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Age of Minority Sexual Orientation Development and Risk of Childhood Maltreatment and Suicide Attempts in Women

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Abstract

Women with minority sexual orientations (e.g., lesbian, bisexual) are more likely than heterosexual women to report histories of childhood maltreatment and attempted suicide; however, the importance of the timing of minority sexual orientation development in contributing to this increased risk is uncertain. This study investigated relationships between self-reported ages of achieving minority sexual orientation development milestones (first awareness of same-gender attractions, disclosure of a minority sexual orientation to another person, and same-gender sexual contact), and childhood maltreatment and suicide attempt experiences in a sample of 2,001 women recruited from multiple-community sources. Younger age of minority sexual orientation development milestones was positively linked to self-reported recall of childhood maltreatment experiences, and to a childhood suicide attempt. After adjusting for differences in maltreatment, the odds of suicide attempt attributable to younger age of sexual orientation development milestones was reduced by 50 to 65%, suggesting that maltreatment may account for about half of the elevated risk for childhood suicide attempts among women with early minority sexual orientation development. Implications for services, interventions, and further research to address maltreatment disparities for sexual minorities are discussed.

Keywords

sexual orientation; suicide attempt; childhood maltreatment; victimization; racial/ethnic minority

Risk for suicide attempts has emerged as an important issue in the lesbian, gay, and bisexual (LGB) population (Bagley & Tremblay, 2000; S. D. Cochran, 2001; S. D. Cochran, Mays, Alegria, Ortega & Takeuchi, 2007; Garofalo, Wolf, Wissow, Woods, & Goodman, 1999; Kitts, 2005; Mathy, Cochran, Olsen & Mays, 2009; Pinhey & Millman, 2004; Remafedi, French, Story, Resnick, & Blum, 1998; Russell & Joyner, 2001). Accumulating evidence

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reveals higher risk of reported suicidal ideation and attempts among females identifying as lesbian or bisexual or reporting some aspect of a minority sexual orientation (e.g., same-gender attractions) as compared to heterosexual females (Balsam, Beauchaine, Mickey, & Rothblum, 2005; Bontempo & D'Augelli, 2002; Consolacion, Russell, & Sue, 2004; Eisenberg & Resnick, 2006; Fergusson, Horwood, Ridder, & Beautrais, 2005; Garofalo et al., 1999; Pinhey & Millman, 2004; Remafedi et al., 1998; Russell & Joyner, 2001; Silenzio, Pena, Duberstein, Cerel, & Knox, 2007; Wichstrom & Hegna, 2003). Results from a 2008 meta-analysis using data from studies published between 1997 through 2004 concluded that lesbians and bisexual women had 1.82 times increased risk of lifetime and 2.45 times increased risk of 12-month prevalence of suicide attempts compared to heterosexual women (King et al., 2008). Taken together, these studies have provided strong evidence that risk for making a suicide attempt is higher among women with a minority sexual orientation compared to heterosexual women.

Although mechanisms for this increased risk for suicidality have not been fully explicated, negative experiences such as discrimination and violence, related to the stigmatization of minority sexual orientation have been found to be important contributors (Bontempo & D'Augelli, 2002; S. D. Cochran, Sullivan, & Mays, 2003; D'Augelli, 2003; Lhomond & Saurel-Cubizolles, 2006). When minority sexual orientation develops during childhood or early adolescence, as opposed to later on in young adulthood, there are suggestions that these individuals may be more vulnerable to negative consequences of having a stigmatized identity (Rotheram-Borus & Fernandez, 1995). Although most LGB youth manage the process of minority sexual orientation identity development without encountering significant harm, some do report elevated rates of health and social problems compared to the general youth population (Garofalo & Katz, 2001; Russell, 2002). The goal of this study is to examine the contribution of age of minority sexual orientation development to the risk of harassment for being lesbian or bisexual and maltreatment among minority sexual orientation women. We also investigate associations with suicide attempts occurring during childhood or adolescence.

The Role of Minority Stress

Because homosexuality is socially stigmatized (Herek, 2000), LGB people may experience *minority stress* (defined as the additional stressors that members of stigmatized social groups are exposed to; DiPlacido, 1998; Meyer, 1995). Stressors may be internal (e.g., shame, fear of discovery of one's minority sexual orientation by other persons) or external (e.g., antigay discrimination and violence) or a mix of the two. Evidence for increased vulnerability to external stressors comes from studies documenting that individuals with minority sexual orientations are more likely than heterosexual individuals to report victimization during childhood or adolescence (Austin et al., 2008; Balsam, Rothblum, & Beauchaine, 2005; Bontempo & D'Augelli, 2002; Corliss, Cochran, & Mays, 2002; Faulkner & Cranston, 1998; Garofalo, Wolf, Kessel, Palfrey, & DuRant, 1998; Russell, Franz, & Driscoll, 2001; Saewyc, Bearinger, Blum, & Resnick, 1999; Tjaden, Thoennes, & Allison, 1999). Much of this increased risk for discrimination and victimization has been attributed to the status of being LGB (Berrill, 1990; D'Augelli, 2003). Antigay maltreatment can occur in a variety of social, interpersonal, and societal contexts such as at home within the family, at school, and in societal policies and laws.

Research and clinical findings also support evidence that stress from sexual minority status negatively impacts mental health (Cniro et al., 2005; Herek, Gillis, & Cogan, 1999; Mays & Cochran, 2001; Meyer, 1995). Minority sexual orientation youth who experience harassment and victimization have an elevated risk for suicidal symptoms and other mental health problems (D'Augelli, 2003; D'Augelli, Grossman, Starks, 2006; Hershberger & D'Augelli,

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1995; Russell & Joyner, 2001; Waldo, Hesson-McInnis, & D'Augelli, 1998). For example, an investigation of the relationship of sexual orientation and victimization to suicide attempts among a representative school-based sample of youth reported an interaction between sexual orientation and at-school victimization (Bontempo & D'Augelli, 2002). Approximately 10% of lesbian and bisexual girls reported frequent at-school victimization in the past year compared to only about 1% of heterosexual girls. Among girls who reported experiencing the highest levels of victimization, those who endorsed a minority sexual orientation were much more likely than heterosexuals to report that they had attempted suicide. These findings suggest that youth with minority sexual orientations may have greater exposure to victimization experiences and that these experiences have harmful effects.

In addition to maltreatment at school, some minority sexual orientation youth also experience violence and rejection from their families. A study of 224 White and Latino LGB young adults (aged 21 to 25 years) found that participants who reported high amounts of negative parental reactions to their sexual identity or gender expression had an eight times greater odds of reporting a prior suicide attempt compared to youth who reported low levels of parental rejecting behaviors (Ryan, Huebner, Diaz, & Sanchez, 2009). Familial rejection of adolescent minority sexual orientation likely also contributes to higher rates of homelessness among LGB youth compared to the general population of youth (B. N. Cochran, Stewart, Ginzler, & Cauce, 2002).

Sexual Orientation Development

The timing of human developmental processes and the contexts in which development occurs have important implications for health and wellness. This is also true for the development of sexual orientation. Although there is considerable variation among individuals in the order and timing in which these events occur (Floyd & Bakeman, 2006; Rosario, Schrimshaw, & Hunter, 2004; Savin-Williams & Diamond, 2000), the formation of a minority sexual orientation identity has been described as involving four milestones: recognition of same-gender sexual attractions, initiation of same-gender sexual and intimate relationships, disclosure of a nonheterosexual sexual orientation to others, and identification as LGB (Cass, 1996; Troiden, 1993). Each of these developmental experiences brings possibilities for both positive personal growth and negative health risks. Vulnerability to difficulties associated with minority stress may be heightened when LGB individuals begin recognizing differences in themselves from their peers, in part, because of internal conflict associated with an emerging stigmatized sexual identity (D'Augelli, Hershberger, & Pilkington, 2001).

Coping with minority stress may be further complicated for individuals negotiating minority sexual orientation development milestones during childhood or early adolescence (Carrion & Lock, 1997; Rotheram-Borus & Fernandez, 1995), as opposed to in later adolescence or young adulthood. Viewed as a transitional time between childhood and adulthood, the period of adolescence is marked by significant changes that can cause stress and adjustment problems when multiple challenges occur in the absence of protective resources (J. A. Graber & Brooks-Gunn, 1995; Petersen, Leffert, & Graham, 1995; Sameroff, 2006). Younger age of development of a minority sexual orientation may generate difficulty because children and adolescents have greater dependence on family who might disapprove of homosexuality, fewer personal and social resources (e.g., financial, legal, positive LGB role models), and less developed coping skills than adults (Rotheram-Borus & Fernandez, 1995). Other reasons for difficulty are that adolescents place a great deal of importance on peer relationships and acceptance (Savin-Williams & Berndt, 1990) and emphasis on gender role conformity intensifies during adolescence (Huston & Alvarez, 1990; Lobel, Nov-

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Krispin, Schiller, Lobel, & Feldman, 2004). Nonconformity to social norms may lead to conflict with family and peers. Successfully forming peer relationships is a central developmental task that if thwarted, could harm mental health and adjustment (Bagwell, Schmidt, Newcomb, & Bukowski, 2001; Prinstein, 2003).

Avoiding adversity and managing minority stress may be especially difficult for adolescents who are less able to hide their minority sexual orientation either because of factors such as direct disclosure of their sexual orientation identity or involvement in same-gender sexual or romantic relationships. Disclosure of a minority sexual orientation to family and peers generates increased risk of rejection, harassment, and victimization (Pilkington & D'Augelli, 1995; Savin-Williams, 1994). For example, in one study, LGB youth who had disclosed their sexual orientation to family members reported experiencing greater familial physical threats and verbal and physical abuse compared to youth who had not disclosed their sexual orientation (D'Augelli, Hershberger, & Pilkington, 1998). In another study, youth who felt their parents were intolerant or rejecting of their sexual orientation were more likely than other LGB youth to report suicide attempts (D'Augelli et al., 2001). Engaging in same-gender sexual activity during adolescence has also been linked to child maltreatment (Harry, 1989) and suicide attempts (Wichstrom & Hegna, 2003). In sum, the unique psychosocial context of adolescence may interact with minority stress to multiply difficulties in youth with minority sexual orientations.

The Present Study

This study investigated the contribution of the age of minority sexual orientation development to the risks of antigay harassment, maltreatment, and suicide attempts during childhood and adolescence in a large community sample of women with minority sexual orientations. The objectives of this study were twofold. The first was to estimate the influence of the timing of minority sexual orientation developmental milestones on risk for harassment, maltreatment, and suicide attempts before age 18 years as assessed through retrospective self-reports. We hypothesized that women reporting younger age of minority sexual orientation developmental milestones would be more likely to also report childhood experiences of maltreatment and a suicide attempt. The second objective was to investigate the possibility that experiences of harassment and maltreatment may mediate the relationship between age of minority sexual orientation development milestones and suicide attempts. We hypothesized that harassment and maltreatment experiences would explain, at least partly, the relationship between younger age of sexual orientation development and suicide attempts. According to Baron and Kenny (1986), mediation would be supported if both age of sexual orientation development and childhood maltreatment contribute to childhood suicide attempts and the contribution of younger age of sexual orientation development to risk of suicide attempt is reduced when childhood maltreatment is included as an independent variable in the model.

Method

Sample and Procedure

The study received Institutional Review Board approval from the University of California, Los Angeles. Respondents for this study were a nonprobability sample of women who self-identified as lesbian or bisexual or reported being sexually active with or sexually attracted to other women and who also provided information on childhood maltreatment and suicide attempts ($N = 2,001$). Participants living in Los Angeles County ($N = 1,253$) or the San Francisco Bay area ($N = 748$) completed and returned an anonymous, self-administered, mailed questionnaire. Demographic characteristics of respondents are provided in Table 1. The mean age of respondents was 40 years ($SD = 12$ years). The majority of respondents

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identified as lesbian, White, and reported that they had at least a bachelor's degree. About 50% of the sample reported incomes less that $40,000 in the year prior to being surveyed.

To reach a wide representation of lesbian and bisexual women, multiple-participant recruitment methods developed specifically to reach this population were used. Strategies included direct out-reach at gay community public events and social organization meetings, informational mailings to individuals identified through gay and lesbian commercially available or social organization mailing lists, and distributing questionnaires through social networks of respondents who volunteered to recruit other participants (see Corliss, Grella, Mays, & Cochran, 2006, for more information on study method). Accurate calculation of a response rate is not possible with this recruitment method because it is not possible to determine if potential respondents actually received a questionnaire.

Measures

Sexual Orientation Development—Included in the questionnaire were three measures to assess the timing of specific aspects of the development of minority sexual orientation: age of first awareness of one's sexual attractions to females, age of first disclosure of one's minority sexual orientation to another person, and age of first sexual contact with another female. Research with LGB adults suggests that relatively few individuals become aware of their same-gender sexual attractions before adolescence (Cass, 1996; Troiden, 1993). Consequently, respondents who reported being aware of their same-gender attractions during preadolescence, or before age 12 years, were considered to have early awareness of their minority sexual orientation. We also reasoned that individuals younger than age 18 years generally have less autonomy than adults of legal age, in part, because the great majority of these individuals are still living at home (Tang, 1995). Consequently, we anticipate it would be more challenging for youth of this age (<18 years) to establish a minority sexual orientation without generating family and peer conflict. Therefore, respondents indicating they first engaged in sexual activity with another female before age 18 years were categorized as having younger onset of same-gender sexual activity. Similarly, respondents indicating they first disclosed their nonheterosexual sexual orientation to another person before age 18 years were categorized as reporting younger age of disclosure.

Maltreatment Before Age 18 Years—The questionnaire included three items to assess self-reported experiences of antigay harassment in childhood or adolescence. Respondents were asked if, before the age of 18, they were (a) harassed repeatedly by other children for being a tomboy, (b) harassed by other children for being lesbian or gay, and (c) harassed by family members for being lesbian or gay. Six additional items assessed other forms of maltreatment. Specifically, respondents were asked if, before the age of 18, they were: (a) emotionally abused by family members, (b) physically abused by family members, (c) sexual abused by family members, and (d) sexually molested by strangers. Respondents were also asked separately if they had ever been raped by a male or a female and at what age this occurred. Those reporting being heterosexually or homosexually raped before age 18 were coded as having a rape experience. Of the 28 women in the sample who reported being homosexually raped prior to age 18 years, 10 reported that their first same-gender sexual experience actually occurred after age 18 years. This underscores the distinction women commonly make between rape as an act of violence and consensual sexual activity (Chasteen, 2001).

Suicide Attempt Before Age 18 Years—Respondents were asked if and at what age they had attempted suicide. Those indicating they had attempted suicide before the age of 18 years were coded as having attempted suicide during childhood or adolescence.

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Sexual Orientation—Using three sexual orientation questions, we categorized participants into three sexual orientation groups: lesbian, bisexual, and other nonheterosexual. Participants who indicated that they considered themselves to be “lesbian,” “gay,” or “homosexual” were coded as lesbian; those who considered themselves to be “bisexual” were coded as bisexual. Participants who did not endorse a minority sexual orientation identification, but answered yes to either the question, “Have you ever been sexually attracted to women?” or “Have you ever had sex with a woman?” were coded as other nonheterosexual.

Demographic Variables—Demographic factors that might confound associations between age of minority sexual orientation development and childhood maltreatment or suicide attempt were also included in analyses. These factors identified from prior literature on correlates of childhood maltreatment and suicide attempt include race/ethnicity (Blum et al., 2000; Brown, Cohen, Johnson, & Salzinger, 1998), age cohort (Kessler, Borges, & Walters, 1999), family economic status during childhood (Brown et al., 1998; Goodman, 1999), parental educational attainment (Brown et al., 1998; Lewinsohn, Rohde, & Seeley, 1994), and religious background (Schneider, Farberow, & Kruks, 1989). To index family economic status, respondents who indicated that their family background was “very poor—got public assistance, welfare sometimes” or “struggling just to make ends meet” were coded as being from a family with lower economic status; respondents who indicated that their family “owned a home or took vacations, but money was tight” were coded as being from a family with middle economic status; and respondents who indicated that their family “did well financially, money and education were not an issue;” “did extremely well financially, almost rich or wealthy;” or “came from a wealthy family” were coded as being from a family with higher economic status. To index parental educational attainment, we selected the educational level of the parent or guardian with the highest level of education reported.

Additional questions assessed personal income, and educational attainment. For the purpose of this study, factors associated with age of sexual orientation development as well as experiences of harassment and abuse during childhood could influence respondents’ current income and educational attainment. Therefore, these variables were not used as potential confounders in the statistical models that estimate risk for maltreatment or suicide attempt.

Data Analysis

Data were analyzed using SAS Version 8.2. Multiple-logistic regressions were used to evaluate the relationship of: (a) demographic factors to age of minority sexual orientation development milestones, (b) age of minority sexual orientation development to maltreatment and suicide attempt, and (c) maltreatment to suicide attempt. To examine if maltreatment mediates the relationship between younger age of sexual orientation development and suicide attempts, the maltreatment measures were included in the models estimating suicide risk, and effect estimates for models with and without maltreatment included were compared for evidence of mediation (Baron & Kenny, 1986).

Results

Demographic Patterns of Minority Sexual Orientation Development Milestones

On average, women reported that they first became aware of their same-gender sexual attractions at age 16 years ($SD = 8$ years), first disclosed their sexual orientation to another person at age 23 ($SD = 8$ years), and first had sex with another woman at age 21 ($SD = 7$ years). Those who were first aware of their same-gender attractions before age 12 were more likely than other women to be Hispanic and African American as opposed to White and to

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come from families with lower parental educational attainment, but they were less likely to currently identify as bisexual as compared to lesbian (see Table 2). Women who first disclosed their nonheterosexual orientation to another person before age 18 years were more likely to be younger and to have lower levels of educational attainment than other women in the sample. Women who reported that their first sexual experience with another female occurred before age 18 were more likely to be younger, to come from families with lower economic status, and to have lower levels of educational attainment.

Associations of Sexual Orientation Development With Maltreatment and Suicide Attempts

Prevalence of childhood maltreatment and suicide attempt by age of minority sexual orientation development are shown in Table 3. Younger age of reaching sexual orientation development milestones was associated with increased risk of reporting antigay harassment, maltreatment, and suicide attempts before age 18 years. After adjusting for potential confounding by age cohort, race/ethnicity, family economic status during childhood, parental educational attainment and religious background, respondents aware of their same-gender sexual attractions before age 12 years were more likely than other women to report harassment by peers for being a tomboy, odds ratio (*OR*) = 1.59, 95% CI [1.27, 1.98], harassment by peers, *OR* = 2.89, [2.16, 3.89] and family, *OR* = 2.09, [1.52, 2.88]; for being a lesbian, emotional, *OR* = 1.28, [1.03, 1.58], and physical abuse by family members, *OR* = 1.44, [1.14, 1.81], molestation by strangers, *OR* = 1.47, [1.15, 1.87], heterosexual rape, *OR* = 1.38, [1.02, 1.87], and homosexual rape, *OR* = 4.65, [2.04, 10.6], as well as a positive history of at least one suicide attempt before age 18 years, *OR* = 1.48, [1.06, 2.07].

Similarly, respondents who first disclosed their nonheterosexual orientation to another person before age 18 years were also more likely than other women to report harassment by peers for being a tomboy, *OR* = 1.42, 95% CI [1.13,1.80], harassment by peers, *OR* = 4.51, [3.36, 6.06], and family, *OR* = 4.71, [3.40, 6.52]; for being a lesbian, emotional, *OR* = 1.40, [1.11, 1.76], and physical, *OR* = 1.43, [1.11, 1.83], abuse by family members, molestation by strangers, *OR* = 1.38, [1.06, 1.79], heterosexual rape, *OR* = 2.08, [1.55, 2.81], and homosexual rape, *OR* = 3.35, [1.50, 7.49], as well as a suicide attempt before age 18, *OR* = 1.78, [1.28, 2.50].

Finally, women who reported that their first same-gender sexual experience occurred prior to age 18 were more likely than others to report harassment by peers for being a tomboy, *OR* = 1.38, 95% CI [1.12, 1.71], harassment by peers, *OR* = 4.56, [3.42, 6.07], and family, *OR* = 4.44, [3.25, 6.07]; for being a lesbian, emotional, *OR* = 1.33, [1.08, 1.64], physical, *OR* = 1.84, [1.47, 2.31], and sexual abuse by family members, *OR* = 1.79, [1.41, 2.26], molestation by strangers, *OR* = 1.86, [1.48, 2.35], heterosexual rape, *OR* = 2.16, [1.63, 2.85], and homosexual rape, *OR* = 4.69, [2.11, 10.4], as well as a suicide attempt before age 18, *OR* = 1.85, [1.35, 2.54].

Associations of Childhood Maltreatment With Suicide Attempts

As expected, respondents reporting antigay harassment and maltreatment were also more likely than others to report that they had attempted suicide before age 18 years. After adjusting for potential confounding by age, race/ethnicity, family economic status during childhood, parental educational attainment, and religious background, respondents who reported that they were harassed by peers for being a tomboy, *OR* = 1.49, 95% CI [1.09, 2.02], harassed by peers for being lesbian or gay, *OR* = 2.07, [1.43, 2.99], harassed by family members for being lesbian or gay, *OR* = 2.29, [1.54, 3.42], emotionally abused by family members, *OR* = 3.48, [2.47, 4.90], physically abused by family members, *OR* = 2.75, [2.00, 3.79], sexually abused by family members, *OR* = 2.36, [1.71, 3.27], sexually molested by strangers, *OR* = 1.93, [1.39, 2.67], heterosexually raped, *OR* = 4.23, [2.98, 5.99], and

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homosexually raped, *OR* = 3.92, [1.65, 9.32], were more likely than respondents who did not report these negative experiences to report a suicide attempt during childhood.

Mediating Effects of Maltreatment on Suicide Attempts

When the mediating effects of maltreatment are accounted for in the statistical models, the relationship between younger age of minority sexual orientation development milestones and attempting suicide before age 18 years is greatly attenuated. After controlling for the effects of harassment and abuse, women who report awareness of same-gender attractions prior to age 12, *OR* = 1.22, 95% CI [0.85, 1.74], first disclosure of a nonheterosexual sexual orientation before age 18, *OR* = 1.24, [0.85, 1.82], and first same-gender sexual activity before age 18, *OR* = 1.23, [0.86, 1.77], were no more likely than other women to report a suicide attempt before age 18. After maltreatment was entered into the models predicting suicide attempts, the effect estimate for younger age of awareness of same-gender attractions was reduced by 49%. Reductions in the effect estimate for younger age of first disclosure and younger age of first same-gender sex were even larger (63% and 66%, respectively).

Discussion

Although 82% of women in this study did not report a life-time suicide attempt, 10% did report that they had attempted suicide before age 18 years. These rates are somewhat lower than what has been found in studies of sexual minority female youth where 20% to 40% reported a life-time suicide attempt (D'Augelli, 2003; Remafedi et al., 1998). However, they are higher than what is observed in the general female population (Beautrais, 2002; Sourander, Helstela, Haavisto, & Bergroth, 2001). In the current study, the prevalence of reporting a suicide attempt (14 to 18%) before age 18 years was higher among women whose minority sexual orientation developmental milestones occurred relatively early. In contrast, the prevalence of reporting a childhood suicide attempt (8 to 9%) among women whose sexual orientation milestones occurred at a later age is more similar to estimates observed among females in general (6 to 8%; Beautrais, 2002; Sourander et al., 2001).

Findings from this study suggest that experiences of harassment and maltreatment may be responsible for some of the elevated risk of suicide attempts seen during childhood or adolescence among women whose minority sexual orientation awareness and disclosure occurs relatively early compared to their peers. These findings further illustrate the critical role victimization plays as an important contributor to risk for suicidal symptoms (Bontempo & D'Augelli, 2002; Hershberger, Pilkington, & D'Augelli, 1997), specifically among women. As our study and others (D'Augelli, 2003; Hershberger et al., 1997; Pilkington & D'Augelli, 1995) have demonstrated, lesbian and bisexual women whose sexual orientation milestones occur relatively early are more likely than other lesbian and bisexual women to experience maltreatment and also to attempt suicide. Many lesbian and bisexual female youth who attempt suicide (47% in one community sample; D'Augelli et al., 2001) attributed their prior suicide attempt to difficulties associated with their minority sexual orientation status. In the current study, harassment related to minority sexual orientation and maltreatment occurring in childhood was identified as important mediating factors in the relationship between age of minority sexual orientation development and pre-adult suicide attempts.

There were study limitations that may be important for contextualizing our findings. The data we collected are cross-sectional and therefore do not allow us to say with certainty the temporal sequence of events as measured in the survey. Although allowing some insights into the age that maltreatment occurred, the survey did not contain a series of questions detailing the exact ages at which childhood maltreatment occurred and thus some maltreatment could have occurred before the sexual orientation developmental milestones

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and/or after the suicide attempts. A second issue is that findings may not be generalizable to lesbian and bisexual women who were not reachable through our recruitment methods. For example, women who identify as bisexual but lead essentially heterosexual lives were unlikely to participate in the survey. It is also likely that women with larger LGB social networks and who are more imbedded in the LGB community would be more reachable through our recruitment methods. However, we recruited participants by advertising in gay media, leaving questionnaires at gay bookstores, and allowing participants to request questionnaires anonymously. These efforts were built into our recruitment specifically to reach women who may have had fewer lesbian/bisexual social networks, but who could access the study through those types of outreach. Also our study did not contain a comparison group of heterosexuals that did not allow formal comparisons between minority and majority sexual orientation women.

In addition, our measures of sexual orientation development milestones and childhood experiences relied on retrospective self-report and our measures of maltreatment were global and not behaviorally specific. The use of subjective measures for assessing maltreatment tends to result in underreporting because people are reluctant to label their experiences as abuse even when researchers would consider such experiences to be abusive (Fergusson, Horwood, & Woodward, 2000; Silvern, Waelde, Baughan, Karyl, & Kaersvang, 2000; Widom & Shepard, 1996). How this may affect findings cannot be determined, although a previous study found that rates of psychopathology were higher among women who defined themselves as abused compared to women who did not define themselves as abused, but who met objective criteria for abuse based on behavioral questions (Carlin et al., 1994). If this is the case in the present study, observed associations of developmental milestones and maltreatment to suicide attempt could be exaggerated. One other source of information that we did not have in the study was that of mental disorders that tends to co-occur with suicidality. Because our study was self-report and designed to reach a large and diverse group of women, we were unable to include a standardized *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 2000) criteria assessment of specific disorders as they require trained interviewer administration. A final important consideration is that uncontrolled confounding in the relationship between childhood maltreatment and a suicide attempt may bias the estimated mediation effects of maltreatment (Cole & Hernan, 2002; Robins & Greenland, 1992).

Despite these study limitations, our findings from a large and diverse community sample provide evidence that adolescent girls who reported experiencing a relatively early onset of minority sexual orientation awareness and behavior also more commonly reported negative childhood experiences of both maltreatment and suicide attempts. Because the study's recruitment methods did not draw from clinical and help-seeking settings in which rates of exposure to child abuse and mental health morbidity might be expected to be elevated, we reason that our findings are applicable to the general population of sexual minority women who participate in the LGB community.

Our results parallel findings from pubertal development literature finding greater vulnerability among girls reaching maturation at relatively early ages (J. S. Graber, 2003). Early pubertal timing among females was found to be associated with poorer relationships with family and peers (J. A. Graber, Seeley, Brooks-Gunn, & Lewinsohn, 2004) and physical victimization (Haynie & Piquero, 2006). Sexual identity development is associated with biological changes linked to pubertal development (McClintock & Herdt, 1996). Whether similar mechanisms are responsible for the greater vulnerability among females experiencing early pubertal timing and females exhibiting early timing of minority sexual orientation development is currently unknown and warrants further investigation.

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Implications for Service and Intervention

Findings from our study suggest that it is doubtful that homosexuality, per se, directly causes increased vulnerability for suicidality and emotional distress among young lesbian and bisexual women. Rather, difficulties associated with establishing a minority sexual orientation in the context of minority stress may lie at the root of the problems observed. Minority stress, in conjunction with early timing of sexual orientation development, appears to heighten risk for physical and mental health problems such as suicidal ideation and victimization. For adolescents with a minority sexual orientation, the potential for maltreatment may occur within multiple-social contexts including family, school, and various spheres of society. Consequently, strategies to improve support, reduce maltreatment at home and elsewhere, and enhance the health and well-being of these adolescents require a multipronged approach. Health care providers and other professionals working with adolescents can help by asking youth about their sexual orientation and the quality of the support they receive from family and friends, and, when warranted, referring sexual minority youth to supportive services such as counseling or support groups. Providers can also help by engaging family members, when appropriate and providing them with assistance and resources to enhance support for their children (Ryan et al., 2009). Furthermore, because cultural competency training can improve the capacity of professionals to respond to the needs of adolescents with minority sexual orientations (Kelley, Chou, Dibble, & Robertson, 2008), curriculum specifically addressing sexual orientation should be part of educational programs that train health, social, and educational service providers.

Because antigay discrimination and victimization often occur at middle and high schools, programs and policies to increase support and foster safety for sexual minority students are effective strategies. Research has suggested that LGB students who attend high schools that have implemented LGB-sensitive HIV curriculum (Blake et al., 2001), staff training on sexual diversity (Szalacha, 2003), or LGB student support groups (Goodenow, Szalacha, & Westheimer, 2006) are less likely to experience victimization or engage in risk behaviors such as suicide attempts or at-risk sexual behaviors than LGB students who attend schools that have not implemented such programs. Although there have been substantial efforts within schools to reduce bullying, rarely have issues related to sexual-orientation-based victimization been incorporated into bullying prevention programs (Espelage & Swearer, 2008). This is true despite the fact that bullying and antigay pejoratives frequently co-occur (Poteat & Espelage, 2005). Thus, bullying prevention programs should explicitly address sexual orientation; and these programs should be evaluated for their ability to improve the school climate for youth with minority sexual orientations. Strategies that can support these youth at the early stages of their coming out would help to reduce the negative consequences that they experience as a function of their sexual minority status. These efforts can assist youth in dealing with harmful consequences of discrimination and maltreatment by fostering coping skills and protective resources necessary to overcome suicidal ideation and behaviors (Eisenberg & Resnick, 2006).

Implications for Research

Within the field of sexual orientation and mental health, interest in identifying subgroups of individuals with minority sexual orientations who vary in their risk profiles has been increasing (Poteat, Aragon, Espelage, & Koenig, 2009). The hope is that this more detailed understanding of sexual minority populations could lead to interventions that are better targeted to individuals who need them most. Understanding how race/ethnicity, educational or economic resources, or other sociodemographic factors contribute to vulnerability or serve to bolster resiliency against maltreatment and suicide are important areas of research. Future research should explore whether there are important differences in vulnerability to

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maltreatment, emotional distress, and suicidality in relation also to variability in sexual orientation development.

Prior research has been criticized for focusing primarily on risk, often to the exclusion of identifying the resilience that frequently characterizes youth with minority sexual orientations (Savin-Williams, 2001). To some degree this is changing. Nonetheless, future research should continue to identify modifiable factors that protect minority sexual orientation youth from harm and foster positive development and adjustment in the face of discrimination and minority stress. One additional concern is that policies and programs to improve the health of minority sexual orientation adolescents are in their infancy and often lack comprehensive evaluation of efficacy. Therefore, studies need to be conducted to examine the effectiveness of existing and new policies and programs for protecting young sexual minority women from victimization and emotional distress that is a consequence of their minority sexual orientation.

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Table 1

Study Demographic Characteristics of Women Reporting a Minority Sexual Orientation

Characteristic	*N*	%
Sexual orientation identity		
Lesbian	1,657	82.8
Bisexual	224	11.2
Other nonheterosexual	120	6.0
Age cohort, year born		
1945 or earlier	225	11.2
1946 to 1955	426	21.3
1956 to 1965	624	31.2
1966 to 1975	515	25.7
1976 or later	211	10.5
Race/ethnicity		
White, non-Hispanic	1,139	66.9
Hispanic	262	13.1
African American, non-Hispanic	204	10.2
Asian/Pacific Islander, non-Hispanic	132	6.6
Other	64	3.2
Family economic status during childhood		
Lower	529	26.4
Middle	933	46.6
Higher	539	26.9
Highest parental educational attainment		
Less than high school	194	9.7
High school degree	599	29.9
More than high school degree	1,208	60.4
Religious background		
Protestant	518	25.9
Catholic	532	26.6
Jewish	214	10.7
Other Christian	143	7.2
Other	295	14.7
None	299	14.9
Educational attainment		
High school or less	265	13.2
Some college	507	25.3
College degree	647	32.3
Graduate school	582	29.1
Annual personal income		
$0 to 19,999	406	20.3
$20,000 to 39,999	596	29.8

Characteristic	*N*	%
$40,000 to 59,999	519	25.9
$60,000 or more	480	24.0

Note. N = 2,001. Columns may exceed 100% due to rounding.

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Table 2

Demographic Correlates of Younger Age of Minority Sexual Orientation Development Milestones Among Women Estimated From Logistic Regressions of Each Milestone on All Demographic Characteristics

Characteristic	Awareness < age 12 (%)	Disclosure < age 18 (%)	Same-gender sex < age 18 (%)
Total Sample	25.6	22.0	26.1
Sexual orientation identity			
Lesbian	26.4	21.8	26.1
Bisexual	18.8	21.6	27.2
Other nonheterosexual	27.8	25.2	24.4
	$p = .05$	$p = .28$	$p = .76$
Age cohort, year born			
1945 or earlier	21.8	10.2	21.0
1946 to 1955	23.0	10.1	20.9
1956 to 1965	28.4	22.7	29.9
1966 to 1975	26.2	24.8	23.7
1976 or later	25.1	48.8	36.7
	$p = .43$	$p < .001$	$p = .002$
Race/ethnicity			
White, non-Hispanic	21.3	20.3	25.6
Hispanic	39.4	31.8	31.0
African American, non-Hispanic	36.2	20.1	28.5
Asian/Pacific Islander, non-Hispanic	26.7	22.8	20.5
Other	25.8	23.3	20.6
	$p < .001$	$p = .33$	$p = .21$
Family economic status during childhood			
Lower	32.2	26.2	30.5
Middle	23.8	19.7	23.8
Higher	22.4	21.9	25.8
	$p = .18$	$p = .19$	$p = .11$
Highest parental educational attainment			
Less than high school	28.6	25.1	26.4
High school degree	31.9	20.4	27.0
More than high school degree	22.1	22.3	25.6
	$p = .01$	$p = .31$	$p = .74$
Religious background			
Protestant	23.4	16.5	22.8
Catholic	27.8	23.5	27.3
Jewish	21.6	18.5	21.7
Other Christian	27.3	22.0	28.9
Other	30.3	23.3	28.3
None	23.0	30.2	29.2
	$p = .45$	$p = .21$	$p = .54$

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Characteristic	**Awareness < age 12 (%)**	**Disclosure < age 18 (%)**	**Same-gender sex < age 18 (%)**
Educational attainment			
High school or less	32.6	32.2	35.8
Some college	30.7	28.0	30.8
College degree	22.5	20.1	21.9
Graduate school	21.6	14.4	22.3
	$p = .17$	$p < .001$	$p < .001$
Annual personal income			
$0 to 19,999	30.2	30.8	31.6
$20,000 to 39,999	24.7	23.7	24.3
$40,000 to 59,999	27.7	19.7	26.7
$60,000 or more	20.7	14.8	23.0
	$p = .05$	$p = .86$	$p = .40$

Note. $N = 2{,}001$.

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Table 3

Differences in Prevalence of Harassment, Other Maltreatment, and Suicide Attempt Before Age 18 Years by Age of Minority Sexual Orientation Development Among Women

		Awareness younger than age 12 years			Disclosure younger than age 18 years			Same-gender sex younger than age 18 years		
Childhood experience	**Total sample (%)**	**Yes (%)**	**No (%)**	***p* value**	**Yes (%)**	**No (%)**	***p* value**	**Yes (%)**	**No (%)**	***p* value**
Harassment experiences										
By peers for being a tomboy	34.6	43.4	32.1	<.001	44.7	32.0	.003	41.9	32.2	.003
By peers for being lesbian	12.5	21.9	9.4	<.001	31.4	7.5	<.001	27.2	7.3	<.001
By family members for being lesbian	9.8	15.9	7.8	<.001	24.7	5.8	<.001	21.8	5.6	<.001
Other maltreatment experiences										
Emotional abuse by family members	48.1	53.2	46.6	.03	55.1	46.7	.004	54.1	45.9	.007
Physical abuse by family members	27.6	33.9	25.2	.003	33.7	26.3	.005	37.1	24.0	<.001
Sexual abuse by family members	23.4	27.9	21.9	.11	27.2	22.6	.18	32.2	20.2	<.001
Molestation by strangers	22.5	28.3	20.1	.002	27.7	21.1	.02	31.3	19.3	<.001
Rape by a male	13.1	15.5	12.1	.04	21.6	11.1	<.001	20.7	10.4	<.001
Rape by a female	1.4	3.2	0.7	.003	3.3	0.9	.003	3.5	0.7	<.001
Suicide attempt	10.2	13.7	9.1	.02	17.9	8.1	<.001	15.8	8.4	<.001

Note. $N = 2{,}001$. Differences estimated from logistic regressions with age cohort, race/ethnicity, family economic status during childhood, parental educational attainment, and religious background included in all models.