

ORIGINAL ARTICLE

Gender Differences in Health and Risk Behaviors Among Bisexual and Homosexual Adolescents

ELIZABETH M. SAEWYC, B.S.N., R.N., LINDA H. BEARINGER Ph.D., M.S., R.N.,
PATRICIA A. HEINZ, M.S., R.N., C.N.M., ROBERT W. BLUM, M.D., Ph.D.,
AND MICHAEL D. RESNICK, Ph.D.

Objective: This study explored gender differences in the health and risk behaviors of 394 self-identified bisexual and homosexual adolescents who participated in an anonymous, school-based survey.

Methods: Respondents included 182 girls and 212 boys; girls were significantly younger than boys ($p < 0.001$), so respondents were further grouped as younger (≤ 14 years) and older (≥ 15 years) for analysis. Chi-square was used to test for gender differences in health perceptions and risk behaviors. Items included general health perceptions and health care access, body image and disordered eating behaviors, sexual behaviors, alcohol use, and emotional health measures including mood, life satisfaction, and suicidal ideation and attempts.

Results: Both younger and older girls were significantly more likely than their male age mates to report a history of sexual abuse, dissatisfaction with weight, a negative body image, more frequent dieting, and an earlier age at onset of sexual intercourse. Both younger and older boys were significantly more likely than girls to have a positive body image, to rate themselves as healthier than peers, to report no regular source of health care, to be sexually experienced, and to drink alcohol more often and in greater quantity; a significantly greater proportion of older boys than older girls reported alcohol use before school (19.0% vs. 3.9%; $p < 0.05$). No significant gender differences were found for measures of emotional health, including suicidal ideation and at-

tempts; however, nearly 1 of 3 older boys and girls reported at least one suicide attempt.

Conclusions: Gender is a substantive source of variation in health and risk behaviors among bisexual and homosexual adolescents. Health care providers should incorporate gender-specific approaches to health promotion and risk reduction with young people who self-identify as gay, lesbian, or bisexual. © Society for Adolescent Medicine, 1998

KEY WORDS:

Gender differences
Sexual orientation
Homosexual
Bisexual
Adolescents
Health behavior
Risk behavior

The development and personal recognition of one's sexual orientation and the way this recognition is incorporated into one's sense of self are a central developmental task of adolescence (1-3). When that orientation is bisexual or homosexual, however, the developmental task is complicated by the social stigma attached to a nonheterosexual identity (3,4).

As with those who bear other socially stigmatized characteristics such as disability, race, or even obesity (5), youth who identify as bisexual or homosexual are at increased risk for adverse physical, social, and psychological outcomes. These outcomes include emotional difficulties, problems in school, verbal abuse from peers, physical assaults, sexual abuse, conflict with the law, substance use, eating disorders, and suicide and suicide attempts (6-13).

From the Schools of Nursing (Saewyc, Bearinger and Heinz), Medicine (Blum and Resnick) and Public Health (Resnick), Medicine, and Public Health, University of Minnesota, Minneapolis, Minnesota.

Address reprint requests to: Linda H. Bearinger, Ph.D., RN, School of Nursing, University of Minnesota, 6-101 Weaver-Densford Hall, 308 Harvard St. S.E., Minneapolis, MN 55455.

Manuscript accepted August 8, 1997.

Nonheterosexual youth employ several strategies to cope with the pervasive discrimination and internalized negative messages that are the result of stigma (14,15). Some strategies, such as the "heterosexual immersion" described by Troiden (2) or survival prostitution after running away or being forced out of their homes, put them at further risk for unintended pregnancy and sexually transmitted diseases (16). For example, a recent study of 284 homosexual and 99 bisexual adolescent males in San Francisco found an overall 9.4% seroprevalence rate for human immunodeficiency virus (HIV) and a seroprevalence of 19.8% for hepatitis B markers (17).

The preponderance of research on sexual orientation among adolescents is focused on homosexual and bisexual males (7–9,11,17,21–25). Although some studies include lesbian or bisexual adolescent females, or retrospective recall of adolescence by adult women (10,26,27), few studies focus on both males and females (13,28–30). In the majority of these studies, the focus has been on the prevalence of nonheterosexual orientations, without gender comparisons. As a result, programs providing services and interventions for for gay, lesbian, and bisexual youth frequently assume similar developmental paths and biopsychosocial health risks for both boys and girls (20). Henderson (1) was one of the few researchers to compare the developmental differences of gay and lesbian youth; however, her sample included a limited clinical population of older adolescents who were college students, and did not include any subjects who self-identified as bisexual.

The purpose of this study was to identify gender differences in health and risk behaviors among self-identified bisexual and homosexual adolescents.

Methods

Sample

The data for this secondary analysis were drawn from the Minnesota Adolescent Health Survey conducted during the 1986–1987 school year, in which a random, stratified sample of over 36,000 public school students in Grades 7–12 throughout the state completed an anonymous questionnaire consisting of 148 questions of health and risk behaviors. The original study was approved by the institutional review board, and further approval was obtained for this specific secondary analysis. The development of the questionnaire and its psychometric properties are described elsewhere (30–33,41,42). The survey included questions regarding various dimensions of sexual orientation, including sexual fantasy, same-

Table 1. Sexual orientation and demographic distribution of sample

	Female		Male	
	%	(N)	%	(N)
Total sample	46.2	(182)	53.8	(212)
Type of self-identified sexual orientation*				
Bisexual	79.1	(144)	61.8	(131)
Mostly homosexual	13.7	(25)	17.0	(36)
100% homosexual	7.1	(13)	21.2	(45)
Age (yr)**				
≤13	39.2	(72)	21.7	(46)
14	16.5	(30)	14.2	(30)
15	13.7	(25)	18.4	(39)
16	13.2	(24)	20.8	(44)
≥17	17.0	(31)	25.0	(53)
Race/ethnicity (NS)				
White	72.6	(127)	79	(163)
Black	11.4	(20)	11.3	(23)
Hispanic	3.4	(6)	1.5	(3)
American Indian or Alaska Native	3.4	(6)	1.0	(2)
Asian or Pacific Islander	9.1	(16)	6.3	(13)

* $p < 0.01$.

** $p < 0.001$.

sex and opposite-sex behavior, attractions and intentions, and self-labeling. The latter was the variable chosen as the selection criterion because of the four dimensions, it yielded the lowest prevalence of nonheterosexual orientation, suggesting greater sensitivity. Self-labeling also showed the most consistent correlations in the expected direction when the four measures were intercorrelated. They do not comprise a unidimensional scale (13,30). Respondents were asked to identify their sexual orientation with six response options: 100% heterosexual, mostly heterosexual, bisexual, mostly homosexual, 100% homosexual, and unsure.

For this analysis, the sample ($N = 394$) consisted of those female and male respondents who identified themselves as bisexual, mostly homosexual, or 100% homosexual. Within this group, 46.2% ($n = 182$) were female and 53.8% ($n = 212$) were male. Females were significantly younger than males (mean = 14.52 females vs. 15.14 males, $\chi^2 = 27.34$, $df = 8$, $p < 0.001$). Otherwise, this group of adolescents did not differ by gender in race/ethnicity, geographic location, parental socioeconomic status, or family structure. The majority of these adolescents were white (76.3%), middle to upper-middle class (84.2%), from two-parent families (68.0%), and living in urban or suburban areas (77.9%). As shown in Table 1, there were significant differences in self-identified sexual orientation by gender ($\chi^2 = 18.07$, $df = 2$, $p < 0.001$),

with a greater percentage of males identifying as 100% homosexual (21.2% males vs. 7.1% females) and a greater percentage of females identifying as bisexual (79.1% females vs. 61.8% males). Homosexual and bisexual adolescents were combined in the analysis for three reasons: (a) because Troiden (2) and others noted that adolescents frequently shift their self-identification between bisexual and homosexual during the process of identity acquisition and acceptance; (b) there is no empirical evidence to date documenting differing developmental considerations for adolescents who self-identify as bisexual versus those who self-identify as gay or lesbian; and (c) to increase the power of the analysis to detect differences by gender.

Analysis

Respondents were compared on a wide range of risk behaviors and health indicators using Chi-square analysis to assess differences between girls and boys. For the majority of the variables, analyses were based on single survey items; for multiple item variables, scales were based on prior analyses determining factor structure and internal consistency (31). Variables included for comparison explored physical and sexual abuse history; general health perceptions and health care access; self-esteem, body image, and disordered eating behaviors; emotional health including satisfaction with personal life, depression, and suicide attempts; substance use behaviors; same-gender and opposite-gender sexual behaviors, including heterosexual intercourse and age at heterosexual debut; and worries associated with pregnancy or acquired immunodeficiency syndrome (AIDS).

A composite measure of emotional health, the General Well-being Scale, was composed of 18 questions which measured the respondent's overall mood during the month prior to the survey, compared by quintiles. These items were derived from a scale developed by Wan and Liveratos for the National Center for Health Statistics (34). The scale shows good construct validity (35) and the total score has been closely related to depression (31).

Because female respondents were significantly younger than males, all variables were further compared within age groups using an older/younger dichotomy. Older adolescents were defined as those age 15 years or older ($n = 216$), and younger adolescents were those 14 years or younger ($n = 178$). However, owing to sample size, the sample was not further partitioned by race or ethnicity.

Results

Results are presented in Table 2, and significant results are described below.

General Health

Respondents were asked to compare their health with other students their own age. As shown in Table 2, the majority of both age groups viewed their health as "about the same as others" their age. However, older boys (27.4%) were significantly more likely than older girls (10.1%) to rate themselves as healthier than other people their own age, and older girls (19.0%) were twice as likely as older boys (9.6%) to consider themselves less healthy than others.

In addition to perceptions of health, access to a regular source of health care is an important indicator of an adolescent's opportunity for both treatment of illness and injury, as well as opportunity for health screening, anticipatory guidance, and health counseling. While there was no significant gender variation among younger teens, nearly 1 in 4 older boys reported they had no usual place for medical care, compared to only 1 in 20 older girls.

Body Image and Disordered Eating Behaviors

There were significant differences between younger boys and girls in self-perceived body image, but not among older youth. Two thirds of younger males rated themselves high on body image, compared to slightly over one third of females; twice as many younger females (27.0%) as males (14.9%) rated themselves low on body image.

A significantly greater proportion of older females (38.5%) than males (21.8%) considered themselves to be overweight, and more older males (30.8%) than older females (5.1%) viewed themselves as underweight.

In each age group, more girls than boys reported dieting in the last year, at all levels of frequency. However, binge eating and self-induced vomiting showed no significant variation between boys and girls.

Sexual and Physical Abuse History

As shown in Table 2, the proportion of younger respondents with a history of sexual abuse was almost four times greater among girls (14.9%) than boys (4.1%). None of the younger boys and 42.1% of the younger girls had discussed the abuse with someone. Among older respondents, the prevalence

Table 2. Health and risk variables

Variable	Younger*		Older**	
	Females (n = 102)	Males (n = 76)	Female (n = 80)	Males (n = 136)
General health and body image				
Comparative health perception	(n = 101)	(n = 74)	(n = 79)	(n = 135)
Healthier than others	13.9%	16.2%	10.1%	27.4%
About the same as others	77.2%	77.0%	70.9%	63.0%
Not as healthy as others	8.9%	6.8%	19.0%	9.6%
	(NS)		$(\chi^2 = 10.89, df = 2, p < 0.01)$	
Place for medical care	(n = 98)	(n = 73)	(n = 79)	(n = 130)
No usual place	12.2%	20.5%	5.1%	23.1%
	(NS)		$(\chi^2 = 13.19, df = 5, p < 0.05)$	
Body image and disordered eating				
Body image	(n = 100)	(n = 74)	(n = 79)	(n = 132)
High	39.0%	66.2%	34.2%	45.5%
Moderate	34.0%	18.9%	39.2%	30.3%
Low	27.0%	14.9%	26.6%	24.2%
	$(\chi^2 = 12.60, df = 2, p < 0.01)$		$(\chi^2 = 19.35, df = 2, p < 0.001)$	
Self-evaluation of body weight	(n = 100)	(n = 75)	(n = 78)	(n = 133)
Overweight	37.0%	24.0%	38.5%	21.8%
About right weight	52.0%	68.0%	41.1%	47.4%
Underweight	11.0%	8.0%	5.1%	30.8%
	(NS)		$(\chi^2 = 19.35, df = 2, p < 0.001)$	
Frequency of weight loss diet in last year	(n = 102)	(n = 75)	(n = 79)	(n = 135)
Never	42.2%	69.3%	43.0%	71.9%
1–4 times	36.3%	24.0%	40.5%	22.2%
5–10 times	8.8%	2.7%	6.3%	4.4%
>10 times	5.9%	4.0%	5.1%	0
Always	6.9%	0	5.1%	1.5%
	$(\chi^2 = 16.13, df = 4, p < 0.01)$		$(\chi^2 = 21.97, df = 4, p < 0.001)$	
Sexual and physical abuse history	(n = 94)	(n = 73)	(n = 78)	(n = 132)
Ever been sexually abused	14.9%	4.1%	30.7%	16.7%
	$(\chi^2 = 5.23, df = 1, p < 0.05)$		$(\chi^2 = 5.70, df = 1, p < 0.05)$	
Ever been physically abused	(n = 96)	(n = 74)	(n = 80)	(n = 132)
	11.5%	9.5%	28.8%	20.5%
	(NS)		(NS)	
Emotional health	(n = 92)	(n = 58)	(n = 74)	(n = 120)
Ever attempted suicide	12.0%	22.4%	31.1%	30.8%
	(NS)		(NS)	
Substance use (among those reporting ever use)	(n = 26)	(n = 20)	(n = 48)	(n = 85)
Amount of alcohol at one time				
Heavy (≥ 5 drinks)	7.7%	20.0%	27.1%	48.2%
	(NS)		$(\chi^2 = 6.83, df = 2, p < 0.05)$	
Drink alcohol before school	(n = 29)	(n = 23)	(n = 50)	(n = 84)
Yes	0	0	4.0%	19.0%
	(NS)		$(\chi^2 = 6.10, df = 1, p < 0.05)$	
Use drugs before school	(n = 11)	(n = 12)	(n = 39)	(n = 55)
Yes	36.4%	0	35.9%	25.5%
	$(\chi^2 = 5.28, df = 1, p < 0.05)$		(NS)	
Legal problems from drug use	(n = 43)	(n = 34)	(n = 60)	(n = 100)
Yes	0	14.7%	5.0%	16.0%
	$(\chi^2 = 6.76, df = 1, p < 0.01)$		$(\chi^2 = 4.34, df = 1, p < 0.05)$	

*younger = ≤ 14 years, **older = ≥ 15 years.

Table 2. Health and risk variables (continued)

Variable	Younger		Older	
	Females (<i>n</i> = 102)	Males (<i>n</i> = 76)	Female (<i>n</i> = 80)	Males (<i>n</i> = 136)
Sexual attitudes and behaviors				
Ever had sexual intercourse	(<i>n</i> = 94) 21.3%	(<i>n</i> = 72) 34.7%	(<i>n</i> = 78) 51.3%	(<i>n</i> = 130) 63.8%
Age at first intercourse ≤13 yr	($\chi^2 = 3.73, df = 1, p < 0.05$) (<i>n</i> = 22) 80.0%	(<i>n</i> = 23) 87.0%	(<i>n</i> = 39) 51.2%	(<i>n</i> = 84) 47.6%
Sexual experience with a male	(NS)		($\chi^2 = 14.65, df = 7, p < 0.05$)	
Sexual experience with a female	(<i>n</i> = 53) 35.8%	(<i>n</i> = 42) 14.3%	(<i>n</i> = 27) 63.0%	(<i>n</i> = 59) 45.8%
	($\chi^2 = 5.62, df = 1, p < 0.05$)		(NS)	
Gender of sexual fantasy partner	(<i>n</i> = 49) 8.2%	(<i>n</i> = 42) 45.2%	(<i>n</i> = 27) 26.9%	(<i>n</i> = 58) 74.9%
	($\chi^2 = 16.46, df = 1, p < 0.0001$)		($\chi^2 = 16.61, df = 1, p < 0.0001$)	
Female	(<i>n</i> = 85) 3.5%	(<i>n</i> = 70) 72.9%	(<i>n</i> = 77) 9.1%	(<i>n</i> = 132) 49.2%
Male	69.4%	8.6%	49.4%	14.4%
Both	27.1%	18.6%	41.6%	36.4%
	($\chi^2 = 88.03, df = 2, p < 0.00001$)		($\chi^2 = 44.89, df = 2, p < 0.00001$)	
Attractions and intentions to be sexual	(<i>n</i> = 94) 73.2%	(<i>n</i> = 71) 71.8%	(<i>n</i> = 76) 52.7%	(<i>n</i> = 130) 44.6%
Solely/mostly opposite sex	7.7%	15.5%	15.7%	20.0%
Solely/mostly same sex	19.1%	12.7%	31.6%	35.4%
	(NS)		(NS)	

of sexual abuse was higher than among younger respondents. Again, a significantly greater proportion of older girls (30.7%) than older boys (16.7%) reported a history of sexual abuse. More than half of the older boys (54.5%) and 45.8% of older girls who reported a history of sexual abuse had never discussed the abuse with anyone.

There were no gender differences in the prevalence of self-reported physical abuse (9.5% younger males, 11.5% younger females; 28.8% older females, and 20.5% older males).

Emotional Health

No significant differences by gender were found for any of the variables used to measure emotional health. However, more than half the girls and almost half the boys had scores in the lowest two quintiles of the General Well-being Scale, a score that has been closely linked to depression. Of even greater concern, nearly 1 in 3 older boys and girls had ever attempted suicide.

Substance Use

Among those who reported drinking alcohol, frequency of alcohol use did not vary by gender. Volume of alcohol consumed during one episode of drinking was significantly different only among older respondents. Nearly half of older boys reported heavy drinking, compared to 27.1% of older girls (5 or more "drinks"/episode: a drink was defined as one can of beer, one glass of wine, or one shot of hard liquor). Specific types of alcohol used did not differ by gender.

Consumption of alcohol or drugs before school is a strong indicator of substance abuse (36) as are self-reports of legal problems associated with substance use (37). Among the younger respondents who reported ever using alcohol or drugs, none reported drinking alcohol before school; however, of the 23 who responded to the question about drug use before school, 36.4% of younger girls reported they used drugs before school, while none of the 12 younger boys reported so doing. Among older ado-

Table 3. Summary of significant gender differences

<p>More younger girls than boys reported</p> <ul style="list-style-type: none"> ● Dissatisfaction with weight ● Low body image ● Frequent dieting ● A history of sexual abuse ● Drug use before school ● More bisexual or heterosexual fantasies 	<p>More younger boys than girls reported</p> <ul style="list-style-type: none"> ● Feeling healthier than peers ● A positive body image ● Satisfaction with weight ● More frequent and heavier alcohol consumption ● More legal problems with substance use
<p>More older girls than boys reported</p> <ul style="list-style-type: none"> ● Feeling less healthy than peers ● Feeling overweight ● Frequent dieting ● History of sexual abuse ● Age of first sexual intercourse ≤ 13 years ● More bisexual fantasies and attractions 	<p>More older boys than girls reported</p> <ul style="list-style-type: none"> ● Feeling healthier than peers ● A positive body image ● Feeling underweight ● Having no usual source of health care ● Heavier drinking ● Alcohol use before school ● More legal problems with substance use ● Sexual experience

lescents with a history of alcohol or drug use, there were significant differences in alcohol use but not in drug use before school, with older boys more likely than older girls to report use before school. Notably, more than 1 in 3 older girls (35.9%) and 1 in 4 older boys (25.5%) did report using drugs before school.

Legal problems associated with drug or alcohol use also varied significantly by gender among both older and younger respondents with a history of use. In both age groups, boys more than girls had alcohol- or drug-associated legal problems.

Sexual Attitudes and Behaviors

Among younger respondents, boys (34.7%) were more likely than girls (21.3%) to report ever having had sexual intercourse. Among sexually experienced older adolescents, boys were more likely than girls to report a younger age at first intercourse (age ≤ 10 years: 15.5% boys vs. 7.7% girls; 11 years: 9.5% boys vs. 2.6% girls; 12 years: 4.8% vs. 2.6%; 13 years: 17.9% boys vs. 38.5% girls; 14 years: 16.7% vs. 12.8%; 15 years: 23.8% vs 20.5%; 16 years: 10.7% boys vs. 5.1% girls; 17 years: 1.2% vs. 10.2%). However, a slightly greater proportion of older girls than boys reported an age at first intercourse of 13 years or younger (51.3% girls vs. 47.6% boys). Frequency of sexual intercourse was not significantly different among respondents of either age.

A significantly greater proportion of younger girls (35.8%) than younger boys (14.3%) reported having had any kind of sexual experience with a male. Likewise, younger boys (45.2%) were more likely than girls (8.2%) to report any kind of sexual experience with a female, and the same was true with older respondents; more older boys (74.1%) than

older girls (26.9%) reported sexual experience with a female. For both genders and age groups, more respondents indicated having had heterosexual than homosexual sexual experiences.

When fantasizing about sex, the majority of younger girls reported fantasizing about males and the majority of younger boys reported fantasizing about females; however, somewhat more younger girls (27.1%) than younger boys (18.6%) reported fantasizing about both genders. For older adolescents, half of the boys and girls reported fantasizing exclusively about the opposite gender, while 41.6% of older girls and 36.4% of older boys reported fantasizing about both genders.

There was no significant gender variation in reported attractions and intentions to be sexually active. For both genders, the proportion indicating heterosexual attractions and intent included close to three fourths of younger respondents, while the proportion indicating homosexual and bisexual attractions and intent was greater among older respondents.

Table 3 contains a summary of gender differences.

Discussion

The results of this study revealed some gender differences in health and risk behaviors among bisexual and homosexual adolescents. They also demonstrated areas in which both groups were similarly at risk for certain emotional and health problems.

Similarities were also evident. Both groups were at risk for low levels of psychological well-being, for suicidal ideation and attempts, and for early age at first heterosexual intercourse. Likewise, although the

subjects of this study self-identified as gay, lesbian, or bisexual, the majority of younger adolescents and half of older adolescents reported fantasizing exclusively about the opposite sex. This may represent a stigma-managing response as adolescents attempt to come to terms with the conflict between their self-identification and their internalized cultural norms regarding nonheterosexual behavior; Trolden (2) identified "heterosexual immersion" as one method adolescents use to try to cure themselves of what is presented as an abnormal mapping of desire.

Many of the gender differences in health and risk behaviors found among this group of adolescents mirror gender differences found in the general adolescent population, but the risks appear to be higher in prevalence. For example, in both this sample and the general population, a greater proportion of males than females have had sexual experience (40); however, when compared with the general population of adolescents, gay, lesbian, and bisexual youth in this sample were three times more likely to report onset of sexual intercourse at or before age 13 years (31,38,39). Likewise, when compared with males, females in the general population and in this sample were at greater risk for a history of sexual abuse, but the bisexual and homosexual adolescents studied, regardless of gender, reported a prevalence of sexual abuse almost twice that of their counterparts in the general population of adolescents (31,39,40). Similarly, gender differences in this sample mirrored those of the general population around body image variables, dieting, and substance use. In nearly all risk factors and behaviors, the proportion of bisexual and homosexual youth involved were greater than those of presumably heterosexual youth in the general population. Of particular note is the reported suicide attempts among the boys in this study sample. The reported prevalence of suicide attempts for boys in this study is similar to that found in a study of bisexual and gay male youth by Remafedi et al. (11). It was three to four times more than that of the general population of males (31,40,42).

One of the strengths of this study is that the gay, lesbian, and bisexual adolescents sampled were drawn from a statewide school-based sampling frame. Therefore, respondents were more likely to be representative of a wider range of homosexual and bisexual adolescents than many of the clinical or convenience samples in other research with nonheterosexual populations, including those who are not publicly self-identified as homosexual or bisexual. Although the data are a decade old, this is one of the very few data sets with a sufficiently large nonclinical

sample that permits analysis by gender and by sexual orientation. A limitation is that this sample did not include out-of-school youth, who are clearly a different and potentially more at-risk population of young people in terms of health status and poor outcomes (35,39). Likewise, this sample did not test for possible variation in response by race or ethnicity owing to limitations in sample size, nor could it compare for within-group variation by self-identified orientation.

Because recognition of sexual orientation is a developmental stage of adolescence, this cross-sectional research represents a population at one point in time. It is probable that many youth in the larger sample who will eventually identify as gay, lesbian, or bisexual were excluded from this subsample because they had not yet self-identified as nonheterosexual; likewise, many who identified as bisexual may later identify as homosexual, and the reverse, perhaps several times over the life course. However, self-identifying with any nonheterosexual orientation carries stigma within the dominant culture of the United States, and may therefore carry the increased health risks related to sexual minority status.

Few studies have compared the health and risk behaviors of gay, lesbian, and bisexual youth by gender; yet, in the areas of risk factors such as abuse, body image, dieting behaviors, sexual behaviors, and substance abuse, this study has documented significant gender variation.

Research, advocacy, and programming aimed at health promotion, prevention, and risk reduction should incorporate understanding about heterogeneity within the overall population of lesbian, gay, and bisexual young people. Through both large-scale, population-based studies such as this one, as well as rich phenomenological studies of gender, ethnic, racial, and class variations in behavior and meaning, researchers should continue to examine risk and protective factors among minority groups, including those for whom a stigmatized sexual orientation appears to heighten the prevalence of risk behaviors beyond that found in the general population of adolescents.

In clinical practice and program development, it may be important to address the needs of gay, lesbian, and bisexual youth through gender-specific interventions in areas such as body image, dieting, sexual practices, abuse issues, and substance use. While the stigma of nonheterosexual orientations may provide a common bond for gay, lesbian, and bisexual youth, their responses to that stigma may be

mediated considerably by culturally defined gender roles and ideals.

The authors were supported in parts by Grants MCJ279185 (Graduate Studies in Adolescent Nursing Program) and MCJ00985 (Interdisciplinary Adolescent Health Training Program) from the Maternal and Child Health Bureau (Title V, Society Security Act) Health Resources and Services Administration, Department of Health and Human Services.

References

- Henderson AF. Homosexuality in the college years: Developmental differences between men and women. *J Am Coll Health* 1984;32:216-9.
- Troiden RR. Homosexual identity development. *J Adolesc Health Care* 1988;9:105-13.
- Gonsiorek JC. Mental health issues of gay and lesbian adolescents. *J Adolesc Health Care* 1988;9:114-22.
- Hammersmith SK. A sociological approach to counseling homosexual clients and their families. *J Homosexuality* 1987.
- Resnick MD. The social construction of disability and handicap in America. In: Blum RW, ed. *Childhood and Adolescent Disability*. Miami, Grunne & Stratton, 1984.
- Bell A, Weinberg M. *Homosexualities: A Study of Diversity Among Men and Women*. New York, Simon & Schuster, 1978.
- Jay K, Young A, eds. *The Gay Report: Lesbians and Gay Men Speak Out About Their Sexual Experiences and Lifestyles*. New York, Simon & Schuster, 1979.
- Martin AD. Learning to hide: The socialization of the gay adolescent. *Adolesc Psychiatry* 1982;10:52-65.
- Coleman E. Developmental stages of the coming out process. *J Homosexuality* 1982;7:31-43.
- Simari CG, Baskin D. Incestuous experiences within homosexual populations: A preliminary study. *Arch Sex Behav* 1988; 11:329-43.
- Remafedi G, Farrow J, Deisher R. Risk factors for attempted suicide in gay and bisexual youth. *Pediatrics* 1991;87:869-75.
- Story M, French SA, Resnick MD, Blum RW. Ethnic/racial and socioeconomic differences in dieting behaviors and body image perceptions in adolescents. *Int J Eating Disord* 1995;18: 173-9.
- French SA, Story M, Resnick MD, Blum RW. Sexual orientation and prevalence of body dissatisfaction and eating disordered behaviors: A population-based study of adolescents. *Int J of Eating Disord* 1996;19:119-126.
- Ponse B. Secrecy in the lesbian world. *Urban Life* 1976;5:313-38.
- Fein SB, Neuhring EM. Intrapsychic effects of stigma: A process of breakdown and reconstruction of social reality. *J Homosexuality* 1981;7:3-13.
- Bidwell RJ, Deisher RW. Adolescent sexuality: Current issues. *Ped Annuals* 1991;20:293-302.
- Lempe GF, Hirozawa AM, Givertz D, et al. Seroprevalence of HIV and risk behaviors among young homosexual and bisexual men. *JAMA* 1994;272:449-54.
- Hughes EC. Dilemmas and contradictions of status. *Am J Sociol* 1945;50:353-9.
- Goffman E. *Stigma: Notes on the Management of Spoiled Identity*. Englewood Cliffs, NJ, Prentice-Hall, 1963.
- Herd G, Boxer A. *Children of Horizons: How Gay and Lesbian Teens Are Leading a New Way Out of the Closet*. Boston, Beacon Press, 1993.
- Remafedi G. Male homosexuality: The adolescent's perspective. *Pediatrics* 1987;79:326-30.
- Remafedi G. Adolescent homosexuality: Psychosocial and medical implications. *Pediatrics* 1987;79:331-7.
- Remafedi G. Fundamental issues in the care of homosexual youth. *Med Clin North Am* 1990;74:1169-79.
- Remafedi G. Predictors of unprotected intercourse among gay and bisexual youth: Knowledge, beliefs, behavior. *Pediatrics* 1994;94:163-8.
- Zenilman J. Sexually transmitted diseases in homosexual adolescents. *J Adolesc Health Care* 1988;9:139-43.
- Ryan C, Bradford J. The National Lesbian Health Care Survey: An overview. In: Shernoff M, Scott WA, eds. *The Sourcebook on Lesbian/Gay Health Care*, 2nd ed. Washington DC, National Lesbian/Gay Health Foundation, 1988:30-40.
- Carlson EM, Beringer LH, Resnick MD, Blum RW. Heterosexual behaviors and pregnancy among non-heterosexual adolescent girls. *J Adolesc Health* 1995;16:161 (abstr).
- Sorensen RC. *Adolescent Sexuality in Contemporary America*. New York, World Publishing, 1973.
- Bell AP, Weinberg MS, Hammersmith SK. *Sexual Preference: Its Development in Men and Women*. Bloomington, In, Indiana University Press, 1981.
- Remafedi G, Resnick M, Blum R, Harris L. Demography of sexual orientation in adolescents. *Pediatrics* 1992;89:714-21.
- Blum RW, Harris LJ, Resnick MD, Rosenwinkel K. Technical Report on the Adolescent Health Survey. University of Minnesota, Adolescent Health Program, Minneapolis, MN, 1989.
- Chandy JM, Harris L, Blum RW, Resnick MD. Children of alcohol misusers and school performance outcomes. *Child Youth Serv Rev* 1993;15:507-19.
- Chandy JM, Resnick MD, Harris L. Disordered eating among adolescents whose parents misuse alcohol: protective and risk factors. *Int J Addict* 1994;29:505-16.
- Wan TT, Liveratos B. Interpreting a general index of subjective well-being. *Health Soc* 1978;56:531-56.
- Resnick MD, Harris LJ, Blum RW. Impact of caring and connectedness on adolescent health and well-being. *J Pediatr Child Health* 1993;29:1-9.
- Ewing JE. Detecting alcoholism: The CAGE questionnaire. *JAMA* 1984;252:1905-7.
- Farrell AD. Risk factors for drug use in urban adolescents: A three-wave longitudinal study. *J Drug Issues* 1993;23:443-62.
- Ellis NT, Torabi MR. Prevalence of adolescent health risk behaviors: School health implications. *J Sch Nurs* 1994; 10:25-33.
- Resnick MD, Blum RW. The association of consensual sexual intercourse during childhood with adolescent health risk and behaviors. *Pediatrics* 1994;94:163-8.
- Nagy S, Adcock AG, Nagy MC. A comparison of risky health behaviors of sexually active, sexually abused, and abstaining adolescents. *Pediatrics* 1994;93:570-5.
- French SA, Story M, Downes B, et al. Frequent dieting among adolescents: psychosocial and health behaviors correlates. *Am J Public Health* 1995;85:695-701.
- Remafedi G, French S, Story M, et al. The relationship between suicide risk and sexual orientation: Results of a population-based study. *Am J Public Health* (in press).