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Suicidality and Sexual Orientation: Differences Between Men and Women in a General Population-Based Sample From The Netherlands

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Homosexuality has been shown to be associated with suicidality and mental disorders. It is unclear whether homosexuality is related to suicidality, independently of mental disorders. This study assessed differences in lifetime symptoms of suicidality (death ideation, death wishes, suicide contemplation, and deliberate self-harm) between homosexual and heterosexual men and women, controlling for lifetime psychiatric morbidity. Interaction effects of age and the role of perceived discrimination were also examined. Data were collected on a representative sample of the Dutch population aged 18–64 years. Classification as heterosexual or homosexual was based upon reported sexual behavior in the preceding year. Of those sexually active, 2.8% of 2,878 men and 1.4% of 3,120 women had had same-sex partners. Homosexual men differed from their heterosexual counterparts on all four suicide symptoms (*OR* ranging from 2.58 to 10.23, with higher *OR*s for more severe symptoms), and on the sum total of the four symptoms; homosexual women only differed from heterosexual women on suicide contemplation ($OR = 2.12$). Controlling for psychiatric morbidity decreased the ORs, but among men all associations were still significant; the significance for suicide contemplation among women disappeared. Younger homosexuals were not at lower risk for suicidality than older homosexuals in comparison with their heterosexual counterparts. Among homosexual men, perceived discrimination was associated with suicidality. This study suggests that even in a country with a comparatively tolerant climate regarding homosexuality, homosexual men were at much higher risk for suicidality than heterosexual men. This relationship could not only be attributed to their higher psychiatric morbidity. In women, there was no such clear relationship.

KEY WORDS: homosexuality; suicidality; epidemiology; mental disorders; general population study.

INTRODUCTION

Recent studies among representative samples of the general population of different countries show that there is substantial support for the existence of differences in mental health status between heterosexual and homosexual people (Cochran, Sullivan, & Mays, 2003; Gilman et al., 2001; Meyer, 2003; Mills et al., 2004). In a New Zealand birth cohort study, young people with a homosexual or bisexual orientation were at increased risk for a range of mental disorders (Fergusson, Horwood, & Beautrais, 1999). An increased risk among homosexual people in a sample of the U.S. population of 18 years and older was also found, with homosexually active men more likely than heterosexually active men to experience 12-month major depression and panic attacks and homosexually active women more likely than heterosexually active women to have alcohol or other drug dependence (Cochran & Mays, 2000a).

Because mental disorders are associated with suicidal symptoms (Kessler, Borges, & Walters, 1999; Sareen et al., 2005), it is to be expected that studies also find an increased risk for suicidal feelings or behavior in homosexuals. The study among young New Zealand people found that for suicide ideation the odds ratio was

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5.4 times higher among homosexuals than among heterosexuals (67.9% of homosexuals reporting this), and for suicide attempts 6.2 times higher (32.1% of homosexuals reporting this) (Fergusson et al., 1999). No clear gender differences were found, perhaps due to the small numbers of homosexuals in this particular study. In a population-based study among adolescents from Minnesota, suicidal intent and actual attempts were related to homosexuality in men but not in women (Remafedi, French, Story, Resnick, & Blum, 1998). A study among men aged 17–39 years from the general population of the United States found men with lifetime homosexual activity to have 3.4 times higher odds ratio for suicide ideation and 6.5 times higher odds ratio for suicide attempts than exclusively heterosexually active men (Cochran & Mays, 2000b). Although the association between mental disorders and suicidal symptoms is well known, to our knowledge only one study about differences in suicidal symptoms between heterosexuals and homosexuals adjusted for mental health status. In this study, after adjusting for depressive and substance abuse symptoms, adult men who ever had had male sex partners were still at a higher lifetime risk for various suicidal symptoms compared to their heterosexual counterparts (Herrell et al., 1999).

Our study examined differences between heterosexual and homosexual people with regard to four suicide symptoms: death ideation, death wishes, suicide contemplation, and deliberate self-harm (hereafter, we use the term "suicidality" for these symptoms), and the sum total of these four symptoms, taking into account the higher prevalence of mental disorders among homosexual people. We used a large and representative sample of the Dutch population aged 18–64 years from the Netherlands Mental Health Survey and Incidence Study (NEMESIS; Bijl, Ravelli, & Van Zessen, 1998; Bijl, Van Zessen, Ravelli, De Rijk, & Langendoen, 1998). We hypothesized higher prevalences of suicidality among homosexuals, especially among males, but much less stronger associations when controlling for mental disorders. Given the increased social acceptance of homosexuality in Dutch society (Social and Cultural Planning Office, 1996, 2000; Van de Meerendonk, Eisinga, & Felling, 2003; Van de Meerendonk & Scheepers, 2004; Van den Akker, Halman, & De Moor, 1994; Widmer, Treas, & Newcomb, 1998), it might be expected that younger homosexuals are less at risk for suicidality. Therefore, we tested the interaction effect of age.

Because social stigmatization and discrimination can be regarded as a chronic social stressor, making people vulnerable to mental health problems (Cochran & Mays, 2000a; Kessler, Mickelson, & Williams, 1999; Herek, Gillis, & Cogan, 1999; Mays & Cochran, 2001), we also studied among homosexuals whether perceived discrimination because of sexual preference was associated with suicidality. We hypothesized that perceived discrimination was associated with suicidality.

METHOD

Study Design

The data used for this study were part of the Netherlands Mental Health Survey and Incidence Study (NEMESIS). The major aim of that study was to assess the prevalence of psychiatric symptoms and disorders in a representative sample of the Dutch general population, aged 18–64 years. NEMESIS was conducted with the approval of the ethics committee of the Netherlands Institute of Mental Health and Addiction, Utrecht, the Netherlands.

A multistage, stratified, random sampling procedure was used to identify the sample. First, 90 municipalities were sampled randomly. Second, addresses from private households were randomly selected. Third, in these households, individuals with the most recent birthday and aged between 18 and 64 years were asked to participate. Individuals living in institutions, such as psychiatric hospitals, were not included in the sampling frame. All participants received an introductory letter from the Dutch Minister of Health. In order to establish contact with the selected participants, interviewers made up to ten calls or visits to an address at different times and days of the week. To optimize response and to compensate for possible seasonal influences, the fieldwork was extended over the entire period from February through December 1996. Participants provided verbal consent after having been informed about the aims of the study. The interviewer entered data into a computer during a face-to-face interview. A total of 7,076 participants were enrolled. The response rate was 69.7%. A detailed description of the design of the study (Bijl, Ravelli, & Van Zessen, 1998; Bijl et al., 1998) and major outcomes with regard to mental disorders and functioning among homosexuals have been reported elsewhere (Sandfort, De Graaf, & Bijl, 2003; Sandfort, De Graaf, Bijl, & Schnabel, 2001).

Measures

Sexual Behavior

Individuals were categorized as homosexual or heterosexual on the basis of recent rather than lifetime sexual behavior, the former being a more accurate categorization

than the latter (Laumann, Gagnon, Michael, & Michaels, 1994). Participants were asked whether they had had sexual contact in the preceding year and what the gender of their sexual partner(s) was. People who had had sex with someone of the same gender (exclusively or not) were categorized as homosexual. Other sexually active people were categorized as heterosexual. Homosexually active participants and exclusively heterosexually active participants are subsequently referred to in this article as homosexual and heterosexual persons, respectively. We did not ask participants to label their sexual orientation as heterosexual, homosexual or bisexual.

Of the total of 7,076 persons, 30 participants did not answer the questions regarding sexual behavior. Of the remaining 7,046, 85.2% reported having been sexually active in the preceding year. More men than women had been sexually active, 87.7% versus 83.0%, $\chi^2(1) = 30.1$, $p < .0001$. Of the 6,003 sexually active participants, five lacked the necessary data to classify them as heterosexual or homosexual, leaving 5,998 persons for the present analysis. Of the 2,878 men, 2.8% ($n = 82$) had had sex with male partners (six of these men also had sex with women in the respective period). Of the 3,120 women, 1.4% ($n = 43$) had had sex with female partners (six of them also had sex with men). More men than women reported homosexual behavior, $\chi^2(1) = 15.9$, $p < .0001$.

Statistical comparisons were made with and without the behaviorally bisexual people in the homosexual groups. Because the outcomes did not differ, we decided not to exclude bisexual people from the analyses reported here.

Suicidality

Suicidality was assessed using the Composite International Diagnostic Interview (CIDI, version 1.1; Robins et al., 1988; World Health Organization, 1990), designed for use by trained interviewers who are not clinicians. The CIDI depression section contains four questions on suicidality: death ideation (thoughts of death) ("Have you ever had a period of 2 weeks or more during which you were preoccupied with your own death, others' death or dying in general?"), death wishes ("Have you ever had a period of 2 weeks or more during which you wanted to be dead?"), suicide contemplation (suicide ideation) ("Have you ever been so down that you thought of committing suicide?"), and actual deliberate self-harm (suicide attempt) ("Have you ever attempted suicide?"). These questions were asked on a lifetime basis. These suicide items were the same questions that were used in the Epidemiologic Catchment Area Survey (Weissman, Klerman, Markowitz, & Ouellette, 1989) and the U.S. National Comorbidity Survey (Kessler et al., 1999).

A composite measure, the sum total of the four items on suicidality, was constructed.

DSM-III-R Disorders

Lifetime mental disorders were assessed with the CIDI, generating *DSM-III-R* Axis I disorders. The CIDI has documented reliability and validity for practically all diagnoses (Cottler et al., 1991; Kessler et al., 1998; Semler, Von Cranach, & Wittchen, 1987; Wittchen, 1994; Wittchen, Lachner, Wunderlich, & Pfister, 1998; Wittchen, Zhao, Abelson, Abelson, & Kessler, 1996). The following disorders were included: mood disorders (major depression, dysthymia, bipolar disorder), anxiety disorders (panic disorder, agoraphobia, social phobia, simple phobia, obsessive-compulsive disorder, generalized anxiety disorder), substance use disorders (alcohol or drug abuse and dependence), eating disorders (anorexia, bulimia), schizophrenia, and other nonaffective psychotic disorders. The variable "any lifetime mental disorder" refers to the presence of one or more of these disorders. To separate the outcome of interest, suicidality, from the diagnosis of major depression for which a positive reply to any of the four suicide items counts as a positive score on one of nine symptom groups for which a total of five or more is required by *DSM-III-R* (American Psychiatric Association, 1987), the diagnosis of major depression was reformulated by requesting the sum total of these symptom groups, excluding suicidality, to be four instead of five.

Perceived Discrimination

Perceived discrimination because of sexual orientation was assessed with a single question that asked if the respondent had experienced discrimination over the preceding year because of her/his sexual orientation. Participants could answer yes or no to this question. Although the time frames of perceived discrimination and suicidality did not match, we assumed that perceived discrimination in the last year was an indicator of lifetime perceived discrimination.

Demographic Characteristics

These included gender, age, level of education, relationship status (living without a steady partner vs. living with a steady partner), employment status, and urbanicity (rural vs. urban). Table I shows that the homosexual and heterosexual participants differed significantly on

Table I. Demographic Characteristics by Sexual Orientation and Gender

	Men					Women				
	Heterosexual		Homosexual			Heterosexual		Homosexual		
	M	*SD*	*M*	*SD*	F/χ^2	*M*	*SD*	*M*	*SD*	F/χ^2
Age (years)	41.3	11.6	39.2	10.2	*ns*	40.0	11.7	38.6	9.3	*ns*
Educational level (%)										
Primary, basic vocational	26.0		12.2			28.7		17.5		
Lower secondary	35.6		28.0			39.7		37.5		
Higher secondary	6.7		7.3			8.2		2.5		
Higher professional, university	31.7		52.4		17.87***	23.4		42.5		9.48*
Living alone (%)	12.0		48.8		95.20***	9.1		32.6		27.34***
Employed (%)	77.7		70.7		*ns*	52.7		76.7		9.86**
Urban (%)	83.0		93.9		6.77**	82.5		86.0		*ns*

*$p < .05$. **$p < .01$. *** $p < .001$.

various demographic variables. Both homosexual men and women had a relatively higher educational level than heterosexual men and women. A smaller percentage of homosexual men and women reported currently living with a steady partner than heterosexual men and women. Homosexual women were more likely to be employed than heterosexual women. Homosexual men were more likely than heterosexual men to live in urban areas.

Statistical Analysis

Analyses were carried out separately for each gender. Differences in percentages of suicidality symptoms were assessed using chi-square analysis. Differences in the mean of the composite suicidality measure were assessed using ANOVA. In logistic regression and regression analyses, odds ratios (*OR*s) and their 95% confidence intervals (CI), and regression coefficients (β), were computed adjusted for age, and, in a second series of models, adjusted for age and the presence or absence of each of the following lifetime *DSM-III-R* mental disorders simultaneously in the same regression: mood, anxiety, substance use, psychotic, and eating disorders. We did not control for any demographic variables other than age because variables such as urbanicity, relationship status, work status, and educational level are likely to change over time, whereas the dependent variables in this study concern a lifetime period. Further analyses were carried out to determine whether there was an interaction between sexual orientation and age (continuous variable). In these series of models, both the main effects and the interaction term were included. Within the group of homosexual men and women, the association between perceived discrimination and suicidality was studied. Because discrimination may lead to mental disorders (Janssen et al., 2003), we also analyzed these associations controlling for psychiatric morbidity. To limit the number of variables in these analyses, we did not include simultaneously the different disorders, but the variable "any lifetime mental disorder."

All analyses were performed separately for men and women because there is evidence that gender differences exist in the association between sexual orientation and suicidality (Bailey, 1999; Remafedi, 1999; Remafedi et al., 1998).

RESULTS

Psychiatric Morbidity

Elsewhere, we reported that homosexually active men were significantly more likely than their heterosexual counterparts to report lifetime mood disorder ($OR = 3.11$; CI = 1.91–5.05) and anxiety disorder ($OR = 2.67$; CI = 1.62–4.41), and homosexually active women lifetime substance use disorder ($OR = 3.43$; CI = 1.60–7.33) and mood disorder ($OR = 2.41$; CI = 1.26–4.63) (Sandfort et al., 2001).

Suicidality

Table II shows that homosexual men were much more at risk than heterosexual men for lifetime death ideation (48.8% vs. 26.7%), death wishes (26.8% vs. 5.8%), suicide contemplation (40.2% vs. 7.8%), deliberate self-harm (14.6% vs. 2.0%), and for the composite suicidality measure (the mean of the sum total of the four suicidality items was 1.30 vs. 0.42). The *OR*s in the second last column show that this risk was higher the more severe and the less frequent the suicide symptom was, with

Table II. The Association Between Sexual Orientation and Suicidality, by Gender

	Heterosexual (%)	Homosexual (%)	χ^2	*df*	*p*	*OR* (95% CI)[a]		*OR* (95% CI)[b]	
Men									
Death ideation	26.7	48.8	19.60	1	<.0001	2.58 (1.66–4.01)		1.82 (1.13–2.92)	
Death wishes	5.8	26.8	59.40	1	<.0001	5.93 (3.55–9.92)		3.38 (1.82–6.27)	
Suicide contemplation	7.8	40.2	104.75	1	<.0001	7.74 (4.86–12.32)		5.72 (3.30–9.91)	
Deliberate self-harm	1.6	14.6	69.61	1	<.0001	10.23 (5.18–20.20)		5.57 (2.58–12.04)	
Women									
Death ideation	40.4	46.5	0.66	1	*ns*	1.28 (0.70–2.34)		0.88 (0.46–1.66)	
Death wishes	12.7	14.0	0.06	1	*ns*	1.11 (0.47–2.65)		0.61 (0.24–1.57)	
Suicide contemplation	12.3	23.3	4.69	1	.03	2.12 (1.03–4.36)		1.32 (0.59–2.93)	
Deliberate self-harm	3.1	4.7	0.36	1	*ns*	1.52 (0.36–6.39)		0.96 (0.22–4.26)	
	M (*SE*)	*M* (*SE*)	*F*	*df*	*p*	β^*	*p*	β^{**}	*p*
Composite (men)	0.42 (0.01)	1.30 (0.15)	98.30	1	<.0001	0.18	<.0001	0.17	<.0001
Composite (women)	0.68 (0.02)	0.88 (0.16)	1.85	1	*ns*	0.02	*ns*	−0.01	*ns*

Note. Men: Heterosexual, $N = 2{,}796$; homosexual, $N = 82$. Women: Heterosexual. N = 3,077; homosexual, N = 43.
[a]Controlled for age.
[b]Controlled for age, mood, anxiety, substance use, psychotic, and eating disorders.

death ideation showing a 2.58 times higher odds among homosexual men than among heterosexual men, and deliberately self-harm a 10.23 times higher odds.

In general, suicidality was more common among women than men. Between homosexual and heterosexual women, only one significant difference was found: lesbian women had a 2.12 times higher odds than heterosexual women in reporting suicide contemplation. There was no significant difference in the mean score on the composite suicidality measure between homosexual and heterosexual women.

The last column of Table II presents *OR*s (for the suicide items) and standardized regression coefficients (for the composite suicidality measure) for the association between sexual orientation and suicidality controlled for psychiatric morbidity. After controlling for the influence of age and mental disorders, the ORs and the standardized regression coefficient for men were somewhat lower, but they were still statistically significant. Thus, the higher risk for suicidality among homosexual men could not only be attributed to their higher rate of mental disorders. Among women, the difference in suicide contemplation was no longer significant after controlling for psychiatric morbidity.

Are Younger Homosexuals Less at Risk?

We tested for an interaction effect between age and sexual orientation. In general, older people did not show higher lifetime prevalences of suicidality than younger people. Contrary to our expectations, younger homosexual men were at higher risk than older homosexual men comparing them to their heterosexual counterparts for suicide contemplation ($OR = 0.93$; CI = 0.88–0.99), and for the composite suicidality measure ($\beta = -0.07$, $p < .0001$).

Perceived Discrimination

Among homosexual men and women, we assessed whether perceived discrimination because of sexual orientation was related to the reporting of suicidality. More homosexual men than women reported having experienced such discrimination in the previous year: 20 (24.4%) of 82 homosexual men and 8 (18.6%) of 43 homosexual women. Age was not significantly associated with perceived discrimination. Among men, perceived discrimination was associated with the three most severe suicide symptoms and with the composite suicidality measure (Table III). Among women, no significant associations were found, probably partly due to the small numbers of those who experienced discrimination. Controlled for psychiatric morbidity, in men the association of deliberate self-harm was no longer significant.

In addition, among all participants, we also conducted logistic regression analyses on the relationship between perceived discrimination because of sexual orientation and suicidality, controlled for sexual orientation, age, and the five mental disorders (not in table). Only among men significant associations were found: perceived discrimination was associated with death wishes ($OR = 6.69$; CI = 2.01–22.27), suicide contemplation ($OR = 7.62$; CI = 2.25–25.81), and the composite suicide measure ($\beta = 0.12$, $p < .0001$). In the last two equations,

Table III. The Association Between Perceived Discrimination and Suicidality Among Homosexual Men and Women

	Discrimination (%)								
	No[a]	Yes[b]	χ^2	*df*	*p*	*OR* (95% CI)		*OR* (95% CI)[a]	
Homosexual men									
Death ideation	43.5	65.0	2.79	1	.10	2.41 (0.85–6.86)		1.30 (0.41–4.11)	
Death wishes	17.7	55.0	10.69	1	.001	5.67 (1.89–16.95)		3.39 (1.06–10.84)	
Suicide contemplation	29.0	75.0	13.29	1	<.0001	7.33 (2.32–23.19)		4.59 (1.36–15.50)	
Deliberate self-harm	9.7	30.0	5.00	1	.03	4.00 (1.12–14.30)		2.44 (0.64–9.25)	
Homosexual women									
Death ideation	45.7	50.0	0.05	1	*ns*	1.19 (0.26–5.52)		1.15 (0.23–5.66)	
Death wishes	11.4	25.0	1.00	1	*ns*	2.58 (0.38–17.43)		2.63 (0.35–19.52)	
Suicide contemplation	17.1	50.0	3.94	1	*ns*	4.83 (0.94–24.95)		5.16 (0.92–28.96)	
Deliberate self-harm	5.7	0.0	0.48	1	*ns*	—		—	
	M (*SE*)	*M* (*SE*)	*F*	*df*	*p*	β^*	*p*	β^{**}	*p*
Composite									
Homosexual men	1.00 (0.16)	2.25 (0.30)	14.35	1	<.0001	0.39	<.0001	0.25	.02
Homosexual women	0.80 (0.17)	1.25 (0.45)	1.20	1	*ns*	0.17	*ns*	0.17	*ns*

[a]Homosexual men: $N = 62$; homosexual women: $N = 35$.
[b]Homosexual men: $N = 20$; homosexual women: $N = 8$.
[c]Controlled for any lifetime mental disorder.

sexual orientation was also still significantly associated with suicidality (*OR* = 3.43; CI = 1.79–6.61; and β = 0.08, $p < .0001$, respectively).

DISCUSSION

This study found a strong relationship between suicidality and sexual orientation in men, but much less so in women, and that this relationship in homosexual men could not only be attributed to their higher psychiatric morbidity. In spite of a more tolerant society in the last decades (Social and Cultural Planning Office, 1996, 2000; Van de Meerendonk et al., 2003; Van de Meerendonk & Scheepers, 2004; Van den Akker et al., 1994; Widmer et al., 1998), younger homosexuals were still at high risk for suicidality. Perceived discrimination because of sexual orientation was a risk factor for suicidality among homosexual men.

Strengths and Limitations

Compared to several other studies, this study had a number of methodological strengths, which included a large sample of participants representative of the general population (instead of a convenience sample of homosexual men and/or women which was often used in the first studies addressing this issue (Cochran & Mays, 2000a), the recruitment of participants without referring to sexual orientation as an object of the study, the measurement of suicidality with standardized diagnostic criteria, and the possibility of studying the relationship between suicidality and sexual orientation controlling for mental disorders.

There were some methodological limitations to the study. First, the operationalization of sexual orientation was not optimal. A direct assessment of orientation or self-labeling would have been more preferable. Although various studies have demonstrated discrepancies between homosexual behavior and homosexual orientation or homosexual self-labeling (Doll, Petersen, White, Johnson, & Ward, 1992; Laumann et al., 1994; Sandfort, 1998), we think that recent homosexual behavior is a better indicator of homosexual self-labeling than any lifetime homosexual involvement. A Dutch general population survey showed that in the Netherlands (Van Zessen & Sandfort, 1991), current behavior corresponded highly with self-labeled sexual orientation.

Second, suicidality could not be studied separately among homosexual and bisexual groups, because the number of participants with bisexual behavior was low. This might have been of interest because bisexuals have been found to be at the highest risk (Jorm, Korten, Rodgers, Jacomb, & Christensen, 2002).

Third, suicidality was regarded as a continuum ranging from fleeting death ideation at its mildest to actual suicide attempt at its severest end, but completed suicides were not studied. Thus, although it is likely that homosexual men may be at higher risk for suicide than heterosexual men, there is still no definitive proof that

they kill themselves more frequently. In this CIDI-version, concrete suicide planning was not asked for, while it is usually considered as an important component of the suicidal continuum (Kessler et al., 1999; Neeleman, De Graaf, & Vollebergh, 2004), nor were questions asked about the degree to which attempts were threatening (Savin-Williams, 2001). Furthermore, no information in the CIDI and in the additional questionnaire was available on age of suicide attempt and number of attempts, age of onset of homosexual desires and activity, and on the relationship between their homosexuality and suicidality according to the participants (Friedman, 1999). Nor were there questions about frequency and degree of perceived discrimination, and type of discrimination (day-to-day minor incidents vs. severe assaults). This information might have been of interest in order to study the relationship between suicidality and sexual orientation in more detail.

Fourth, suicidality and lifetime disorders were assessed on a lifetime basis. The validity of lifetime diagnoses (based on self-reporting of symptoms over the life-span) has been questioned on grounds of difficulty of accurate recall (Wittchen et al., 1989).

Fifth, the time frames of perceived discrimination and suicidality did not match. We assumed that perceived discrimination in the last year was an indicator of lifetime perceived discrimination. However, we were not able to test this assumption.

Finally, this study did assess a broad range of disorders, but some disorders known to be associated with suicidal behavior such as posttraumatic stress disorder and Axis II personality disorders were not measured.

Comparison with Other Studies

We found a clear difference in the risk for suicidality among homosexual men compared to heterosexual men, but not among homosexual women compared to heterosexual women. Other studies have also shown this association among men (Remafedi, 1999; Remafedi et al., 1998; Skegg, Nada-Raja, Dickson, Paul, & Williams, 2003), although one study only found homosexual young women, and not homosexual young men, more at risk for suicide attempt (Van Heeringen & Vincke, 2000).

The prevalence of suicidality among homosexual men can be considered as extremely high, ranging from 48.8% for death ideation to 14.6% for deliberate self-harm. Controlling for mental disorders, which were more prevalent among homosexual men, did lower the associations, but all differences were still significant. Given the comparatively rather tolerant social climate towards homosexuality in the Netherlands (Social and Cultural Planning Office, 2000; Van de Meerendonk et al., 2003; Van de Meerendonk & Scheepers, 2004; Van den Akker et al., 1994; Widmer et al., 1998), one might expect lower odds of suicidality among homosexuals versus heterosexuals in the Netherlands compared to other countries. However, compared to studies in other Western countries, these figures were not lower.

A study among young people in New Zealand found an odds of 5.4 for the comparison of homosexuals with heterosexuals (women and men together) for lifetime suicidal ideation; for suicidal attempts, this was 6.2 (Fergusson et al., 1999). In a population-based study among adolescents in the United States, suicidal contemplation and suicide attempts were related to homosexuality in males but not in females (Remafedi et al., 1998). Somewhat lower (unadjusted) ORs among men were found than in our study ($OR = 3.6$ and $OR = 7.1$, respectively). A study among 17–39 year old men from the general population of the United States, NHANES III (the third National Health and Nutrition Examination Survey), found lifetime homosexually active men to have higher risks for suicidality than those exclusively heterosexual active, but again with somewhat lower (unadjusted) *OR*s than in our study (e.g. suicide contemplation $OR = 3.4$; deliberate self-harm $OR = 6.5$; Cochran & Mays, 2000b). It should be noted, though, that these studies differed in design, definition of homosexuality, age groups, and suicide questions, which might hamper comparisons.

What could be the reasons for the absence of lower suicidality rates in our study? It could be that actual acceptance in the Netherlands is lower than the official figures suggest and that homosexual people are still confronted with stigma and discrimination, although possibly in less blunt forms. Furthermore, the fact that younger homosexuals do not show lower figures than older homosexuals suggests that the "coming out" process is still emotionally difficult (Bailey, 1999). This finding could also be the result of the fact that the older participants did not include those who had actually committed suicide, artificially depressing the number of older people who were classified as suicidal. But because the actual suicide rate in the population is low, this is not likely to be the case.

Perceived Discrimination

Perceived discrimination because of sexual orientation was a risk factor for suicidality among men. Actual experiences with discrimination can be regarded as specific stressors, which, according to other researchers, might cause other mental problems as well (Diplacido,

1998; Herek et al., 1999; Meyer, 1995; Otis & Skinner, 1996; Sandfort, Bos, & Vet, 2005). We only had data on perceived discrimination in the last year. Lifetime perceived discrimination was not measured, but some information on discrimination endured in the past was available: emotional neglect and psychological or physical abuse before the age of 16. Experiencing at least one of these adversities was more often found among homosexual men compared to heterosexual men (58.5% vs. 25.0%) (Sandfort et al., 2003). This former discrimination (e.g., by parents or peers) might directly lead to suicidality or indirectly via the mechanism of internalized homophobia. The finding that, among homosexual men, perceived discrimination because of sexual orientation was associated with at least two suicidality measures, means that both external factors (like discrimination) and internal factors (like internalized homophobia) are of influence.

Suicidality was not related to sexual orientation in women, probably because homosexual women were less exposed to these social stressors compared to homosexual men. This might be explained be the fact that attitudes toward homosexual men are generally more negative than attitudes toward homosexual women (Kite & Whitley, 1998). It could also be that, unlike in men, suicidality in homosexual women is more dependent upon their gender than on their sexual orientation. As we have shown earlier, even though the homosexual women in this study more frequently than heterosexual women reported having a substance abuse disorder, being emotionally neglected or psychologically or physically abused before the age of 16, and having been sexual abused either before or after the age of 16, they did not differ regarding their quality of life (Sandfort et al., 2003). We know of no studies looking at this phenomenon, but it could be that homosexual women develop more active coping skills than homosexual men, which prevent stressors from inducing suicidality.

In conclusion, this study showed that, in men, homosexuality was associated with suicidality, independent of psychiatric morbidity. Why homosexuality is related to suicidality in men only requires further research. It would be of interest to identify mechanisms that homosexual women might have developed to protect themselves better against stressful experiences. Teaching homosexual men and women to protect themselves against the negative effects of discrimination by increasing their self esteem could be of use (Sandfort et al., 2003). Alternatively, homosexual men might profit from further increased societal acceptance of homosexuality. The data in this study were obtained in 1996. Information from a more recent time is of importance to detect changes. New studies should focus on the mechanisms that might explain the high association between male homosexuality and suicidality. Using identical research designs and questionnaires in different countries could show whether the relationship between sexual orientation and suicidality rates varies according to societal acceptance of homosexuality. Such studies should also explore frequency of suicidal symptoms and the age at which they occur.

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