Sexual Orientation and the Risk for Unintended Pregnancy Among U.S. Women of Reproductive Age

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SHORT ABSTRACT:

Unintended pregnancies are common in the U.S. (accounting for half of pregnancies) and are associated with various negative health and well-being outcomes for mothers and children. Despite research finding that sexual minority women have higher rates of teenage pregnancy and risky behaviors, no prior studies have investigated unintended pregnancy among sexual minority women of reproductive age (15-44) using a large nationally-representative data set. We use the National Survey of Family Growth to identify whether sexual minority women are at elevated risk for unintended pregnancies.

EXTENDED ABSTRACT

Unintended pregnancy rates in the U.S. are the highest among all industrialized countries; half of all U.S. pregnancies are unintended (Singh, Sedgh, & Hussain 2010). Unintended pregnancies often interfere with women's educational trajectories and other life plans and are associated with poorer prenatal care, lower birth weight, higher levels of maternal depression, and other negative outcomes for mothers and children (Gipson, Koenig, & Hindin 2008; Korenman et al 2002; Kost, Landry, & Darroch 1998(a); Kost, Landry, & Darroch 1998(b); Myhrman 1988; Barber et al 1999; Najman et al 1991; Kane et al 2013). Pregnancy prevention interventions tailored to the needs of specific subgroups have proven to be most effective (Suellentrop 2011; Burlew, Philliber, & Sullentrop 2011). However, despite indications that they are highly in need of unintended pregnancy prevention intervention, sexual minority (non-heterosexual) women have been virtually ignored in unintended pregnancy research. Based on the few studies that have been conducted, young (<age 20) lesbian and bisexual women are more likely than their heterosexual counterparts to experience a pregnancy and to engage in behaviors that increase their risk for unintended pregnancy (Saewyc, et al 1998; Saewyc et al 1999; Black et al 2001; Saewyc et al 2008; charlton et al 2013; Tornello, Riskind, & Patterson 2014; Kirby & Lepore 2007). Yet it is unknown whether these pregnancies were unintended or resulted in negative outcomes. Even less is known about the pregnancy intentions and outcomes of sexual minority women (SMW) over the age of 20.

Background

Sexual orientation is a multidimensional construct; typically defined and measured in terms of sexual attraction, behavior, and identity (IOM 2011; Mustanski et al 2014; Horowitz & Newcomb 2001). While most adolescents and adults exhibit consistency (or concordance) across these three dimensions (e.g., they are exclusively heterosexual or homosexual in their sexual attractions, behaviors, and self-labeled identity), some do not (Ibid). Females in particular are likely to report discordance across sexual orientation dimensions (Ibid; Diamond, Omoto, & Kurtzman 2006; Diamond 2008). However, most population-based studies have employed a unidimensional approach to measuring sexual orientation, often using a single item to assess a single dimension of sexual orientation (IOM 2011; Mustanski et al 2014; Korchmaros, Powell, & Stevens 2013; Badgett & Goldberg 2009; Gattis, Sacco, & Cunningham-Williams 2012).

Discordance across sexual orientation dimensions is an emerging area of research, and important behavioral differences (drug and alcohol use, condom use, HIV testing) and health outcomes (mental health disorders) have been reported among individuals whose self-reported sexual identity do not match (i.e., is discordant with) their sexual behavior and/or sexual attraction (Mustanski et al 2014; Gattis, Sacco, & Cunningham-Williams 2012; Reback & Larkins 2013; Zhao et al 2010; Iguartua et al 2009).

Over half of pregnancies in the U.S. are unintended – that is, they are mistimed (occurring earlier than the woman wanted) or unwanted (not wanted at any time). In addition to derailing life plans, these pregnancies are commonly linked to a variety of negative health and well-being indicators for women and their children, including lower levels of prenatal care and breastfeeding; and higher levels of premature delivery, low birth weight, child abuse, intimate partner violence, and maternal depression and anxiety (accounting for background characteristics) (Gipson, Koenig, & Hindin 2008; Korenman et al 2002; Kost, Landry, & Darroch 1998(a); Kost, Landry, & Darroch 1998(b); Myhrman 1988; Barber et al 1999; Najman et al 1991; Kane et al 2013). Because of these negative consequences, Healthy People 2020 names as a national priority the reduction of unintended pregnancy as well as the elimination of disparities in unintended pregnancy. Although significant research and intervention efforts have targeted these pregnancies, no studies have examined the risk of unintended pregnancy among sexual minority women using a nationally-representative sample of reproductive aged American women (15-44). This is a glaring omission, since these women are likely at elevated risk of unintended pregnancy based on their sexual behaviors. For example, one study found that self-identified lesbian/gay and bisexual (LGB) teens were 2 to 7 times more likely than their heterosexual counterparts to experience a pregnancy, to have experienced early heterosexual intercourse (<age 14), to have had more sex partners, to not use or incorrectly use contraceptives, and to experience sexual abuse; all factors associated with an increased risk of unintended pregnancy (Saewyc, et al 1998; Saewyc et al 1999; Black et al 2001; Saewyc et al 2008; charlton et al 2013; Tornello, Riskind, & Patterson 2014; Kirby & Lepore 2007).

Present Study

Our goal is to identify which sexual minority women are at risk for unintended pregnancies, examine potential mediating factors, and determine whether sexual minority and heterosexual

women differ in the "downstream" effects of unintended pregnancy, such as poor prenatal care and low birth weight.

We use data from the National Survey of Family Growth (NSFG) to answer the following research questions:

1. Is sexual orientation discordance a risk factor for unintended pregnancy? And how does age influence this association? We hypothesize that discordant women – specifically those who identify as straight but have some same-sex attraction -- will be at elevated risk for unintended pregnancies since discordant women likely experience increased stress from concealing their sexual orientation for fear of stigmatization. We also expect that the association will be stronger among younger (15-24 year olds) versus older (25 years and older) women because young women with non-normative identities are less likely to be settled in those identities.
2. What factors mediate the association between unintended pregnancy risk and sexual orientation discordance? We hypothesize that elevated risk for unintended pregnancy among discordant SMW will be partially explained by less consistent contraceptive use, greater number and greater turnover of sexual partners, and attitudes that suggest greater discomfort with sexual minority status.

This is the first study to explore the wantedness of pregnancies, as well as health outcomes of these pregnancies, among sexual minority women in the U.S. Although a few studies have investigated disparities in pregnancy risk between sexual minority adolescents and their heterosexual counterparts, these studies did not examine intention status or pregnancy outcomes, and were limited to women under 20, despite the fact that most unintended pregnancies occur to women in their 20s. This leaves a significant gap in knowledge about the ways in which sexual minority status influences the risk of unintended pregnancy and related outcomes.

Data & Methods

Data

Data for this study come from the National Survey of Family Growth (NSFG), a large, nationally-representative sample of Americans, ages 15-44. This is considered to be the best data source on fertility and family related behaviors in the U.S. The data are cross-sectional, with

new samples taken every few years between 1978 and 2002, and every year starting in 2006. Respondents are interviewed face-to-face and also use audio computer assisted self-interviewing (ACASI) to answer sensitive questions. We use data on 12,221 women ages 15-44 who were surveyed between 2006 and 2010 (the most recent survey year). These women reported on 20,338 pregnancies, of which 10,291 were unintended (6,371 mistimed plus 3,920 unwanted). The response rate for the study was 78%.

Key Predictor and Outcome Measures

Unintended Pregnancy. Questions used in the NSFG for ascertaining intention status employ the standard wording. Respondents were asked, "Right before you became pregnant, did you yourself want to have a(nother) baby at any time in the future?" and, if so: "So would you say you became pregnant too soon, at about the right time, or later than you wanted?" Based on these two questions, pregnancies are classified as either: coming at the right time or later than desired ("intended"), coming too soon ("mistimed,") or not wanted at any time in the future ("unwanted"). Pregnancies that are either "mistimed" or "unwanted" are considered to be "unintended." The NSFG collects information on pregnancy intentions for all pregnancies taking place in the 5 years prior to the survey. Following prior research, pregnancies are the unit of observation in the analysis; the outcome of interest is whether each pregnancy is intended or unintended.

Sexual Orientation Concordance. Respondents reported on multiple dimensions related to sexual minority status. Regarding identity, respondents were asked, "Do you think of yourself as ... Heterosexual or straight; Homosexual, gay, or lesbian; Bisexual; Something else." Those who answered "Heterosexual or straight" are considered to have straight identity; all others are considered to have non-straight identities. Attraction was evaluated using the question, "People are different in their sexual attraction to other people. Which best describes your feelings? Are you... Only attracted to males; Mostly attracted to males; Equally attracted to males and females; Mostly attracted to females; Only attracted to females." Those who answered "Only attracted to males" are considered to have straight attraction; all others are considered to have some non-straight attraction. Based on these two questions, respondents are classified into 4 mutually exclusive categories: Straight (in both identity and attraction), non-Straight (in both identity and attraction), Straight identity with non-straight attraction, and Straight attraction with non-straight identity. The third dimension of sexual minority status is behavior. By treating pregnancies as

the unit of analysis (excluding artificial insemination), we only examine women who have had sex with a male.

Table 1 presents cross-tabulations of pregnancies for categories of sexual orientation concordance by intendedness. The analysis includes 20,081 pregnancies, which are almost equally split between "intended" (49%) and "unintended" (51%). The majority of these pregnancies are to straight women (n=16,686), but a substantial number are to women who are non-straight concordant (n=1,141) or non-straight discordant with straight identity and non-straight attraction (n=2,048). A very small minority are to women who are non-straight discordant with non-straight identity and straight attraction (n=206). These cross-tabulations indicate that the percentage of pregnancies that are unintended varies by sexual orientation concordance. While 50% of pregnancies to straight women are unintended, the percentage is higher among two categories of non-straight women: non-straight concordant (64% of pregnancies) and non-straight discordant with straight identity and non-straight attraction (58% of pregnancies). In contrast, among the small number of pregnancies to the final category of women (non-straight discordant women with non-straight identity and straight attraction), the percentage unintended is the lowest (38% of 206). Later in the paper, these relationships will be further explored in a multivariate context.

[TABLE 1 HERE]

Additional Measures

Age. We categorize age as younger (15-24) versus older (25-44).

Mediators. We hypothesize that elevated risk of unintended pregnancy among discordant SMW will be partially explained by factors such as a greater number and greater turnover of sexual partners (based on survey questions on number of lifetime partners and number of partners in the prior 12 months – male and female), early first sex, and attitudes that suggest greater discomfort with sexual minority status (agreement or disagreement with statements about whether sexual relations between two same-sex adults is okay, and whether it is okay for gay adults to adopt).

Covariates. A number of factors may confound the relationship between sexual minority status and pregnancy intentions and outcomes, including race/ethnicity (non-Hispanic white, non-Hispanic black, Hispanic, other), pregnancy order (whether this is the woman's first, second, third, or higher order pregnancy), poverty status (family income below the poverty line, 100-199% of poverty, 200-299% of poverty, or 300% of poverty and above), and mother's education level (less than high school, high school or equivalent, some college, or a bachelor's degree or higher). We use mother's education level rather than respondent's own education, since the two are highly correlated and younger women's education has not yet been completed.

Analytic Strategy

For all analyses, pregnancies are the unit of analysis. We examine all pregnancies in the past 5 years. All models control for key covariates (race-ethnicity, pregnancy order, mother's education, and poverty status).

To address our first research question, we employ logistic regression to test whether concordant or discordant sexual orientation is correlated with having an unintended pregnancy, compared to an intended pregnancy (reference category). Next, we examine how this association varies by age.

To address our second research question, we will use logistic regression to examine whether various factors mediate the relationship between concordant/discordant sexual orientation and the likelihood of having a mistimed or unwanted pregnancy (compared with an intended pregnancy). Possible mediators –including contraceptive use, number of partners, seriousness of partners, and attitudes about same-sex relationships – will be added one at a time, in a nested format. These analyses have not yet been completed.

References

Badgett L, Goldberg NE. Best Practices for Asking Questions About Sexual Orientation on Surveys. Los Angeles: The Williams Institute; 2009.

Blake SM, Ledsky R, Lehman T, Goodenow C, Sawyer R, Hack T. Preventing sexual risk behaviors among gay, lesbian, and bisexual adolescents: the benefits of gay-sensitive HIV instruction in schools. Am J Public Health. 2001; 91(6): 940-946.

Burlew R, Philliber S, Suellentrop K. What Helps in Providing Contraceptive Services for Teens. Washington, DC: The National Campaign to Prevent Teen and Unplanned Pregnancy, 2011.

Charlton BM, Corliss HL, Missmer SA, Rosario M, Spiegelman D, Austin B. Sexual orientation differences in teen pregnancy and hormonal contraceptive use: an examination across 2 generations. Am J Obstet Gynecol. 2013; 209: 204.e1-8.

Diamond LM, Omoto AM, Kurtzman HS. What we got wrong about sexual identity development: unexpected findings from a longitudinal study of young women. In: Sexual Orientation and Mental Health: Examining Identity and Development in Lesbian, Gay, and Bisexual People. Washington, DC: American Psychological Association; 2006:73-94.

Diamond LM. Female bisexuality from adolescence to adulthood: results from a 10-year longitudinal study. Dev Psychol. 2008; 44(1):5-14.

Gattis MN, Sacco P, Cunningham-Williams RM. Substance use and mental health disorders among heterosexual identified men and women who have same-sex partners or same-sex attraction: results from the National Epidemiological Survey on Alcohol and Related Conditions. Arch Sex Behav. 2012; 41: 1185-1197.

Gipson JD, Koenig MA, Hindin MJ. The effects of unintended pregnancy on infant, child, and parental health: a review of the literature. Studies in family planning. 2008. 39(1):18–38

Horowitz J, Newcomb M. A multidimensional approach to homosexual identity. J Homosex. 2001; 42(2): 1-19.

Iguartua K, Thombs B, Burgos G, Montoro R. Concordance and discrepancy in sexual identity, attraction, and behavior among adolescents. J Adol Health. 2009; 45: 602-608.

IOM (Institute of Medicine). The Health of Lesbian, Gay, Bisexual, and Transgender People: Building the Foundation for Better Understanding. Washington, DC: The National Academies Press, 2011.

Kane JB, Morgan SP, Harris KM, Guilkey DK. The Educational Consequences of Teen Childbearing. Demography. 2013; 50(6):2129–50

Kirby D, Lepore G. Sexual Risk and Protective Factors: Factors Affecting Teen Sexual Behavior, Pregnancy, Childbearing and Sexually Transmitted Disease: Which Are Important? Which Can You Change? Washington, DC: The National Campaign to Prevent Teen and Unplanned Pregnancy, 2007.

Korchmaros JD, Powell C, Stevens S. Chasing sexual orientation: a comparison of commonly used single-indicator measures of sexual orientation. J Homosex. 2013: 60(4): 596-614.

Korenman, Sanders, Robert Kaestner, and Ted Joyce. Consequences for infants of parental disagreement in pregnancy intention. Perspectives on Sexual and Reproductive Health 2002. 34(4): 198–205.

Kost, Kathryn Predicting maternal behaviors during pregnancy: Does intention status matter. Family Planning Perspectives 1998b. 30(2): 79–88. Myhrman 1988; Barber et al 1999

Kost, Kathryn, David J. Landry, and Jacqueline E. Darroch. The effects of pregnancy planning status on birth outcomes and infant care. Family Planning Perspectives 1998a. 30(5): 223–230.

Mustanski B, Birkett M, Greene G, et al. The association between sexual orientation identity and behavior across race/ethnicity, sex, and age in a probability sample of high school students. Am J Public Health. 2014; 104(2): 237-244.

Najman, J.M., J. Morrison, G. Williams, M. Andersen, and J.D. Keeping. The mental health of women 6 months after they give birth to an unwanted baby: A longitudinal study. Social Science & Medicine 1991. 32(3): 241–247.

Reback C, Larkins S. HIV risk behaviors among a sample of heterosexual identified men who occasionally have sex with another male and/or a transwoman. J Sex Res. 2013; 50(2): 151-163.

Saewyc EM, Bearinger LH, Blum RW, Resnick MD. Sexual intercourse, abuse and pregnancy among adolescent women: does sexual orientation make a difference? Family Planning Perspectives. 1999; 31(3): 127-131.

Saewyc EM, Poon CS, Homma Y, Skay CL. Stigma management? The links between enacted stigma and teen pregnancy trends among gay, lesbian, and bisexual students in British Columbia. Can J Hum Sex. 2008; 17(3): 123-139.

Saewyc EM, Skay CL, Bearinger LH, Blum RW, Resnick MD. Sexual orientation, sexual behaviors, and pregnancy among American Indian adolescents. J Adol Health. 1998; 23: 238-247.

Singh S, Sedgh G, Hussain R. Unintended pregnancy: worldwide levels, trends and outcomes. Stud Family Plann. 2010; 41(4): 241–250.

Suellentrop K. What Works: Curriculum-Based Programs That Prevent Teen Pregnancy. Washington, DC: The National Campaign to Prevent Teen and Unplanned Pregnancy, 2011.

Tornello SL, Riskind RG, Patterson CJ. Sexual orientation and sexual and reproductive health among adolescent young women in the United States. J Adol Health. 2014; 54: 160-168.

Zhao Y, Montoro R, Igartua K, Thombs BD. Suicidal ideation and attempt among adolescents reporting “unsure” sexual identity or heterosexual identity and same sex attractions or behavior: forgotten groups? J Am Acad Child Adolesc Psychiatry. 2010; 49(2): 104-113.