

## ADOLESCENT HEALTH BRIEF

# Suicidality in a Venue-based Sample of Young Men Who Have Sex With Men

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**Purpose:** To examine the incidence, prevalence, and characteristics of suicide attempts in a unique, venue-based sample of young men who have sex with men (YMSM).

**Methods:** Eligible participants were 15–25-year-old men who were living in a major metropolitan area (Minneapolis/St. Paul, Minnesota) and had sex with men within 12 months of the interview. A total of 255 subjects were randomly sampled from popular venues for a structured, 20-min interview (1999) that included four items regarding suicide intentions and attempts. Data were analyzed using bivariate and multivariate tests of statistical significance.

**Results:** Eighty-six percent of eligible individuals completed the survey. One-third of all respondents reported at least one suicide attempt, and 4.7% attempted suicide in the past year. Although suicide attempts were more prevalent among African-Americans and urban residents; only school enrollment was significantly associated with attempts in the multivariate analysis (odds ratio = .55, 95% confidence interval = .31, .97).

**Conclusions:** This study corroborates the findings of prior studies of high rates of suicide attempts among YMSM. In addition, it demonstrates that attempts are more prevalent among out-of-school youths. © *Society for Adolescent Medicine*, 2002

**KEY WORDS:**

Adolescence  
Homosexuality  
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Over the past three decades, researchers have reported consistently high rates of suicidality among homosexual persons, particularly among adolescents and young adults [1]. On the basis of data that were available at the time, the 1989 Report of the Secretary's Task Force on Youth Suicide projected that "gay youth are 2 to 3 times more likely to attempt suicide than other young people. They may comprise up to 30% of completed youth suicides annually" [2]. Subsequently, the American Association of Suicidology, Centers for Disease Control and Prevention, and National Institute of Mental Health convened a panel of experts in 1994 to consider the problem of suicide among gay and lesbian people [3]. Some of the attendees concluded "there is no population-based evidence that sexual orientation and suicidality are linked in some direct or indirect manner" [4].

Since then, various studies, that have been reviewed elsewhere [1,5], have explored the relationship between sexual orientation and suicidality. Most studies of this type have used convenience samples that may be limited by participant biases [1] or school-based samples that do not capture out-of-school youths [5]. Some of the school-based surveys have been unable to ascertain the sexual orientation of subjects and rely on sexual behavior as a proxy measure of sexual identity [5]. Only two of the largest studies of students in Minnesota [6] and Massachusetts [7] had sufficient statistical power to examine gender differences, finding an association

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between homosexuality and suicidality among males. The relatively small populations of homosexual youth in most studies have been inadequate to examine ethnic and racial differences.

Although acknowledging the absence of empirical data on completed suicides, the Surgeon's Call to Action to Prevent Suicide, 1999, recognized the growing concern about an association between suicide risk and bisexuality or homosexuality for youth, particularly males [8]. In reply to the call for action, the Division of Violence Prevention at the Centers for Disease Control and Prevention commissioned papers for a National Suicide Prevention Conference, including a report on suicide and sexual orientation [5]. The recommendations for future research included additional study of risk factors for suicide attempts; ethnic differences; and measures of resiliency in representative populations of gay, lesbian, bisexual, and transgendered persons [5].

In response to these needs, the current study was designed to examine suicidality among young men who have sex with men (YMSM) attending popular venues in a major U.S. metropolitan area. Specifically, we evaluated: (a) the annual incidence and lifetime prevalence of suicide attempts among YMSM, and (b) possible associations with demographic variables such as age, sexual identity label, race/ethnicity, residential area, years of education, student status, work status, and U.S. citizenship. The work was done as part of a multisite research program to prevent human immunodeficiency virus (HIV)/acquired immunodeficiency syndrome (AIDS) among YMSM.

## Methods

### Subjects

Eligible participants were male residents of a seven-county metropolitan area (Minneapolis/St. Paul) who were aged 15 to 25 years and reported having sex with men within 12 months of the interview. Men who denied having sex with men in the past year, nonresidents, and persons outside the 15- to 25-year age range were excluded.

### Sampling Methods

Participants were randomly sampled from venues frequented by YMSM. The sampling methods were modeled on a different study of HIV seroprevalence among YMSM [9]. The sampling methods were de-

signed to yield a representative sample of YMSM attending popular venues in a given locality.

To construct a sampling frame, adult and youth key informants initially identified local venues frequented by YMSM and peak periods of attendance. In the single metropolitan area of this study, venues included bars, cafes, and retail outlets. Next, field research teams counted the number of persons who appeared to be eligible at each venue. Finally, they conducted brief screening interviews to quantify the number of eligible attendees during consecutive 4-h periods of peak attendance. The field research teams were drawn from a pool of three male and three female college students and graduates of diverse ethnic backgrounds. Venue/day/time (VDT) combinations were included in the final sampling frame if at least seven eligible men were counted within a 4-h period.

Fifteen VDTs were randomly selected from the pool for sampling events each month from May to August 1999. During each of the sampling events, a supervisor directed interviewers to intercept the next potential respondent entering the venue. Interviewers intercepted potential respondents and asked screening questions to determine eligibility for the longer interview. Eligible individuals were invited to complete an interview at a private area nearby. At the conclusion of the interview, participants received a list of community resources for YMSM, written information on HIV/AIDS, and \$20 remuneration. HIV antibody counseling and testing were not offered as part of the procedures.

### Instrument

Participants completed structured, 20-min interviews with approximately 90 questions, the exact number varying slightly because of skip patterns. The interview contained questions about demographic and psychosocial characteristics and patterns of sexual behavior, including the gender and number of partners, condom use, and other specific sexual behaviors. Other topics included attitudes and peer norms about condoms, HIV test experience, and exposure to AIDS prevention information and activities.

Although all participating research sites used most of the same survey items, this article focuses on questions (available from the author) that were administered in a single area with a special interest in suicidality among YMSM. They included four categorical items pertaining to suicide ideation [6], attempts [10], methods [11], and medical treatment of

attempts [11]. The questions were adopted or adapted from prior research [6,10,11].

### Human Subjects

Interviewers obtained written informed consent before beginning the survey. Participants who were in need of medical and psychosocial services were referred to appropriate resources. The local University Institutional Review Board approved the procedures.

### Analyses

Two undergraduate research assistants provided double data entry for quality assurance. Discrepancies in data entry were corrected by referring to the written record of results. An initial examination of response frequencies was followed by bivariate analyses, using Pearson Chi-square tests of statistical significance. All analyses were performed with SPSS software [12]. The designated level of statistical significance was  $< .05$ .

### Results

Of the 680 men who were screened, 297 were found to be eligible for the survey. Of these, 255 men completed interviews, yielding a response rate of 86%. (Responses to the suicide items were missing for one additional participant.) Ages ranged from 16 to 25 years (mean, 20 years; SD, 2.4 years). Non-Hispanic/Latino persons comprised 95.9% of the sample. Eighty-five percent of subjects reported their race as white; and 8.8%, as black/African-American. The remainder identified as Asian, American Indian/Alaska Native, and/or Native Hawaiian/Pacific Islander; 92.5% were U.S. citizens. Ninety-four percent of subjects self-identified as gay or bisexual and 6% as heterosexual, undecided, or other. A total of 84.7% lived within a major urban center, and the remaining 15.3% came from surrounding counties in the metropolitan area.

### Description of Suicidality Among YMSM

One-third (85/254) of all respondents reported at least one suicide attempt: 4.7% of participants attempted suicide in the past year, including 12.1% of all of the attempters. In the past month alone, nearly one in five individuals (47/245) contemplated suicide, and 6.3% (3/47) of them said they "would like

to kill (themselves)." Ingestion of drugs, cutting, or stabbing were the most common methods used by attempters, accounting for 82.1% of all attempts. Drowning, asphyxiation, or strangulation contributed an additional 7.1%; and two individuals (2.3%) attempted suicide by jumping or shooting themselves. The remaining attempters reported a combination of the previous methods ( $n = 4$ ), automobile injury ( $n = 1$ ), and unsafe sex ( $n = 1$ ); or they refused further description ( $n = 2$ ). One-third of attempts (28/84) resulted in hospital admission for routine ( $n = 20$ ) or intensive ( $n = 8$ ) care. An additional 22.6% of cases reportedly received first aid or emergency room care.

### Comparison of Attempters and Nonattempters

The results of bivariate analyses are displayed in Table 1. As compared with the other subjects, persons who had attempted suicide were significantly more likely to be black/African-American and urban residents. Also, they had completed fewer years of education and were less likely to be enrolled in school. There were no statistically significant associations between suicide attempts and age, sexual orientation label, employment, and U.S. citizenship.

When the four significant independent variables were entered into a multiple logistic regression analysis, only student status was associated with a prior suicide attempt. There were significantly lower odds of an attempt among those in school (odds ratio = .55, 95% confidence interval = .31, .97). We found no statistically significant differences among the 12 individuals who attempted suicide in the past year and the rest of the sample. However, there was a trend toward higher levels of education (13.48 vs. 12.67 years) and school enrollment among the nonattempters (63.6% vs. 50%).

### Discussion

There have been few studies of suicidality using community-based samples of YMSM. We know of two others, a household survey [13] of 115 17- to 27-year-old men who have sex with men in Canada ( $n = 115$ ) and another involving a New Zealand birth cohort with 11 young gay and bisexual men [14]. The time-place sampling method of the current study provides an alternative to traditional probability and nonprobability methods of sampling difficult-to-reach populations in community settings [15].

Different from convenience sampling, time-place sampling systematically selects members of a target

**Table 1.** Characteristics of Suicide Attempters and Nonattempters (n = 254)

Variables	Attempters (n = 85)	Nonattempters (n = 169)	Value (df = 252)	p
	Years (mean)		Student's t-Test Results	
Age (years)	20.6	20.7	-0.1	NS*
Years of education	13.1	13.6	-2.1	< .05
	Percent <sup>†</sup>		Test Results <sup>‡</sup> (df = 1)	
Gay (vs. other identity)	78.8	82.8	0.6	NS
Urban (vs. nonurban)	82.4	69.2	5.0	< .05
In school	51.8	68.6	6.9	< .05
Employed	82.4	85.8	0.5	NS
U.S. citizen	91.8	92.9	0.1	NS
Race/ethnicity				
White	84.1	85.0	0.0	NS
African-American	14.6	6.0	5.1	< .05
American Indian	3.7	3.0		NS <sup>§</sup>
Hispanic	3.7	4.3		NS <sup>§</sup>
Asian	0.0	4.8		NS <sup>§</sup>

\* NS indicates not significant (i.e.,  $p$  value  $\geq$  .05).

<sup>†</sup> Unless otherwise specified, figures within columns represent the percentage of attempters or nonattempters with the indicated characteristic.

<sup>‡</sup> Unless otherwise specified, results pertain to  $\chi^2$  tests.

<sup>§</sup> Fisher's exact test.

population from specific venues in a community. Different from probability samples of schools and households, it efficiently yields large numbers of participants from the target population, including out-of-school and homeless youths. The main disadvantages of this sampling method are the exclusion of individuals who do not patronize popular venues and the preferential selection of frequent attendees. Muhib et al. [15] recently provided an in-depth analysis of the methodology.

This study corroborates findings of prior studies of high rates of suicide attempts among YMSM, previously reported to be in the range of 20% to 42% [1,5]. It also reveals a high monthly incidence of suicide ideation (19%) and annual incidence of attempts (4.7%). Approximately four in five suicide attempts involved ingestion of drugs, cutting, or stabbing, nearly identical to the findings reported in a 1991 study of attempts among 14- to 21-year-old gay and bisexual youth. Thirty percent of attempts in our sample resulted in hospitalization, similar to the 21% figure previously reported [16,17].

Although the current study did not include a comparison group of young men who exclusively had sex with women or who were abstinent, prior studies offer points of reference. Responding to identical survey items, 15% of male junior and senior high school students (not screened for sexual behav-

ior) in Minnesota reported global thoughts of suicide in the month prior to the completion of a statewide student survey; 6.8% reported ever having attempted suicide; and 2.7% reported attempts in the past year alone [18]. Thus, despite similar rates of suicide ideation, the incidence and prevalence of attempts among YMSM in the current study were, respectively, 1.6 and 4.9 times higher than that of the general population of male students in Minnesota.

Compared with our findings, even higher annual incidence rates of suicide ideation (41.7%) and attempts requiring medical attention (20%) were reported in 1993 by male and female students in Massachusetts who had had sex with people of the same sex [19]. The relatively higher rates may be owing to differences in the survey instrument and the demographic characteristics of respondents in the Massachusetts Youth Risk Behavior Survey, including women who might be more likely than men to contemplate and attempt suicide [20]. Compared with other localities, Massachusetts students also may be more likely to make and/or report suicide attempts. The overall annual incidence of serious suicide attempts among students in Massachusetts (4.7%) was almost twice that of the 1990 U.S. sample, in which only 2.5% of female students and 1.6% of male students reported a suicide attempt that required medical attention [21].

This current study sheds new light on the demographic characteristics of YMSM who attempted suicide. As compared with others, African-Americans had the highest prevalence of attempts (54.5%). Although the suicide rates of African-American youths historically have been lower than those of Whites, the rate of increase in suicide in recent decades has been greater for African-Americans [22], and our finding may contribute to a broad understanding of the attendant risks. However, it is noteworthy that ethnic differences disappeared in the multivariate analysis after controlling for residence and educational variables.

School enrollment alone was associated with any previous suicide attempts in the multivariate analysis. Our results are consistent with the finding of a higher suicide attempt rate among gay and bisexual male school dropouts at a social service agency [23]. By way of explanation, leaving school may be a symptom of the underlying emotional and social difficulties that also predispose to suicide. Gay, lesbian, bisexual, and transgender students often experience school problems, many of which have been attributed to verbal and physical abuse from peers [24,25]. Conversely, "school connectedness" may operate as a protective factor, accounting for the observed lower attempt rates among students (regardless of sexual orientation) [26].

Compared with persons who attempted suicide in the last year alone, nonattempters tended to have higher educational levels and be enrolled in school. However, the findings did not attain statistical significance, probably because of the small number of recent attempters. Other limitations of the data were the absence of information about age, educational attainment, and school enrollment at the time of a suicide attempt; the total number of attempts per individual; and the study's general reliance on subjects' reports and recollections of attempts.

The similarities between attempters and nonattempters should not be misconstrued as evidence that suicide attempts are associated with homosexuality *per se*. This study did not assess other psychosocial risk factors that have been found to be associated with suicidality in prior studies, including gender nonconformity, early awareness of homosexuality, stress, violence, lack of social support, family problems, acquaintances' suicide attempts, homelessness, and substance abuse or other psychiatric symptoms [1,5]. Moreover, the findings may not apply to homosexually oriented women who might have different epidemiological patterns, risks, and protective factors for suicide.

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