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Original article

Trajectories of Sexual Orientation from Adolescence to Young Adulthood: Results from a Community-Based Urban Sample of Girls

Johnny Berona, Ph.D. [a,*], Stephanie D. Stepp, Ph.D. [b], Alison E. Hipwell, Ph.D. [b], and Kate E. Keenan, Ph.D. [a]

[a] *Department of Psychiatry and Behavioral Neuroscience, University of Chicago Medical Center, Chicago, Illinois*
[b] *Department of Psychiatry, University of Pittsburgh, Pittsburgh, Pennsylvania*

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A B S T R A C T

Purpose: To examine the longitudinal cohesion and stability of sexual minority status indicators.
Methods: The sample comprised 2,450 girls recruited from the city of Pittsburgh at ages 5–8 years. Sexual attraction, sexual partnering, romantic partnering, and sexual orientation identity were assessed between 14 and 22 years.
Results: Repeated measures latent class analysis identified three sexual minority trajectories: primarily other-sex oriented (n = 716), primarily same-sex oriented (n = 90), and bisexually oriented (n = 235). Sexual minority status indicators displayed fluidity over time but cohered within latent classes.
Conclusions: Within this large sample of girls, several distinct sexuality trajectories emerged. Trajectories are relatively stable from adolescence to young adulthood.

IMPLICATIONS AND CONTRIBUTION

Sexual minorities experience many health disparities. However, sexuality is multifaceted and less is known about how those components might change over time. This study found three distinct sexual minority trajectories from adolescence to young adulthood. Results highlight sexual diversity and the importance of considering multiple aspects of sexuality.

Sexual minorities (i.e., same-sex attracted or identifying as lesbian, gay, or bisexual) experience disparities in physical (i.e., obesity, cardiovascular disease) and mental health (i.e., mood and anxiety disorders) across the life span [1,2]. While epidemiological research has advanced knowledge about the prevalence and correlates of health disparities, fundamental demographic and developmental questions remain unaddressed. Sexuality components demonstrate variability in age of onset within and across indicators cross-sectionally and longitudinally, presenting challenges in identifying sexual minority populations and tailoring interventions [3–8]. As there are no standardized methods of measuring sexuality indicators or consolidating this information optimally, the Institute of Medicine has recommended that methodological research in this area be prioritized [1].

Lifetime prevalence of sexual minority status is estimated to be up to 15% of the general population, leading to substantial

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* Address correspondence to: Johnny Berona, Ph.D., Department of Psychiatry and Behavioral Neuroscience, University of Chicago, 5841 S. Maryland Avenue MC 3077, Chicago, IL 60637.
E-mail address: johnnyberona@uchicago.edu (J. Berona).

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heterogeneity among sexual minority youth [9,10]. Configurations of sexual minority status indicators can be oriented in a single direction (e.g., gay/lesbian identification and exclusively same-sex attraction and partnering) or branched and oriented in several directions (e.g., heterosexual identification and partnering with multiple genders) [11]. Cross-sectional observation of branched patterns can arise from variability in timing and sequencing of sexuality milestones such as awareness of same-sex attractions and self-identification as a sexual minority [12,13]. Initially considered a sequential process, accumulating evidence suggests that the timing and order of milestones vary widely with some differences by cohort and gender [14–17]. Recent changes in stigma and its structural manifestations have rapidly altered the social contexts in which sexual minority youth develop, thereby creating marked within-cohort variability in ages of first disclosure and partnering [18–20]. With respect to gender, females appear to be more likely than males to identify as a sexual minority before experiencing same-sex sexual partnering, to identify as a sexual minority at a later age, and to experience a shorter time interval between these two events [15,16]. However, there is a dearth of prospective research corroborating these patterns as described in cross-sectional and retrospective reports.

Longitudinal observation of branched patterns may be driven by sexual fluidity, a capacity for change within and across sexual minority status indicators over time [7]. Sexual fluidity has been observed across the life span, most prominently among females but more recently among males and gender minorities as well [21–23]. Although sexual fluidity has been documented across time intervals of several years, remarkably little is known about how attractions, partnering, and identity may fluctuate across shorter time frames [24]. Characterizing the longitudinal course of sexuality bears import for addressing health disparities because sexuality trajectories necessarily determine the timing and duration of minority stress exposure [25–28]. Earlier identification of sexual minority youth may facilitate linkage with resources such as school-based support (e.g., gay/straight alliances) and interventions that support adaptive coping to prevent adverse consequences of minority stress [29,30]. Understanding patterns of romantic and sexual partnering behaviors specifically has implications for sexual and reproductive health. Sexual minority youth are more likely to experience sexually transmitted infections and unintended pregnancies than exclusively heterosexual youth [31–35]. If developmental context and longitudinal variability are not considered, prevention efforts may not be adequately comprehensive and inclusive.

Large-scale cohort studies have found diverse sexuality trajectories across the life span [21–23]. However, to our knowledge no cohort study to date has prospectively tracked multiple sexuality components from adolescence to adulthood. For instance, the Add Health Study measured attraction and behavior at all waves but sexual identity only in adulthood [21]. This study addresses this gap in our understanding by examining joint trajectories of sexual attraction, sexual partnering, romantic partnering, and sexual identity in an urban sample of girls.

Methods

Participants in the Pittsburgh Girls Study (PGS), an accelerated longitudinal cohort study, were drawn from a household enumeration of 5- to 8-year-old girls living in the City of Pittsburgh in 1999 [36]. Briefly, all disadvantaged low-income neighborhoods in Pittsburgh were selected for recruitment along with a random selection of half of the remaining neighborhoods in the city. Girls and their primary caregivers provided informed assent and consent to Institutional Review Board–approved protocols and were interviewed annually. The sample comprised 2,450 girls: 52% African-American, 41% European American, and 7% multiracial and other races. Retention in annual assessments ranged from 87.8% to 96.7%.

All sexuality indicators were assessed annually from ages 14 to 22 years. Participants reported sexual identity (heterosexual, mostly heterosexual, bisexual, mostly lesbian/gay, lesbian/gay), sexual attraction (only females, mostly females, males and females equally, mostly males, only males), whether they had a boyfriend and/or girlfriend, and whether they had sexual contact with males and/or females.

We conducted repeated measures latent class analysis (RMLCA) in Mplus with the above sexuality variables as indicators of class membership. This analysis was desirable in favor of other approaches (e.g., frequencies, cross-tabulations) because PGS is a probability sample and whole-case analysis could introduce bias and reduce generalizability. RMLCA handles missing data using robust full information maximum likelihood estimation. Data were structured with chronological age as the unit of time.

Given the range of health disparities sexual minorities experience, we assessed whether sociodemographic factors associated with health were also associated with sexual minority status. Multinomial logistic regression analysis examined whether latent class membership was predicted by age cohort, racial/ethnic minority status, receipt of public assistance, and single-parent status.

Results

A significant proportion of the overall sample endorsed at least one sexual minority status indicator at some point during ages 14–22 years (n = 1,041; 41.2% weighted). Within the sample the distribution of sexual minority status indicators was as follows: same-sex sexual attraction, 987 girls (39.0%); same-sex sexual partnering, 288 girls (11.5%); same-sex romantic partnering, 214 girls (8.2%); and sexual minority identity, 658 girls (26.6%).

The three-class RMLCA solution was the most parsimonious fit for the data (Table 1). The resulting classes included a primarily other-sex-oriented class (n = 716) composed of girls identifying as heterosexual and mostly heterosexual with same-sex attraction but little same-sex partnering, a primarily same-sex-oriented class (n = 90) with most individuals indicating lesbian/gay and mostly lesbian/gay identification and almost exclusively same-sex partnering, and a bisexually oriented class (n = 235) that reported relatively consistent bisexual identity and attraction with an increasing number of female partners over time (Figure 1). Generally, the proportion of individuals endorsing same- and bisexually oriented indicators within each class increased over time. Social/behavioral indicators (i.e., romantic and sexual partnering) progressed at slower paces than cognitive/affective indicators (i.e., sexual attraction and identity).

Most (n = 658; 63.2%) participants reported at least one change in sexual orientation (mean [M] = 1.6 changes, SD = 1.5), which differed across classes, F (2, 1008) = 236.4, $p < .001$. The primarily same-sex class reported more frequent (M = 3.1, SD = 1.5) sexual orientation changes than the bisexual class (M = 2.7, SD = 1.2) and the primarily other-sex class (M = 1.0, SD = 1.1). In multinomial regressions, public assistance and race/ethnicity were associated with class membership, but age cohort and single-parent