of gay enclaves (Gates and Ost, 2004; Carpenter and Gates, 2008), so random sampling techniques employed within so-called "gay households in gay enclaves" are not likely to have inclusive sampling frames. Therefore, sampling choices can lead to the under-representation of some racial/ethnic groups and the social arrangements particular to these groups.

Research has begun to develop sampling methods that are more attentive to the various ways LGBT people of color and lower income LGBT people organize their social and sexual lives, for example, modified chain referral, venue-based and time-space sampling techniques (Ramirez-Valles, Heckathorn, Vazquez, Díaz, Campbell, 2005; Ramirez-Valles, Garcia, Campbell, Díaz, and Heckathorn, 2008; Díaz, Ayala, and Bein 2004). Follow-backs, oversampling, and better quality purposeful or convenience sampling are some recommended strategies for addressing these challenges. Determining an appropriate sampling strategy for survey work involving LGBT from different racial/ethnic groups may require ethnographic mapping and other qualitative formative research.

OTHER SURVEY QUESTIONS AND SURVEY ANALYSIS

An additional consideration when analyzing data on racial/ethnic minority LGBT concerns is the need to understand factors that mediate the choice of identity categories, particularly discrimination and acculturation. Measures of those constructs could include community participation, affinity, and adoption of values shared by the mainstream LGBT (mostly white and middle-class) community (Zea, Reisen, and Díaz 2003). Existing discrimination and acculturation measures may be retested or otherwise modified when there is no reliability or validity data for a specific population in question. Measuring experiences of discrimination and acculturation is important for providing a frame of interpretability or an analytic frame through which study findings about sexual orientation can be better understood, especially given the variability among racial/ethnic minorities in their adoption of culturally constructed sexual identities and the behavioral expectations they embody.

RECOMMENDATIONS

We recommend that researchers consider several factors in collecting sexual orientation data in racial/ethnic minority populations. Our specific recommendations include the following:

Best practice:

When possible assess multiple dimensions of sexuality, such as measures of sexual behavior, attraction, as well as self-identity.

Research examining sexual diversity within racial/ethnic minority groups might include additional response options for sexual orientation identity terms, such as two-spirit, same gender loving, homosexual, down low, or queer, that may turn out to be more relevant for non-white populations.

OTHER PERTINENT ISSUES TO CONSIDER

More research is needed to better understand how attraction and behavior are mapped onto sexual orientation identities. Sexual orientation measurement has been challenged by questions about the politics of inclusion, exclusion, and representation:

- Who gets to be defined as LGBT and who gets left out of a definition of a community?
- How should the multiplicity of identification and its relationship to social discrimination be handled in research on sexual minority populations across race, ethnicity, culture and class lines?
- How does identity map to gender identity and expression?
- How should we handle data when there is an apparent incompatibility between identity and behavior?
- How should we approach sexuality measurement of people of color and working class people given that these groups are grossly over-represented in the prison system and among people living in poverty, both in the U.S. and around the world?

Further research in this area may require extensive qualitative work in advance of future population-based survey research.

REFERENCES

Bye L, E. Gruskin, G. Greenwood, V. Albright, and K. Krotki. 2005. California Lesbians, Gays, Bisexuals, and Transgender (LGBT) Tobacco Use Survey – 2004. Sacramento, CA: California Department of Health Services.

Carballo-Diéguez, A. 1989. "Hispanic Culture, Gay Male Culture, and AIDS: Counseling Implications." *Journal of Counseling and Development* 68:26-30.

Carpenter, C., and G. J. Gates. 2008. "Gay and Lesbian Partnership: Evidence from California." *Demography* 45(3): 573-590.

Centers for Disease Control. 2000. "HIV/AIDS among racial/ethnic minority men who have sex with men—United States, 1989-1998." *Morbidity and Mortality Weekly Report, 49,* 4-11.

Chae, D.H., N. Krieger, E. Barbeau, G. Bennett, and A. Stoddard. 2009. "Implications of discrimination based on sexuality, gender, and race for psychological distress among working class sexual minorities: The United for Health Study, 2003-2004." *International Journal of Health Services*.

Chae, D.H. and G. Ayala. 2009. "Measurement of sexuality among Latino and Asian Americans in the USA: Implications for unfair treatment and psychological distress." *Journal of Sex Research, 22,* 1-9.

Chauncey, G.J. 1994. *Gay New York: Gender, Urban Culture, and the Making of the Gay Male World, 1890–1940*. New York: Basic Books.

Díaz, R.M., G. Ayala, and E. Bein. 2004. "Sexual Risk as an Outcome of Social Oppression: Data from a probability sample of Latino gay men in three US cities." *Cultural Diversity and Ethnic Minority Psychology*. 10(3): 255-267.

Ford, C.A., C.I. Viadro, and W.C. Miller. 2004. "Testing for Chlamydial and Gonorrheal Infections Outside of Clinic Settings: A summary of the literature." *Sexually Transmitted Diseases* 31(1):38-51.

Gates, G.J. and J. Ost. 2004. *The Gay and Lesbian Atlas*, Urban Institute Press, Washington, DC.

Laumann, E.O., J.H. Gagnon, R.T. Michael, and S. Michaels. 1994. *The Social Organization of Sexuality: Sexual Practices in the United States*. Chicago: Univ. Chicago Press

McKirnan, D.J., D.G. Ostrow, and B. Hope. 1996. "Sex, drugs, and escape: A psychological model of HIV risk behavior." *AIDS Care* 8(6):655-670.

Ramirez-Valles, J., D. D. Heckathorn, R. Vazquez, R.M. Díaz**,** and R.T. Campbell. 2005. "From Networks to Populations: The Development and Application of Respondent-Driven Sampling Among IDUs and Latino Gay Men." *AIDS and Behavior*: 9(4): 387-402.

Ramirez-Valles, J., D. Garcia, R. Campbell, R.M. Díaz, D. Heckathorn. 2008. "HIV Infection, Sexual Risk, and Substance Use among Latino Gay and Bisexual Men and Transgender Persons*." American Journal of Public Health,* 98: 1036-1042.

Wolitski R.J., K.T. Jones, J.L. Wasserman, and J.C. Smith. 2006. "Self-identification as "down low" among men who have sex with men (MSM) from 12 US cities." *AIDS and Behavior* 10(5):519-29.

Zea, M.C., C.A. Reisen, and R.M. Díaz. 2003. "Methodological issues in research on sexual behavior with Latino gay and bisexual men." *American Journal of Community Psychology* 31(3-4):281-291.

6. Considerations: Collecting Data on Transgender Status and Gender Nonconformity

This report primarily addresses survey questions on sexual orientation, which includes sexual identity, sexual behavior, and sexual attraction. As discussed earlier, the importance of such survey questions stems from the cultural, health, economic, and social salience of sexual orientation in creating distinct life challenges for LGB people. However, the social and political community for LGB people also includes transgender people who would remain invisible on surveys even with a question on sexual orientation.

As an umbrella term, transgender refers to people whose gender expression defies social expectations (Fineberg, 1996). This definition is so broad that it likely encompasses gender nonconforming individuals who do not think of themselves as transgender. More narrowly, the term transgender describes a smaller group of people who experience incongruence between birth sex and gender identity (Gay and Lesbian Medical Association, 2001; American Public Health Association, 1999; Center for Substance Abuse Treatment, 2001).

The health and well-being of transgender people may be among the poorest in the United States (Clements-Nolle et al., 2001; Fallis et al., 2000; Garofalo et al., 2006; Grossman and D'Augelli, 2006; HIV Epidemiology Program, 2000; Kenagy, 2005; Kosciw and Diaz, 2006; Lombardi et al., 2001; McGowan, 1999; Xavier, 2000). Our lack of knowledge about how to identify transgender respondents on general population surveys hinders efforts to improve the health and socioeconomic status of this marginalized community. While this report cannot make specific recommendations on transgender-related measurement given our current level of methodological knowledge, this section describes various measurement approaches and related issues in an effort to further research on transgender health and welfare.

MEASUREMENT APPROACHES

A. Sex and gender

Conron et al. cognitively tested a combined sex/gender measure in a small racially/ethnically diverse group of adolescents: Sex/gender: female; male; transgender male-to-female; transgender female-to-male; transgender (not exclusively male or female); not sure (2008). Participants were accurately classified as male, female, or transgender; however, some transgender youth found the conflation of sex and gender confusing. A modified measure (Gender: male, female, transgender male-to-female, transgender female-to-male, transgender do not identify as exclusively male or female) was recommended for further testing. This study also found that nontransgender adolescents viewed the terms "sex" and "gender" as interchangeable. Thus a potential drawback of a two-step approach (e.g.,

What is your sex? Male, female, intersex; and What is your gender? Man, woman, transgender, etc.) is non-response on the second (redundant) item.

B. Transgender status

Another approach involves asking participants if they are transgender. In 2006, the self-administered Boston Youth Survey included a question: "Are you transgender?" Participants (n=1,032) were sampled from Boston's racially/ethnically diverse public high schools; 1.6% of respondents answered yes, 86.3% answered no, 6.3% said that they didn't know and 5.7% skipped the item (Almeida et al., 2009). It is possible that students who did not answer the item did not understand the term transgender.

Measures included on the Boston, Massachusetts, and Vermont BRFSS surveys, which are interviewer-administered telephone surveys of adults, have included a definition of transgender. For example, the Massachusetts survey asks, "Some people describe themselves as transgender when they experience a different gender identity from their sex at birth. For example, a person born into a male body, but who feels female or lives as a woman. Do you consider yourself to be transgender? (yes, no) " (Massachusetts Department of Public Health, 2007). The complexity of this measure may present comprehension problems for individuals with low literacy skill. A simplified version is under-going testing in Massachusetts: "When a person's sex and gender do not match, they might think of themselves as transgender. Sex is what a person is born. Gender is how a person feels. Do you think of yourself as transgender? (Conron, 2009a)."

C. Sexual orientation and transgender status

A measure developed by Scout assesses sexual orientation and transgender status simultaneously. An interviewer asks: "Do you consider yourself to be one or more of the following… straight, gay or lesbian, bisexual, transgender?" If a participant hesitates to select a response, the interviewer says "You can name a different category if that fits you better: ____." (Scout, 2008) Information about the performance of this measure can be found at http://www.lgbttobacco.org/resources.php?ID=19.

D. Gender expression

Measures designed to assess conformity between birth sex and gender expression (e.g., appearance or mannerisms) have been used by sexual orientation researchers to identify determinants of victimization among LGB people. D'Augelli, Grossman, and Starks (2006) assessed recalled childhood gender nonconformity in a racially/ethnically diverse sample of LGB youth (n=528) from the New York City area. Two measures were used: 1) being called effeminate (sissy or other taunts) or overly masculine if female (tomboy or other taunts) prior to the age of 13, and 2) being considered too feminine or too masculine by parents prior to the age of 13. Ortiz-Hernandez and Granados-Cosme (2006) asked over 500 LGB adults in Mexico City to rate themselves as masculine and feminine relative to others of the same age and sex. In both studies, gender nonconforming LGB people reported more physical and verbal victimization than conforming LGB individuals.

Clark and colleagues asked 40-75 year old heterosexual and gay women (n=40) to rate themselves on a five-point bipolar gender expression scale: "How would you describe yourself? Would you say, very masculine … very feminine?" Women expressed confusion about whether they were being asked to report on how they see themselves versus how they believe others perceive them (2005). Additionally, participants were uncertain about whether they should answer the item in terms of their appearance or

mannerisms and personality traits. The authors recommended assessing each dimension of gender expression separately.

ISSUES AND CONSIDERATIONS

Several issues warrant consideration when selecting a measurement approach: 1) the population of interest, 2) the prevalence of the population, 3) false positives, and, 4) non-response. The transgender population to which one wishes to generalize should inform the selection of a measurement approach. Estimates suggest that perhaps as many as 0.5-1.2% of the adult population may be classified as transgender when transgender status is assessed (personal communications, R. McCormick, Dir. Vermont BRFSS, March 5, 2007; M. Ostrem, Research Dir., Boston Public Health Commission, Boston BRFSS, March 21, 2007). As many as 7-8% of children may be classified as transgender, in the broadest sense, when a measure of parental perception of child gender nonconforming expression is used (Conron, 2009b). Simple random sampling approaches will fail to identify enough transgender people for analysis, particularly when transgender is defined narrowly, unless the sample size is quite large and/or repeated over time. Stratified sampling and innovative methods (e.g., respondent driven sampling) to sample minority populations may be needed.

Avoidance of false positives and non-response is particularly important when the population of interest is small, as with transgender people. Measures that include a definition of the term transgender may reduce the occurrence of false positives and non-response. The presence of multiple transgender response options (such as transgender male-to-female-, transgender female-to-male, and transgender) in a measure of gender may provide enough information to reduce incorrect endorsement and confusion by non-transgender respondents. Providing multiple response options will also enable sub-group analyses in larger samples. This may be useful because male-to-female and female-to-male individuals appear to have different health profiles (Clements-Nolle et al., 2001; Kenagy, 2005). An investment in gender-related measurement research,[9] both formative and cognitive testing, is a critical next step towards improving the health and welfare of the transgender community.

REFERENCES

Almeida J., R.M. Johnson, H. Corliss, B. Molnar, and D. Azrael. 2009. "Emotional distress among LGBT youth: The influence of perceived discrimination based on sexual orientation." *Journal of Youth and Adolescence* 38(7): 1001-14.

American Public Health Association. 1999. "The need for acknowledging transgendered individuals within research and clinical practice." Policy number: 9933. Policy date: 1/1/1999. Available at http://www.apha.org/advocacy/policy/policysearch.

[9] Research on best practices to collect sexual orientation data from transgender respondents is also needed. In a small cognitive testing study (Austin, Conron, Patel, and Freedner, 2006), transgender adolescents expressed difficulty answering sexual orientation items because such questions are grounded in a binary gender system (degree of same-sex/same-gender versus opposite-sex/opposite-gender orientation). Garofalo et al. report that 47% of Chicago male-to-female transgender youth who reported sex with men (n=50) reported a homosexual sexual identity while 26% reported a heterosexual identity (2006), illustrating that some youth answered in terms of their birth sex while others answered in terms of their gender identity.

Austin, S.B., K.J. Conron, A. Patel, N. Freedner. 2006. "Making sense of sexual orientation measures: Findings from a cognitive processing study with adolescents on health survey questions." *Journal of LGBT Health Research* 3(1): 51-62.

Center for Substance Abuse Treatment. 2001. "A provider's introduction to substance abuse treatment for lesbian, gay, bisexual, and transgender individuals." (DHHS Publication No. SMA 01–3498). U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Rockville, MD. Available at http://www.kap.samhsa.gov/products/manuals/pdfs/lgbt.pdf.

Clark, M.A., G. Armstrong, and L. Bonacore. 2005. "Measuring sexual orientation and gender expression among middle-aged and older women in a cancer screening study." *Journal of Cancer Education* 20(2):108-112.

Clements-Nolle, K., R. Guzman, and M. Katz. 2001. "HIV prevalence, risk behaviors, health care use, and mental health status of transgender persons: Implications for public health intervention." *American Journal of Public Health* 91:915-921.

Conron, K.J. 2009a. Gender Measures Project briefing. Massachusetts Department of Public Health. Meeting, April 7, 2009.

-- 2009b. Child gender atypicality and violence victimization: Findings from the National Study of Children Exposed to Violence. Maternal and Child Health Seminar, Harvard School of Public Health. Invited lecture, February 11, 2009.

Conron, K.J., Scout, and S.B. Austin. 2008. "'Everyone has a right to, like, check their box:' Findings on a measure of gender identity from a cognitive testing study with adolescents." *Journal of LGBT Health Research* 4(1):1-9.

D'Augelli, A.R., A.H. Grossman, and M.T.J. Starks. 2006. "Childhood gender atypicality, victimization, and PTSD among lesbian, gay, and bisexual youth." *Journal of Interpersonal Violence* 21(11):1462-82.

Fallis G., S.L. Landers, S. Lawrence, and J. Sperber. 2000. "Access to Health Care for Transgendered Persons in Greater Boston." Boston, MA: John Snow Research and Training Institute and Justice Resource Institute, GLBT Health Access Project.

Fineberg, L. 1996. *Transgender Warriors: Making History from Joan of Arc to Dennis Rodman.* Boston: Beacon Press.

Garofalo, R., J. Deleon, E. Osmer, M. Doll, and G.W. Harper. 2006. "Overlooked, misunderstood and at-risk: Exploring the lives and HIV risk of ethnic minority male-to-female transgender youth." *Journal of Adolescent Health* 38:230-236.

Gay and Lesbian Medical Association and LGBT health experts. 2001. "Healthy People 2010 Companion Document for Lesbian, Gay, Bisexual, and Transgender (LGBT) Health." San Francisco, CA. Available at: http://www.glma.org.

Grossman, A.H. and A.R. D'Augelli. 2006. "Transgender youth: Invisible and vulnerable." *Journal of Homosexuality* 51:111-128.

HIV Epidemiology Program, Los Angeles County, Department of Health Services. 2000. "An Epidemiologic Profile of HIV and AIDS in Los Angeles County." Available at: http://lapublichealth.org/hiv/reports/epipro/2000/epipro00.pdf.

Kenagy, G.P. 2005. "Transgender health: Findings from two needs assessment studies in Philadelphia." *Health & Social Work* 30:19-26.

Kosciw, J.G. and E.M. Diaz. 2006. "The 2005 National School Climate Survey: The Experiences of Lesbian, Gay, Bisexual and Transgender Youth in our Nation's Schools." New York, NY: GLSEN;. Available at: http://www.glsen.org.

Lombardi, E.L., R.A. Wilchins, D. Priesing, and D. Malouf. 2001. "Gender violence: Transgender experiences with violence and discrimination." *Journal of Homosexuality* 42:89-101.

Massachusetts Department of Public Health, Health Survey Program, Behavioral Risk Factor Surveillance System. Behavioral Risk Factor Survey 2007 Questionnaire. Available at http://www.mass.gov/Eeohhs2/docs/dph/behavioral_risk/survey_07.pdf.

McGowan, C.K. 1999. *Transgender Needs Assessment*. New York, NY: HIV Prevention Planning Unit, New York City Department of Health.

Ortiz-Hernandez, L. and J.A. Granados-Cosme. 2006. "Violence against bisexuals, gays and lesbians in Mexico City." *Journal of Homosexuality* 50(4):113-40.

Scout. LGBT Surveillance and Data Collection Briefing Paper. Online publication. Last updated Sept 7. 2008. Available at http://www.lgbttobacco.org/files/Surveillance%20Briefing%20Paper%2004.doc.

Xavier, J.M. 2000. The Washington Transgender Needs Assessment Survey: Final Report for Phase Two. Washington, DC: Administration for HIV/AIDS of the District of Columbia.

7. Best Practices for Analyses of Sexual Orientation Data

Collecting data on sexual orientation is obviously an important step, but data must also be analyzed before the knowledge gained from any such data will be revealed. Responsible analyses of sexual orientation must be cognizant of several important factors that have been observed to potentially distort or misrepresent important nuances in these data. Most importantly, a growing body of research analyzing associations between sexual orientation and a wide variety of social and health outcomes suggests that the best research requires several important practices:

- Careful consideration of differences among non-heterosexual responses
- A thorough understanding of how survey methodologies can affect reliability and validity of responses
- Separate subgroup analysis of outcomes and appreciation for how reported findings can be used in the broader socio-political and policy contexts of sexual orientation issues
- A clear understanding of time frames and temporal issues in analyses of sexual orientation
- Recognition of potential sources of measurement error common when considering small segments of a population

DIFFERENCES AMONG NON-HETEROSEXUAL RESPONSES

Most data sources with sexual orientation questions yield relatively small samples of non-heterosexual respondents. These respondents include those who identify as homosexual, gay, lesbian, or bisexual, and often surveys permit respondents to identify as "something else" or "unknown." Data from several research studies and prominent surveys provides evidence that these three groups can be quite different in their demographic composition and these differences could be important in interpreting any findings.

For example, in the 2002 National Survey of Family Growth (Mosher et al., 2005), 2.3% of men aged 18-44 identified as "homosexual", 1.8% as "bisexual" and 3.9% as "something else." Of those men who identified as homosexual, nearly three-quarters said they were mostly or exclusively sexual attracted to other men and conversely about a quarter reported a primary attraction (mostly or exclusively) to women. Among bisexual men, more than half said they were primarily attracted to women, about a third said they were equally attracted to men and women, and only 11% reported a primary attraction to men. Among those classified as "something else," more than 87% reported a primary attraction to women.[10] Clearly, these are potentially very different groups who likely have distinctly different sexual behaviors and demographic characteristics.

In the same survey, 1.3% of women in the same age group identified as "homosexual", 2.8% as "bisexual", and 3.8% as "something else." Note the very different distribution across these identities as compared to men. The women were much more likely to identify as bisexual than the men. Like men,

[10] Based on author (Gary J. Gates) calculation of the 2002 NSFG public-use data file.

women identifying as lesbian are much more likely to be primarily attracted to women than are bisexual women and 85% of the "something else" group is primarily attracted to men.

In the 2005 CHIS, 2.7% of men aged 18-70 identified as "gay" or "homosexual", 0.8% as "bisexual", and 0.8% were classified "not sexual, celibate, none, or other." For women, the figures were 1.2% "gay/lesbian/homosexual", 1.6% as "bisexual", and 0.7% in the "other" category. Again, the distributions are quite different between men and women with women being twice as likely as men to identify as bisexual. More than a third of those in the "not sexual/celibate/none/other" category say they are currently married compared to less than 3% of those identifying as lesbian or gay. More than half have not completed high school. They are also twice as likely as heterosexuals to be senior citizens and to not speak English well.

Researchers should never assume that respondents who choose "I don't know" or "something else" as an option in a sexual orientation question are gay, lesbian, or bisexual. Most surveys demonstrate that these individuals appear to be primarily heterosexual in terms of attraction and behavior. They may be selecting the "something else" type of option because they don't understand the question, an outcome that is likely a product of other demographic characteristics including age, language ability, and education level.

Several studies demonstrate that demographic and economic characteristics and outcomes can vary between gay/lesbian and bisexual identified groups. For example, Albelda and colleagues (2009) studied poverty using the 2003/2005 CHIS data and show that bisexual women are more than twice as likely as lesbians are to be in poverty. Bisexual men are more than 50% more likely than gay men to be in poverty. Carpenter (2005) uses the 2001 CHIS to show that while there was not a statistically significant difference in earnings between gay men and lesbian women and their heterosexual counterparts, there was evidence suggesting that bisexuals earn less than heterosexuals. Herek (2009) finds that gay men and lesbians experience discrimination in very different ways from bisexual men and women.

Several studies of wage differences based on sexual orientation used the General Social Survey, identifying sexual minorities via questions on the sex of sexual partners and not an actual sexual orientation identity question. Like the studies that include identity, results from these studies appear to be sensitive to who is included in the group considered to be gay, lesbian, or bisexual. They also demonstrate sensitivity in results depending on the inclusion of data from various time periods. For example, Badgett (1995) uses GSS data from 1989-1991 and finds that behaviorally lesbian women (those who report some same-sex sexual partners) earn less than other women. Black et al. (2003) also use the GSS data (though they add data from 1993, 1994, and 1996) and use a much more restrictive definition of sexual orientation comparing women who have only had same-sex sexual partners in the last year. They find that defining lesbian in this fashion yields a 20% wage premium for lesbians relative to other women. Carpenter (2005) also considers GSS data and demonstrates that there are differences in economic outcomes based on the time period considered, especially for women.

These examples imply that the robustness of findings across different measures of sexual orientation should be assessed. These findings also suggest that whenever the size of subgroups allows, bisexuals should be analyzed separately from lesbian and gay respondents. Non-respondents to sexual orientation questions or those who select "I don't know" or "other" options should not be considered LGB. Further, differences between men and women should be considered.

SURVEY METHODOLOGIES

Both the reliability and validity of sexual orientation and behavior questions can be affected by survey methodology. As noted in an earlier section, Villarroel and colleagues (2006) showed that telephone computer-assisted survey methods dramatically increased the reporting of same-sex attraction and behavior, particularly in areas with high levels of social stigma associated with homosexuality. When reporting and analyzing results, researchers should consider how the survey was administered and any effect the mode and other survey features might have on responses. For example, based on the Villarroel et al. (2006) findings, we would expect that an in-home, in-person survey would find a lower incidence of same-sex sexual behavior, attraction of sexual orientation than a survey conducted without a human interface (perhaps web-based or telephone computer-assisted). This could distort differences observed among groups based on sexual orientation.

As with any analysis of survey data, researchers should also consider factors like question placement, skip-patterns, and missing data when evaluating findings related to sexual orientation questions. Some surveys place sexual behavior and orientation questions among questions about other sensitive behaviors, while other surveys place the question among more typical demographic questions. Researchers should consider the effects that placement could have on how individuals answer the question. For example, responses to a sexual orientation question could differ substantially between a survey where the sexual orientation item follows questions about experiences of sexual violence and one where sexual orientation is asked after race/ethnicity and before age. Context can matter and individuals are likely to respond quite differently when surrounding questions do not somehow signal stigmatization of the sexual orientation or behavior questions.

Missing data present a problem for researchers. Small sample sizes in relation to non-heterosexual respondents may tempt some researchers to consider methods of imputation with relation to missing data. Respondents who do not respond to one type of question often do not respond to a host of other sensitive questions. Any manipulation of missing responses should consider patterns of missing data rather than simply considering a single item. Similar to “don’t know” responses to sexual orientation questions, researchers cannot safely categorize those not answering these questions as being within or outside of sexual minority groups.

A final caution with regard to survey methodology is that researchers should be conscious of the primary aims of a survey and how those might affect responses. For example, many surveys are focused primarily on middle-aged adults. Questions are often designed with this group in mind. We have already noted that respondents who choose an “other” option to a sexual orientation question are often older, perhaps suggesting that terms like heterosexual, homosexual, straight, and gay are just not part of their everyday language. Researchers should always be cautious when analyzing younger or older age cohorts in surveys designed for middle-aged adults. Their responses could be affected by differences in how they understand questions essentially designed for a different age cohort that might be more familiar with terms such as “heterosexual” or “gay.” This age effect may be particularly strong with regard to questions about sexual identity.

SUBGROUP ANALYSES

Evidence also suggests substantial differences in characteristics of sexual minorities across a variety of demographic sub-groupings. For example, Gates (2008) shows that African-American, Latino/Latina,

and Native American individuals in same-sex couples are substantially more likely to be raising children than their white counterparts—in some cases, two to three times more likely.

Several studies also show that non-white people in same-sex couples experience many of the same economic disadvantages as do their counterparts in different-sex couples. Gates and Ramos (2008a, 2008b) show that African-American and Latino/Latina individuals in same-sex couples have lower education, income, and home ownership rates than the broader LGB community in California. Badgett et al. (2006) show evidence of a "double disadvantage" for African-American gay men as their wages are lower than both black heterosexual men and white gay men.

Gates and Ost (2004) show substantially different geographic distributions for African-Americans and Latinos in same-sex couples compared to the broader distribution of all same-sex couples. While states like Vermont, California, Washington, Massachusetts, and Oregon had the highest concentration of all same-sex couples in 2000, the rankings were quite different for couples that included an African-American or Latino/a partner. The top five states for concentration of couples with an African-American partner were Mississippi, Louisiana, South Carolina, Georgia, and Maryland. For those with a Latino/a partner, the highest ranked states were New Mexico, California, Texas, Arizona, and Nevada.

Researchers should always be aware that attributes attributed to the LGB community are largely associated primarily with white LGB individuals since they represent the largest racial/ethnic grouping within the population. Clear differences in family structure along with demographic, economic and geographic characteristics exist across racial and ethnic groups and should be considered whenever sample sizes permit.

CONTEXTUAL ISSUES

The many high-profile public policy debates about the rights and lives of sexual minorities places a special responsibility on researchers to be conscious of how findings might be used in the public domain. While there is no way that researchers can completely avoid others drawing inappropriate conclusions from reported findings, providing context is one important way that such circumstances can be minimized. This is particularly important when findings involve illegal or stigmatized behaviors by sexual minorities, a group often already stigmatized by their sexual and gender identities and behaviors. Providing examples of rates of reported behaviors among other demographic groups can be a way to offer context for whether the incidence of a particular behavior is notably high or low among sexual minorities.

Another example of context involves research using data on same-sex couples. Carpenter and Gates (2008) show evidence of different effects of sexual orientation for coupled and single LGB individuals. Researchers should remind readers that analyses of couples may give biased predictions if readers attempt to apply findings to non-coupled individuals.

While we certainly do not advocate researchers censoring potentially unflattering or controversial characteristics of sexual minorities, researchers can make an effort to provide appropriate context that can limit inappropriate use of data analyses in the public discussions about LGB issues.

TEMPORAL ISSUES

Because of small samples, researchers might be tempted to combine data over several points in time to increase sample sizes. Badgett (1995) and Black et al. (2003) combine multiple years of the GSS to create larger samples of individuals who report same-sex sexual behavior. While this may be entirely appropriate, researchers should consider caution when combining small samples collected over relatively long periods of time. Carpenter (2005) showed that results were sensitive to the time periods used when combining GSS data from several years. One reason for this is that sexual identity, attraction, and behaviors differ with changing social norms and can be different across age cohorts. Researchers should consider how sensitive results are to different combinations of data gathered over extended time periods. Also, the willingness of individuals to report same-sex experiences or LGB identities might increase over time.

In the absence of sexual identity questions, researchers often rely on responses to questions about past sexual behavior to identify sexual minorities. In addition to potential biases created through the exclusion of individuals who are not sexually active, caution should also be taken when using data in which respondents are asked about behaviors for longer reference periods (e.g., lifetime versus a five year window). Longer time frames may yield substantially more variation in sexual behavior than shorter time periods. Responses to questions about lifetime experiences may also not be as accurate as responses to questions about more recent behavior simply because they require longer recall. Further, when attempting to assess how individuals might currently perceive their sexual orientation identity, more recent sexual behavior is likely a stronger indicator. Black et al. (2000) find more concurrence between recent same-sex sexual behavior (in the last one year or five year) and a gay/lesbian identity than between lifetime sexual behavior and current identity.

Researchers should also be cautious when attempting to predict or correlate sexual minority status based on temporal measures of sexual behavior with other outcomes. When possible, researchers should construct measures that are temporally appropriate and carefully map the timing of influence between sexual orientation and other outcomes.

MEASUREMENT ERROR ISSUES

A final caution in analyzing sexual orientation data relates to a common problem when using data on very small subgroups within a larger sample: false positives. The false positive problem occurs when it is possible that errors made by those in a large population potentially misclassify individuals into a very small population. As the ratio between a large and small population increases, small errors among the large population that introduce incorrect observations into the small population have the increasing potential to substantially contaminate the small population of interest with misclassified individuals.

The U.S. Census tabulations of same-sex couples offer a clear example of this type of measurement error. Gates and Ost (2004) and Black et al. (2007) describe this potentially serious measurement error problem issue. Census Bureau coding procedures recode any same-sex “husband” or “wife” from the household roster as an “unmarried partner.” As a result of this procedure, any different-sex married couples that inadvertently miscode the sex of one of the spouses are coded as same-sex “unmarried

partner" couples.[11] Given the 90-to-1 ratio between married and unmarried partners in the census, even rare sex miscodes could significantly contaminate the same-sex couple sample with different-sex married couples. Black et al. (2006) estimate that perhaps as much as a third of the same-sex couples are miscoded different-sex married couples if the sex miscoding rate among married couples is similar to national averages.

Given that sexual minorities often represent less than 5% of the population, the false positive problem should always be considered in working with such data. Researchers should be vigilant in considering the degree to which errors in the larger population could yield to misclassification into the smaller population.

RECOMMENDATIONS

In summary, we make the following recommendations when analyzing data regarding sexual minorities:

- Whenever the size of subgroups allows, bisexuals should be analyzed separately from lesbian and gay respondents.
- Non-respondents to sexual orientation questions, or those who select "I don't know" or "other" options, should not be considered LGB.
- Differences in the effects of sexual orientation between men and women should be considered.
- When reporting and analyzing results, consider how the survey was administered and any effect that might have on responses.
- Consider factors like question placement, skip-patterns, and missing data when evaluating findings related to sexual orientation questions:
    - Individuals are likely to respond quite differently when surrounding questions do not signal stigmatization of the sexual orientation or behavior questions.
    - Imputation of missing responses should consider patterns of missing data rather than simply considering a single item.
- Responses of younger or older age cohorts could be affected by differences in how respondents understand questions essentially designed for a different age group.
- Attributes of the LGBT community are largely associated primarily with white LGBT individuals since they represent the largest racial/ethnic grouping within the population. Differences across racial and ethnic groups should be considered whenever sample sizes permit.
- Providing examples of rates of reported behaviors among other demographic groups can be a way to offer context for whether the incidence of a particular behavior is notably high or low among sexual minorities.
- Consider how sensitive analyses are to different combinations of data gathered over extended time periods.
- When attempting to assess how individuals might currently perceive their sexual orientation, more recent sexual behavior is likely a stronger indicator.
- When possible, construct appropriate temporal measures of sexual behavior and any outcomes being studied.
- Consider the degree to which respondent errors in the larger population could yield to misclassification into the smaller population of sexual minorities.

[11] Beginning with the 2008 American Community Survey, the Census Bureau has changed both the survey and post-data collection editing techniques. These changes will likely reduce the rate of sex miscoding among different-sex spouses.

REFERENCES

Albelda, R., M.V.L. Badgett, A. Schneebaum, and G.J. Gary. 2009. "Poverty in the Lesbian, Gay, and Bisexual Community." *The Williams Institute*. http://www.law.ucla.edu/williamsinstitute/pdf/LGBPovertyReport.pdf

Badgett, M.V.L. 1995. "The Wage Effects of Sexual-Orientation Discrimination." *Industrial and Labor Relations Review* 48(4): 726-739.

Badgett, M.V.L., L. Saunders, and G.J. Gates. 2006. "Double Disadvantage? African American Same-Sex Couples: Evidence from Census 2000." *Population Association of America* Annual Meeting, Los Angeles, CA.

Black, D., H. Makar, S. Sanders, and L. Taylor. 2003. "The Earnings Effects of Sexual Orientation." *Industrial and Labor Relations Review* 56(3): 449-469.

Black, D., G.J. Gates, S.G. Sanders, and L. Taylor. 2000. "Demographics of the Gay and Lesbian Population in the United States: Evidence from Available Systematic Data Sources." *Demography* 37 (2): 139-154.

-- 2007. "The Measurement of Same-Sex Unmarried Partner Couples in the 2000 U.S. Census." *California Center for Population Research,* Working Paper Series.

Carpenter, C.S. 2005. "Self-Reported Sexual Orientation and Earnings: Evidence from California." *Industrial and Labor Relations Review* 58(2): 258-273.

Gates, G.J. and J. Ost. 2004. *The Gay and Lesbian Atlas*, Urban Institute Press, Washington, DC.

Gates, G.J. 2008. "Diversity among Same-sex Couples and Their Children" in *American Families: A Multicultural Reader*, ed. S Coontz, Routledge.

Herek, G.M. 2009. "Hate Crimes and Stigma-Related Experiences Among Sexual Minority Adults in the United States." *Journal of Interpersonal Violence* 24(1): 54-74.

Mosher, W.D., A. Chandra, and J. Jones, Division of Vital Statistics, CDC. 2005. "Sexual Behavior and Selected Health Measures: Men and Women 15–44 Years of Age, United States, 2002." *Advance Data from Vital and Health Statistics* 362.

Ramos, C. and G.J. Gates. 2008a. "Census Snapshot: California's Black LGB Population." *The Williams Institute.* http://www.law.ucla.edu/williamsinstitute/publications/BlackSnapshot.pdf

-- 2008b. "Census Snapshot: California's Latino/a LGB Population, Williams Institute."*The Williams Institute*. http://www.law.ucla.edu/williamsinstitute/publications/CASnapshotLatino.pdf

Villarroel, M.A., C.F. Turner, E. Eggleston, A. Al-Tayyib, S.M. Rogers, A.M. Roman, P.C. Cooley, and H. Gordek. 2006. "Same-Gender Sex in the United States: Impact of T-Acasi on Prevalence Estimates." *Public Opinion Quarterly* 70(2):166-196.

Abbreviations Used

ACASI: audio computer-assisted self-interviewing

ADD Health: National Longitudinal Study of Adolescent Health

Audio-SAQ: self-administered questionnaires from tape recorders

BRFSS: Behavioral Risk Factor Surveillance System

CAPI: computer-assisted personal interviews

CASI: computer assisted self-administered interviews

CHIS: California Health Interview Survey

DHHS: Department of Health and Human Services

GSS: General Social Survey

LACHS: Los Angeles County Health Surveys

LGB: Lesbian, gay, and bisexual

LGBT: Lesbian, gay, bisexual, and transgender

MSM: Men who have sex with men

NCHS: National Center for Health Statistics

NESARC: National Epidemiologic Survey on Alcohol and Related Conditions

NSFG: National Survey of Family Growth

PAPI: paper and pencil personal interviews

SAQ: self-administered questionnaires audio

T –ACASI: telephone audio computer-assisted self-interviewing

SMART: Sexual Minority Assessment Research Team

T-ACASI: Telephone computer-assisted self-interviews

YRBS: Youth Risk Behavior Survey

Additional Resources

www.gaydata.org: This website was developed by Prof. Randall Sell of Drexel University with the assistance of the authors of this report. The site encourages the collection of sexual orientation data and the analysis of data sources that have already collected such data. The website includes information on existing data sources, measures, sampling, and related recommendations.