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# Suicidal Behavior and Coming Out Milestones in Three Cohorts of Sexual Minority Adults

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## Abstract

**Purpose:** We describe the timing of suicidality across the life span in three cohorts of sexual minority adults. We hypothesized that suicide attempts coincide with the coming out period and that younger sexual minority people, who grew up in more accepting social environments, will have lower prevalence of suicide attempts than older generations.

**Methods:** A U.S. national probability sample of 1518 sexual minority adults in three age cohorts of 18–25, 34–41, and 52–59 years (collected 2016–2018) completed a self-administered survey.

**Results:** Sexual minority adults had high prevalence of lifetime suicidal thoughts, plans, and attempts, with the highest attempted suicides in the younger cohort (30.8%, 95% confidence interval [CI]=26.8–35.1) compared with the middle (23.7%, 95% CI=19.0–29.1) and older (20.3%, 95% CI=16.3–25.1) cohorts. There were no differences in suicidal behavior by race and ethnicity or between men and women, but gender nonbinary people had higher prevalence of suicidal thoughts. The mean age at suicidal thoughts, plans, and attempts tracked closely with age of first realization of sexual minority identity. Most suicide attempts (60.9%) occurred within 5 years of realizing one's sexual minority identity, but a significant proportion of attempts (39.1%) occurred outside this range.

**Conclusion:** Our findings are contrary to the hypothesis that younger cohorts of sexual minority people are at lower risk of suicidality.

**Keywords:** coming out, sexual minority, suicide attempts, suicidal ideation

## Introduction

**D**ISPARITY IN SUICIDE ATTEMPTS between sexual minority and cisgender heterosexual populations has been demonstrated in numerous studies.<sup>1–6</sup> In general, studies of suicidal thoughts and behaviors tend to focus on youth (an important source of data has been the Youth Risk Behavior Survey).<sup>4,7,8</sup> Researchers have suggested a connection between timing of suicidal ideation and attempt and the coming out process.<sup>9,10</sup> The coming out period—the process through which sexual minority people come to understand, label, and ideally, accept their sexual identity—is a period of challenges that lead some sexual minority people to suicidal thoughts or behaviors.<sup>4</sup>

Using data from a nationally representative, longitudinal sample of youth from adolescence into their late 20s, one study documented adolescent-specific risk of suicidality

among sexual minority men.<sup>11</sup> For sexual minority people, first awareness of same-sex attraction and self-realization as lesbian, gay, or bisexual (LGB) are key milestones in the coming out process.<sup>12</sup>

Less is known about suicidal thoughts, plans, and attempts among sexual minority people across the life course and especially at older ages. Some studies have identified young age and coming out as risk factors, but many of these studies included only young people and thus do not offer insight about suicidality for sexual minority people across the life course.<sup>13,14</sup> Paul et al.,<sup>15</sup> who studied men who have sex with men across the life course in a probability sample from four U.S. cities, found that 12% had attempted suicide at some point in their lives and 70% of them did so before age 25. In many studies, young age was assumed to be linked to coming out, but it was not assessed directly.

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Another limitation of studies of suicidal behavior among sexual minority individuals has been that they provide rigorous information about disparities by using probability samples in the general population but do not ask questions that are uniquely relevant to sexual minority respondents.<sup>4,6</sup> We assessed prevalence in a national probability sample and included questions about coming out milestones.

We aimed to assess both age and cohort variability. We assessed suicidality in three cohorts of sexual minority people who grew up in very different social environments. Young respondents, referred to as the Equality cohort (18–25 years old when recruited), came of age in the 2000s, a time of great social and legal progress when equality in various aspects of life (e.g., marriage equality) was the main discourse that surrounded sexual minority people. The Visibility cohort (34–41 years old, when recruited) came of age in the 1990s, during the second wave of the AIDS epidemic—a time of great political and cultural visibility and LGBT institutional growth. The older respondents, referred to as the Pride cohort (52–59 years old, when recruited), came of age in the 1970s at a time when gay pride and coming out made up the main discourse regarding sexual minority people.<sup>16</sup>

Our main hypothesis, consistent with minority stress theory, is that the social environment, characterized by anti-LGBT stigma and prejudice, increases exposure to stress and therefore distress and disease among sexual minority people.<sup>17</sup> Because of social and political advances during the past 50 years, we expected to see great health benefits for the younger generations, whose members grew up in a more accepting and less stigmatizing social environment.<sup>16,18,19</sup> Some evidence supports this hypothesis, showing associations between reductions in suicide attempts among sexual minority adolescents and the enactment of state-level same sex-marriage policies before federal recognition of same-sex marriage in 2015.<sup>20</sup> This hypothesis, however, was tempered by studies that showed little evidence of a reduction in risk of suicidality among young sexual minority people.<sup>21,22</sup>

We also assessed whether gender and race and ethnicity are associated with suicidal behavior. Researchers have reported few differences in suicidal ideation by gender identity and race and ethnicity among sexual minority people. Some studies have suggested that Latino sexual minority populations have higher risk of suicide attempts than White sexual minority populations,<sup>7,23</sup> whereas another found lower odds of lifetime suicidal ideation.<sup>24</sup>

## Methods

### Sample

The study used a U.S. national probability sample of cisgender and gender nonbinary sexual minority adults. Using the Gallup Daily Tracking Survey, a telephone interview that surveys randomly selected adults, study participants were recruited and screened for eligibility into the *Generations* Study between 2016 and 2017. An oversample of Black and Latino respondents was recruited between 2017 and 2018.

Eligible respondents were in one of the three age cohorts (Equality: 18–25 years, Visibility: 34–41 years, or Pride:

52–59 years) when recruited; identified as a sexual minority (using various terms such as lesbian, gay, bisexual, or queer); were not transgender (transgender people were recruited to a corresponding study and not included in the present analysis), although we included gender nonbinary respondents who did not identify as transgender; were Black, Latino, White, or of multiple races including one of these races and ethnicities; and had at least a sixth-grade education and could competently respond in English. These age cohorts were defined by three historical periods hypothesized to be of significance in the life trajectory of sexual minority people in the United States.<sup>16,25</sup> Eligible respondents were invited to complete a self-administered questionnaire online or by mail.

The final sample included 1518 sexual minority respondents—1331 respondents from the original sample and 187 respondents from the oversample. In this article, baseline data were analyzed, excluding 11 respondents who screened in as sexual minority people but later identified as straight or heterosexual in the survey, resulting in a final sample of 1507. Data were weighted to be representative of the U.S. population of sexual minority people fitting the eligibility criteria. First, data were weighted by Gallup to account for sampling bias in the daily interviews and then weighted to the U.S. LGBT population using Gallup's extensive data on LGBT population characteristics based on its surveys since 2012. The study and sample are described in detail elsewhere.<sup>25,26</sup>

The study was approved by the institutional review boards at the University of California, Los Angeles, Gallup, and collaborating institutions. Consent was assumed when the respondent agreed to move forward with the self-administered survey after reviewing the information sheet that disclosed consent information.

### Study variables

**Outcomes.** Suicidality was measured using the Army Study to Assess Risk and Resilience in Service Members instrument.<sup>27</sup> These measures included suicidal thoughts (i.e., “Did you ever in your life have thoughts of killing yourself?”), having made a plan for suicide (i.e., “Did you ever think about how you might kill yourself [e.g., taking pills, shooting yourself] or work out a plan of how to kill yourself?”), and suicide attempt (“Did you ever make a suicide attempt [i.e., purposefully hurt yourself with at least some intention to die]?”). Answer options were dichotomized into “no” and “yes.” Respondents who answered positively were asked to report at what age they had a suicidal thought, plan, or attempt and whether they suffered injury in their attempt.

**Predictors and covariates.** Age cohort was categorized as Equality (18–25 years old), Visibility (34–41 years old), and Pride (52–59 years old) based on respondents' reported age when they were recruited in 2016–2018. Sexual identity milestones were assessed using a 7-item measure.<sup>12</sup> In this article, we assessed two milestones: “At what age were you first sexually attracted to someone of the same sex as you?” and “At what age did you first realize that you were LGBT?” (Respondents were instructed to use the term they use to identify themselves).

Race and ethnicity included White, Black or African American, and Latino or Hispanic people. Respondents who indicated biracial or multiracial identities were included and defined, in this order, as Latino if they had a Latino identity regardless of any additional identity; Black if they had a non-Latino Black identity regardless of any additional identities; and White if they identified as White regardless of any additional identities except Latino or Black.

Gender identity was measured by asking: "If you had to choose only one of the following terms, which best describes your current gender identity?" Answer options were "woman," "man," "transgender woman or male-to-female," "transgender man or female-to-male," and "non-binary or genderqueer."<sup>28</sup> Although transgender identity was assessed, transgender people were recruited to a transgender-specific survey and were not included in this article. Sexual identity was assessed by asking respondents: "Which of the following best describes your current sexual orientation?" Responses were categorized as lesbian or gay, bisexual, and other sexual minority identities, which included same-gender loving, queer, pansexual, and asexual.<sup>29</sup>

Education was measured as self-reported highest grade completed, categorized into "high school education or less" and "more than high school education." Poverty was assessed based on weighted U.S. Census Bureau estimates for poverty thresholds in 2016.<sup>30</sup> Using respondents' reported household income and number of people living on that household income, respondents were categorized as living below 200% or at 200% or above of the federal poverty level.

### Data analysis

Prevalence estimates and 95% confidence intervals (CI) for suicidality (thoughts, plan, and attempt) and demographic variables were assessed by cohorts. We used *F*-tests for categorical variables and design-adjusted Wald tests for continuous variables to assess differences by cohort. Multivariable logistic regressions were conducted on the outcomes, adjusting for covariates. We also calculated estimates of age at first suicide attempt by cohort and plotted the mean ages and standard deviations of coming out milestones and suicide outcomes by cohort. Using a probability plot, we compared the probability distributions of sexual identity milestones and suicide attempt and assessed correlations between the two variables by cohort. Survey weights were applied to all analysis, allowing results to be generalizable to the U.S. sexual minority population per eligibility criteria. For each cohort, we also assessed the concordance of suicide attempts with milestones of first same-sex sexual attraction and first time realizing or labeling oneself as a sexual minority.

### Results

Table 1 shows that members of the younger Equality cohort were less likely than members of the older Visibility and Pride cohorts to identify as a man, have higher education, have more financial resources, and report White, non-Hispanic race and ethnicity and more likely to use terms other than gay and lesbian to describe their sexual identity.

### Suicidality

Table 1 also shows that across the three cohorts, there was a high prevalence of suicidal thoughts, plans, and attempts, with the highest prevalence in the younger cohort. In the younger Equality cohort, 30.8% (95% CI=26.8–35.1) attempted suicide, whereas in the Visibility and Pride cohorts, 23.7% (95% CI=19.0–29.1) and 20.3% (95% CI=16.3–25.1), respectively, attempted suicide. People who attempted suicide in the younger cohort also were more likely to have suffered injuries in their attempt.

Table 2 shows racial and ethnic and gender differences in suicidal thoughts, plans, and attempts by cohort. The overlapping CIs indicate no differences in the prevalence of these outcomes by race and ethnicity. There were no differences between men and women, but compared with men and women, nonbinary people had a higher prevalence of suicidal thoughts among the Equality cohort and suicide plan among the Visibility cohort. The number of nonbinary people in the older Pride cohort was too low to arrive at precise estimates for suicide attempts for that group.

Table 3 shows that after accounting for covariates, compared with the older Pride cohort, a significantly greater proportion of participants from the Equality cohort reported suicidal thoughts (adjusted odds ratio [AOR]=2.07, 95% CI=1.44–2.97) and plans (AOR=1.64, 95% CI=1.17–2.28), but they did not differ in suicide attempts (AOR=1.21, 95% CI=0.83–1.76). Compared with lesbian and gay respondents, more bisexual respondents reported suicidal thoughts (AOR=1.53, 95% CI=1.06–2.20) and attempts (AOR=1.47, 95% CI=1.02–2.11). Respondents with alternative sexual minority identities (such as queer and pansexual) reported higher prevalence of suicidal thoughts (AOR=2.42, 95% CI=1.42–4.12) and plans (AOR=2.03, 95% CI=1.24–3.29) compared with lesbian and gay respondents. These adjusted analyses showed no differences in suicidal thoughts, plans, or attempts based on race and ethnicity. Nonbinary people had higher prevalence of suicidal thoughts and plans than women (but the latter was not statistically significant).

### Suicidality in the context of coming out

Figure 1 shows mean ages for realization of same-sex attraction and LGB identity and suicidal thoughts, plans, and attempts for each cohort. The results show that across cohorts, there were only slight variations in mean age at first same-sex attraction, ranging from 11.4 years old in the younger cohort to 12.2 years old in the older cohort. There was more variation in age at realization of LGB identity: 13.8 years old in the younger cohort, 16 years old in the middle cohort, and 18.2 years old in the older cohort. Despite that variation across cohorts, the mean age at suicidal thoughts, plans, and attempt seemed to track closely with age of first realization of LGB identity. For example, the age at first suicidal thoughts ranged similarly from 13.8 years old in the younger cohort to 17.5 years old in the middle cohort to 22.8 years old in the older cohort.

Table 4 shows the age distribution of first (or only) suicide attempt by age cohort. Despite the concentrations of suicidal behavior in youth and around coming out, 23.7% and 28.8% of suicide attempts occurred at age 26 or older in the Visibility and Pride cohorts, respectively, the two cohorts whose members were aged 34 years or older. In addition, 14.2%

TABLE 1. DEMOGRAPHIC CHARACTERISTICS OF THREE COHORTS OF SEXUAL MINORITY ADULTS: GENERATIONS NATIONAL PROBABILITY SAMPLE, UNITED STATES

	Equality, age 18–25 years (n=664) % (95% CI)	Visibility, age 34–41 years (n=369) % (95% CI)	Pride, age 52–59 years (n=474) % (95% CI)	Generational differences <sup>#</sup>
Race and ethnicity				11.66***
Black, non-Hispanic	17.8 (14.8–21.3)	17.4 (13.3–22.4)	10.4 (7.5–14.4)	b,c
Latino	25.7 (22.1–29.7)	17.2 (13.2–22.1)	10.2 (7.43–13.9)	a,b,c
White, non-Hispanic	56.5 (52.1–60.8)	65.4 (59.5–70.9)	79.3 (74.6–83.4)	a,b,c
Gender identity				17.84***
Woman	58.7 (54.3–62.9)	55 (48.9–61)	39.1 (34.2–44.2)	b,c
Man	31.4 (27.6–35.4)	41.4 (35.5–47.5)	57.3 (52.2–62.3)	a,b,c
Nonbinary	9.9 (7.5–13)	3.6 (2.0–6.1)	3.5 (2.0–6.1)	a,b
Sexual identity				38.08***
Lesbian or gay	36.5 (32.2–40.8)	50.2 (44.1–56.3)	79.9 (75.4–83.8)	a,b,c
Bisexual	48 (43.6–52.4)	40.1 (34.1–46.4)	14.8 (11.5–19)	a,b,c
Pansexual, queer, or other	15.6 (12.7–18.9)	9.6 (6.9–13.3)	5.3 (3.4–8.1)	a,b,c
Education				47.96***
High school or less	54.2 (49.9–58.4)	21.9 (16.1–29.2)	21.7 (17–27.4)	a,b
More than high school	45.8 (41.6–50.1)	78.1 (70.8–83.9)	78.3 (72.6–83)	a,b
Poverty				20.02***
Living below 200% of the FPL	47.8 (43.4–52.3)	34.8 (28.8–41.4)	24.9 (20.4–30.1)	a,b,c
Suicidality				
Thoughts	80.2 (76.6–83.5)	67.9 (61.8–73.5)	60.5 (55.3–65.4)	20.91***,a,b
Plan	65.4 (61.0–69.5)	55.0 (48.8–61.1)	46.7 (41.5–52.0)	14.24***,a,b,c
Attempt	30.8 (26.8–35.1)	23.7 (19.0–29.1)	20.3 (16.3–25.1)	6.25***,a,b
Most serious injury received from suicide attempt				3.14**
No injury	14.2 (9.4–20.7)	15.7 (9.4–25.1)	39.3 (28.1–51.8)	b,c
Very minor injury (e.g., surface scratches, mild nausea)	37.6 (30–45.8)	36.1 (25.4–48.3)	20.8 (12.6–32.4)	b
Minor injury (e.g., sprain, first-degree burns, flesh wound)	25.4 (18.9–33.2)	19.2 (10.7–32.1)	12.8 (6.0–25.1)	b
Moderate injury not requiring overnight hospitalization (e.g., broken bones, second-degree burns, stitches, bullet lodged in arm or leg)	12 (7.7–18.1)	13.8 (8.2–22.3)	13.4 (7.1–23.8)	d
Moderate injury requiring overnight hospitalization (e.g., major fracture, third-degree burns, coma, bullet lodged in abdomen or chest, minor surgery)	8.4 (4.8–14.2)	4.1 (1.4–11.6)	8.7 (4.8–15.5)	e
Severe injuries requiring treatment in an intensive care unit to save life (e.g., major fracture of skull or spine, severe burns, coma requiring respirator, bullet in head, major surgery)	2.5 (0.8–8.1)	11.2 (5.6–21)	5.0 (1.9–12.4)	e

<sup>abc</sup>Unadjusted *post hoc* tests were conducted to determine statistical significance ( $p < 0.05$ ) between <sup>a</sup>younger and middle cohorts, <sup>b</sup>younger and older cohorts, and <sup>c</sup>middle and older cohorts.

<sup>d</sup>No differences among the groups.

<sup>e</sup>Not calculated, small sample size in one or more groups ( $n < 10$ ).

\*\* $p < 0.01$ , \*\*\* $p < 0.001$ .

<sup>#</sup>Adjusted Wald tests were performed to test mean differences and Rao–Scott design-adjusted *F*-tests were conducted for categorical variables. CI, confidence interval; FPL, federal poverty level.

of attempts occurred at age 42 or older in the Pride cohort, whose members were 52–59 years old. Among all suicide attempts, the majority (60.9%) occurred within 5 years (before or after) of realizing one’s LGB identity, but a large proportion of attempts (39.1%) occurred outside this range.

Figure 2 depicts suicide attempt as a function of age at first realizing one’s LGB identity by cohort, showing

that attempts closely matched the age that people in each cohort realized that they were LGB, regardless of the age at which it occurred. The figure shows a linear relationship for people in the middle Visibility ( $r = 0.29$ ,  $p = 0.02$ ) cohort, with greater dispersion in the younger Equality ( $r = 0.13$ ,  $p = 0.20$ ) and older Pride ( $r = 0.04$ ,  $p = 0.75$ ) cohorts.

TABLE 2. RACIAL AND ETHNIC AND GENDER DIFFERENCES IN SUICIDAL THOUGHTS, PLAN, AND ATTEMPT BY COHORT, UNADJUSTED PREVALENCE AND 95% CONFIDENCE INTERVALS: GENERATIONS NATIONAL PROBABILITY SAMPLE, UNITED STATES

	<i>Equality, age 18–25 years (n = 664) % (95% CI)</i>	<i>Visibility, age 34–41 years (n = 369) % (95% CI)</i>	<i>Pride, age 52–59 years (n = 474) % (95% CI)</i>
<b>Suicidal thoughts</b>			
Race and ethnicity			
Black, non-Hispanic	74.8 (65.1–82.5)	62.6 (47.9–75.4)	68.2 (50.9–81.7)
Latino	79.1 (71.8–85.0)	69.5 (55.9–80.4)	49.2 (33.0–65.5)
White, non-Hispanic	82.5 (77.5–86.6)	69.0 (61.1–75.8)	60.9 (55.2–66.4)
Gender identity			
Woman	79.5 (74.4–83.3)	70.7 (62.2–78)	59.1 (51–66.8)
Man	77.1 (70.4–82.7)	62.1 (52.6–70.8)	59.7 (52.6–66.3)
Nonbinary	94.2 (84.3–98.0)	92.1 (71.0–98.2)	88.8 (60.4–97.6)
<b>Suicide plan</b>			
Race and ethnicity			
Black, non-Hispanic	64.7 (54.7–73.6)	52.2 (38.1–65.9)	45.5 (28.8–63.3)
Latino	66.2 (58.0–73.4)	57.4 (43.1–70.6)	37.5 (21.8–56.2)
White, non-Hispanic	65.2 (59.1–70.8)	55.1 (47.3–62.7)	48 (42.3–53.8)
Gender identity			
Woman	66.6 (60.7–72.0)	57.8 (49.2–65.9)	47.9 (39.8–56.2)
Man	57.5 (50.1–64.5)	48 (38.7–57.3)	44.5 (37.7–51.6)
Nonbinary	82.8 (69.5–91.1)	92.1 (71–98.2)	70.2 (34.9–91.2)
<b>Suicide attempt</b>			
Race and ethnicity			
Black, non-Hispanic	36.4 (27.4–46.5)	26.9 (16.2–41.2)	22.0 (10.6–40.3)
Latino	32.1 (24.8–40.4)	25 (15.8–37.1)	16.7 (7.1–34.4)
White, non-Hispanic	28.5 (23.3–34.5)	22.5 (16.8–29.4)	20.6 (16.2–25.9)
Gender identity			
Woman	34.3 (28.8–40.3)	25.8 (19.2–33.8)	19.8 (13.9–27.4)
Man	23.3 (17.7–30.0)	19.5 (13.6–27.1)	19.3 (14.1–25.8)
Nonbinary <sup>a</sup>	34.5 (22.4–49.0)	40 (19.3–65.0)	—

<sup>a</sup>The number of nonbinary individuals in the Pride cohort who had a suicide attempt ( $n=6$ ) was too low to provide a stable estimate.

TABLE 3. PREDICTORS OF SUICIDAL THOUGHTS, PLAN, AND ATTEMPT, ADJUSTED ODDS RATIOS AND 95% CONFIDENCE INTERVALS, MULTIVARIATE LOGISTIC REGRESSION: GENERATIONS NATIONAL PROBABILITY SAMPLE, UNITED STATES

	<i>Thoughts AOR (95% CI)</i>	<i>Plan AOR (95% CI)</i>	<i>Attempt AOR (95% CI)</i>
Cohort (ref: Pride, age 52–59 years)			
Equality (age 18–25 years)	2.07 (1.44–2.97)	1.64 (1.17–2.28)	1.21 (0.83–1.76)
Visibility (age 34–41 years)	1.24 (0.45–1.05)	1.21 (0.85–1.70)	0.96 (0.64–1.45)
Race and ethnicity (ref: White, non Hispanic)			
Black, non-Hispanic	0.68 (0.45–1.05)	0.89 (0.60–1.31)	1.21 (0.80–1.84)
Latino	0.86 (0.59–1.27)	1.08 (0.76–1.53)	1.19 (0.82–1.74)
Gender identity (ref: woman)			
Man	1.00 (0.73–1.37)	0.80 (0.60–1.07)	0.78 (0.55–1.08)
Nonbinary	3.12 (1.23–7.90)	2.06 (0.99–4.30)	1.10 (0.58–2.08)
Sexual identity (ref: lesbian or gay)			
Bisexual	1.53 (1.06–2.20)	1.35 (0.98–1.87)	1.47 (1.02–2.11)
Pansexual, queer, or other	2.42 (1.42–4.12)	2.03 (1.24–3.29)	1.44 (0.84–2.47)
Education (ref: more than high school)			
High school or less	1.19 (0.84–1.69)	0.99 (0.73–1.35)	1.05 (0.75–1.46)
Living below 200% of the FPL (ref: Living at 200% or above FPL)	1.17 (0.84–1.63)	1.20 (0.89–1.62)	1.44 (1.04–1.99)

AOR, adjusted odds ratio.

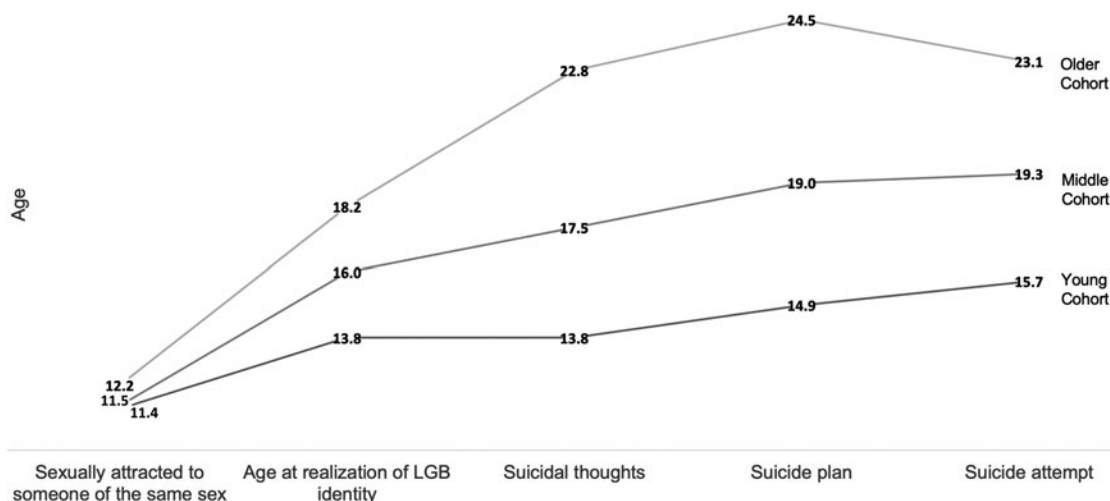


FIG. 1. Age at first sexual attraction, realization of LGB identity, suicidal thoughts, suicide plan, and suicide attempt by cohort: *Generations* national probability sample, United States. LGB, lesbian, gay, or bisexual.

Discussion

In general, suicidal thoughts and behavior occur more frequently in adolescence and young adulthood than later in life, especially among sexual minority people because sexual identity often involves minority stress (e.g., family rejection).<sup>31,32</sup> We found that young sexual minority people had even higher prevalence of lifetime suicide attempts than did older sexual minority people and higher than the 17% lifetime prevalence of suicide attempts among sexual minority adults based on a systematic review and meta-analysis of studies in the United States and four other countries.<sup>33</sup> Although this high prevalence is not surprising, considering the long history of research on suicidality among sexual minority people, it is important to note how striking this prevalence is compared with the 2.4% reported in the general U.S. population.<sup>34</sup>

We found no significant differences in suicidal thoughts, plans, or attempts between men and women, but gender non-binary people had a higher prevalence of suicidal thoughts. We also found no differences among White, Black, and Latino sexual minority populations. The evidence about racial and ethnic differences in suicidal thoughts and behaviors among sexual minority populations is currently equivocal. Although a few studies have found elevated risk of suicide attempts<sup>7,23</sup> among Latino sexual minority people, another found that they had lower odds of lifetime suicidal ideation than White sexual minority people.<sup>24</sup> Additional research that allows intersectional analyses is needed.<sup>35</sup>

In view of positive changes in the social and legal environments for sexual minority people in the United States, we hypothesized that there would be a reduction in suicidality among young sexual minority people.<sup>19</sup> As we noted, findings have been mixed on this topic in the past few years, with some studies showing improvements in mental health and suicidality related to social changes,<sup>20,36</sup> but others showing that sexual minority youth continue to be at high risk of suicidal behavior.<sup>21</sup> Russell and Fish<sup>22</sup> suggested that young age at coming out among sexual minority people may collide with developmental processes and school contexts that perpetuate social regulation and conformity to gender and sexuality norms to produce stress.

Researchers have suggested that the challenges of coming out may compromise mental health and increase suicide risk

TABLE 4. AGE DISTRIBUTION AT FIRST (OR ONLY) SUICIDE ATTEMPT BY AGE COHORT: *GENERATIONS* NATIONAL PROBABILITY SAMPLE, UNITED STATES

Age at suicide attempt, years	<i>Equality, age</i>	<i>Visibility, age</i>	<i>Pride, age</i>
	18–25 years n (%)	34–41 years n (%)	52–59 years n (%)
Before 18	126 (70.0)	52 (56.5)	37 (48.2)
18–25	57 (30.0)	17 (19.8)	22 (23.1)
26–41	—	20 (23.7)	15 (14.6)
42 or older	—	—	13 (14.2)

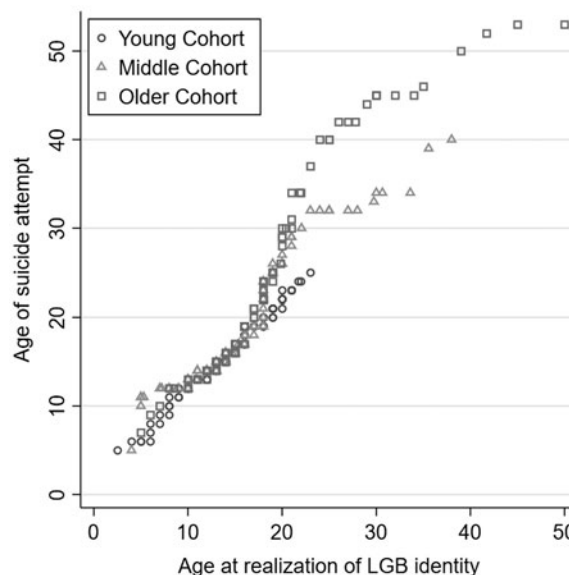


FIG. 2. Age at suicide attempt as a function of age at realization of LGB identity by cohort: *Generations* national probability sample, United States.

among sexual minority people.<sup>1,3,10,11,13–15,37</sup> The findings of the current study are the first to document concordance of suicide attempts with sexual identity milestones using a national probability sample of sexual minority people. We found that suicidality is aligned with developmental milestones in each of the three cohorts we studied. However, our findings also highlight that 14% of first suicide attempts occurred after age 41 among members of our older Pride cohort. This finding calls for further research because we currently lack understanding of suicide attempts in older age. Some stressors affect older sexual minority people, including isolation from family and friends, difficulty in integrating into and feeling accepted by a typically youthful LGBT community, caregiving, or the threat of having to go back into the closet.<sup>38–41</sup>

### Limitations

Our study had some clear limitations. We relied on recall of suicidal thoughts, plans, and attempts, which could introduce recency bias with younger people remembering more than older people. We used timing coincidence with coming out as a proxy for the reason of suicide attempt, but we have no information about the actual circumstances and issues the respondent may have faced at the time of the suicide attempt. In addition, although we posed a hypothesis related to the changing historical circumstances of the three cohorts,<sup>16,42,43</sup> we had no way of assessing this because cohort and period effects are covariant. One study has shown an increase in suicidal behavior over time,<sup>1</sup> which may also explain, in part, the high prevalence we observed in the younger cohort, but other, longer term reviews suggest that this is not the case and therefore not a plausible explanation for our findings.<sup>44,45</sup> Although our findings are consistent with evidence of a concentration of suicidality in early life for sexual minority people,<sup>11</sup> prospective studies of sexual minority health are needed to disentangle the effects of age, cohort, and historical period.

### Conclusion

Our results show a connection between coming out and realizing a sexual minority identity and suicide attempt. Despite the improving social environment, such as the recognition of marriage for same-sex couples and protections against workplace discrimination for sexual and gender minority populations, more needs to be done to support sexual minority youth and young adults.

Suicide prevention activities should be integrated into other health promotion interventions that focus on risk behaviors that have been found to be disproportionately higher among sexual minority youth, such as substance use and intimate partner violence.<sup>46</sup> Another focus for intervention is schools, especially given the amount of time that young people spend in school each week and the disproportionately higher rates of bullying experienced by sexual minority youth in school settings.<sup>46</sup> Suicide prevention efforts for sexual minority populations are unfortunately very underdeveloped as a field of research.<sup>47</sup> In particular, support structures are needed for individuals and families during the coming out process. For example, the Family Acceptance Project is a family-based program that models support for sexual and gender minority youth,<sup>32</sup> and PFLAG (formerly known as

Parents, Families, and Friends of Lesbians and Gays) is a long-existing community-based system for support.<sup>48</sup> Adoption of more inclusive school policies for sexual and gender minority youth is needed, because they have been associated with more positive experiences and perceptions of school climate for LGB youth.<sup>49,50</sup>

### Authors' Contributions

I.H.M. conceptualized and outlined the article with co-authors. I.H.M. and J.R.B. wrote the first draft of the article, S.K.C. conducted the data analyses, and G.W.H. and S.T.R. edited and added to the first draft and subsequent drafts. All authors reviewed and approved the article before submission.

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The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

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