

Gay, Lesbian, and Bisexual Youth Risks for Emotional, Physical, and Social Problems: Results From a Community-Based Survey

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ABSTRACT

Objective: Health problems of gay, lesbian, and bisexual (GLB) youth are reported as differing from those of heterosexual youth. Increased depression, suicide, substance use, homelessness, and school dropout have been reported. Most studies of GLB youth use clinical or convenience samples. The authors conducted a community school-based health survey that included an opportunity to self-identify as GLB. **Method:** An anonymous self-report health care questionnaire was used during a community-based survey in 2 high schools in an upper middle class district. **Results:** Significantly increased health risks for self-identified GLB youth were found in mental health, sexual risk-taking, and general health risks compared with self-identified heterosexuals, but not in health domains associated with substance abuse, homelessness, or truancy. **Conclusions:** Self-identified GLB youth in community settings are at greater risk for mental health, sexual risk-taking, and poorer general health maintenance than their heterosexual peers. *J. Am. Acad. Child Adolesc. Psychiatry*, 1999, 38(3):297–304. **Key Words:** homosexual, bisexual, adolescents, community sample.

Health problems of gay, lesbian, and bisexual (GLB) youth have been described as differing from those of heterosexual youth (e.g., Cabaj and Stein, 1996; Herbert et al., 1996; Hershberger and D'Augelli, 1995). Increased problems with depression, suicide, substance use, homelessness, and school dropout rates are reported. Most studies of GLB youth use clinical or convenience samples (i.e., in gay-identified youth centers, shelters, or other treatment settings). In this article, we report data on health risks of self-identified GLB youth derived from a self-report health care questionnaire used in a community-based survey in 2 high schools in an upper middle class district.

Background

There continues to be controversy about how commonly predominant homosexuality occurs. Estimates

range from 2% to 4% to greater than 10% in males and 1% to 3% in females (Seidman and Rieder, 1994). Bisexuality is less studied, but an estimate of 3% is often used (Diamond, 1993). Reports of problems among GLB youth suggest that many are at risk for emotional, social, and physical health problems. Among the most important of these is an apparently two- to threefold increased rate of suicide attempts among GLB youth (Gibson, 1989). However, most existing studies recruited their samples of gay adolescents from gay support groups, drop-in centers, bars, and acquaintance referrals without using nongay shelter or support group controls (Remafedi et al., 1991). Because results from these studies used these convenience samples, debate continues about the actual risk for suicide in this group (Shaffer, 1995). Other studies, using similar convenience samples, have found increases in high school dropout rates, substance abuse, physical illness, and family discord among gay youth and adolescents (Hershberger and D'Augelli, 1995; Remafedi, 1987, 1988; Rotheram-Borus et al., 1995). Finally, one recently published community-based study found overall increased health risks in GLB youth, as well as specific increased risks for suicide, victimization, sexual risk-taking behaviors, and multiple substance use (Garofalo et al., 1998).

A variety of explanations have been proposed to explain the apparent increased risk for emotional and

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health problems among homosexual youth. These include psychoanalytic, biological, and psychosocial theories. Historically, Freud proposed that arrested psychosocial development characterized homosexual persons and could account for emotional difficulties encountered in this group. Support for this theory remains case-based (Freud, 1910). At the other end of the spectrum, biological explanations for the origins of homosexuality have sought to explain both homosexuality and any attendant psychological difficulties. A variety of studies now suggest genetic and neuroanatomical differences between gay men and heterosexuals. All of these studies are small, they need replication, and none directly proposes a link between these differences and psychological difficulties (LeVay and Hamer, 1994; Pillard, 1990). Numerous reports have documented no significant differences in the overall psychological health of gays and lesbians (Edwards, 1996; Hart et al., 1978; Hooker, 1957; Ross, 1988).

Others explain the emotional difficulties of homosexual persons as resulting from external sources (Dabbs et al., 1995; Hershberger and D'Augelli, 1995). A number of stresses have been identified; these include (1) managing social intolerance; (2) trauma from psychological and physical injury experienced as a result of this intolerance; and (3) self-identification by homosexual persons with these negative opinions of homosexuality. Each of these has been proposed as an explanation for the development of emotional and behavioral problems among GLB youth. In a general way, there is a body of evidence that these types of factors negatively affect other stigmatized social groups similarly (Spencer and Markstrom-Adams, 1990). More specifically, results of studies of homophobia, as well as clinical data, support such a formulation in relation to GLB youth (Herek, 1994; Pleak and Anderson, 1998).

Some propose that health, mental health, and social problems associated with GLB youth are related to internalized homophobia—the self-hatred associated with nonacceptance of one's sexual orientation among homosexual men and women (Carrion and Lock, 1997; Isay, 1991; O'Hanlan et al., 1997; Shidlo, 1994). A recent review of the relationship between increased homophobia and increased health risks of homosexual men and women has been published (O'Hanlan et al., 1997). In addition, Rotheram-Borus et al. (1995), in a study of homosexual and bisexual youth, found an association between lower sexual risk-taking and higher self-esteem, suggesting that perception of self-worth (a possible

corollary for level of internalized homophobia) may contribute to behaviors of gay youth.

These background data support the need to increase our scientific understanding of GLB youth. Overall, we wished to improve upon existing studies by assessing health risks using an anonymous instrument in a sample of high school students that included homosexual and nonhomosexual youth. Specifically, we wished to explore current vulnerabilities for mental and physical health problems of self-identified GLB youth and those with confusion about their sexual orientation, compared with self-identified heterosexual youth.

Our reading of the literature suggests that the mental health problems associated with social intolerance and internalized homophobia could take many forms, ranging from internalizing disorders of depression and anxiety to externalizing behavioral problems with conduct and substance use. Thus, the management of social intolerance, trauma, and internalized homophobia could take many forms. Specific problems would likely arise in the overall context of the social milieu, the family milieu, and the personality of the adolescent. In addition, adjusting to a homosexual orientation in an adolescent individual with an inherited predisposition to depression, anxiety, or other mental health problems might be sufficient stress to initiate the onset of that illness. We predict, then, that GLB youth in our community sample would likely exhibit problems that would reflect a spectrum of disorders. Because of the highly educated and affluent nature of the particular sample, however, we would also predict that emotional problems would more commonly be found in the internalizing group. Our hypotheses included the following:

1. Those adolescents who self-identify as GLB will have increased health problems, particularly mental health problems, when compared with those who do not.
2. Youth who report being unsure of their sexual orientation will also be at increased risk for health problems, particularly mental health problems, compared with those who self-identify as heterosexual. However, because they are not actively identifying with a minority and devalued social group, these problems will be less overall.
3. Self-identified GLB youth will be less comfortable with their sexual orientation than those who self-identify as heterosexual or who are unsure of their sexual orientation because of internalized homophobia.

METHOD

From a community sample of 1,769 high school students, aged 12 through 18 years, emotional, medical, and social behaviors were assessed using a self-report survey.

Instrument

The Juvenile Wellness and Health Survey-76 (JWHS-76) is a 104-item, self-report instrument, normed for the adolescent population (Steiner et al., in press). It is a screening instrument written at a fifth-grade reading level. Of the 104 items, 76 are leading questions, meaning they are answered by everyone. The remainder are follow-up questions. The scaling for health behavior questions is always from 1 to 5, with 5 indicating poorer outcomes. Low scores are benign; the high scores are problematic on all dimensions. Health domains were developed a priori. As a screen the instrument has face validity. There are no test-retest reliability data to date.

The instrument provides 5 health domains: General Risk Taking, e.g., drug use, running away, alcohol use, reckless driving (Cronbach $\alpha = .84$); Mental Health Problems, e.g., depression, suicide, stress, anxiety, family problems, self-harm, temper problems, life and social dissatisfaction, loneliness (Cronbach $\alpha = .76$); Sexual Victimization and Risk, e.g., rape, molestation (victim or perpetrator), pregnancy, acquired immunodeficiency syndrome, physical assault (Cronbach $\alpha = .80$); Eating and Dietary Problems, e.g., body image, binge eating, excessive dieting (Cronbach $\alpha = .68$); and General Health Problems, e.g., growth, chronic disease, headaches, allergies (Cronbach $\alpha = .58$). Also contained in the questionnaire are items addressing age, gender, ethnicity, socioeconomic status, sports participation, and exercise. Finally, the instrument contains a self-reported dishonesty rating (Deception of Others) and coding system for Self-Deception by tallying incomplete responses.

To determine self-identification with a sexual orientation group and to assess the level of reported comfort with that identification, the survey used 2 specific questions:

1. Are you comfortable with your sexual orientation? (Yes/No/Not sure)
2. Do you ever wonder whether you might be homosexual (gay, lesbian) or bisexual? (Frequently/Sometimes/No/I know that I am homosexual or bisexual)

Procedures

To obtain the highest participation possible, we chose an anonymous survey that used assent from parents. The study was approved by our institution's Human Subjects Panel. Parents and students were informed by mail that a survey of health behaviors would be distributed during identified class periods on a specified day. The survey instrument was available to be reviewed in the school administrative offices. If a parent did not object, the student was offered the survey instrument. The instrument was completed by all students in attendance in a math or silent sustained reading class during the academic year 1993 through 1994 in high schools representing an upper middle class sample of a northern California school district. The response rate was 99% of enrolled students. A total of 1,769 questionnaires were collected. Ten were removed because of evidence of deception (i.e., claiming to drink 100 drinks of alcohol a day) and 4 because they endorsed the Deception of Others items maximally.

Data Analysis

Descriptive Analysis. A descriptive analysis was initially conducted on categorical variables using frequencies and on continuous variables using means and standard deviations.

Measures of Association. Tests for association (χ^2) were conducted on selected data elements (sexual orientation and comfort with sexual orientation).

Measures of Dispersion. Our main multivariate statistical procedure was logistic regression with 2-level dependent variables (sexual orientation and comfort with sexual orientation) and 5 independent variables summarizing the questions into the 5 health domains described above. Four covariates (socioeconomic status of mother and father, Self-Deception, Deception of Others) were also included in the logistic regression because of their possible role in affecting overall results. These analyses sought to answer the question: Which of all these domains contributed most significantly to the differences between groups, taking them all into account simultaneously?

Follow-up Analyses. As follow-up analyses, we examined the group differences on all variables by Wilcoxon and Kruskal-Wallis tests (nonparametric tests of differences between 2 and 3 groups, respectively) because we were interested in exploring all significant differences for their possible clinical implications. These analyses sought to refine possible clinical profiles on GLB youth by answering the question: How different are the groups in all domains taken separately?

Analysis of Variance. After testing the equality of variance between the subgroups of sexual orientation and comfort level with sexual orientation on all 5 health domains of the JWHS-76 and finding them not to differ, we performed a 3 by 3 analysis of variance testing our hypothesis about interactive effects.

RESULTS

Demographics

Of the total sample, 47.9% were females. The mean age was 15.9 years (SD = 1.16). The sample was evenly distributed among the 4 grades represented: freshmen, sophomores, juniors, and seniors. Fifty-nine percent were white, 17.9% were Asian-American, 3.5% were Hispanic, 2.1% were African-American, and the remaining 17.7% reported their ethnic background as "other." The socioeconomic status was predominantly upper middle class.

In this sample, 106 (6% of total, 52% male, 48% female) self-identified as GLB; an additional 224 (13% of total, 38% male, 62% female) reported they were unsure of their sexual orientation. No differences were found related to age in terms of self-identification as a member of a sexual minority group. No differences were found between GLB youth and others in terms of race or socioeconomic status.

Comfort With Sexual Orientation

Both sexual minority youth and youth who reported being unsure of their sexual orientation were more likely than their heterosexual peers to be significantly more uncomfortable with their sexual orientation ($\chi^2_4 = 45.23$, $p = .0001$).

TABLE 1
Mental and Physical Health Predictors of Gay, Lesbian, and Bisexual Youth Compared With Heterosexual Students (by Logistic Regression)

Health Domains	Standardized Estimate	Wald χ^2	<i>p</i> Value	Odds Ratio	Confidence Interval
General Risk Taking	0.00214	0.0007	.979	1.005	(0.68, 1.48)
Mental Health Problems	-0.141	4.39	.0362	0.719	(0.53, 0.92)
Sexual Victimization and Risk	-0.191	7.089	.0078	0.537	(0.34, 0.85)
Eating and Dietary Problems	-0.0284	0.0191	.662	0.926	(0.66, 1.3)
General Health Problems	-0.118	3.75	.0527	0.690	(0.47, 1.0)
Deception of Others	-0.173	14.1	.0002	0.305	(0.16, 0.57)

Logistic Regression on the Five Juvenile Wellness Health Survey Factors

When analyzed by logistic regression, self-identified GLB youth were found to be at significantly more overall risk ($\chi^2_9 = 43.725, p = .0001$) than self-identified heterosexual peers. The specific health domain scores are given in Table 1. Significant differences were found on Mental Health Problems, Sexual Victimization and Risk, General Health Problems, and the covariate Deception of Others.

Youth who reported being unsure of their sexual orientation were found to be at significantly more overall risk ($\chi^2_9 = 47.709, p = .0001$) than self-identified heterosexual peers. The health domain scores are given in Table 2. Significant differences were found on Mental Health Problems, Sexual Victimization and Risk, and the covariate Self-Deception. Youth who reported being unsure of their sexual orientation did not differ significantly from those who self-identified as GLB ($\chi^2_9 = 14.163, p = .117$).

Examining group differences by Kruskal-Wallis 3-group comparison on all variables, we found significant differences in Mental Health Problems, Eating and Dietary Problems, and General Health Problems (Table 3).

Data derived from our examination of interactive effects of comfort with sexual orientation, self-identifi-

cation of sexual orientation, and health risks are presented in Table 4. We found a significant interaction with General Health Problems ($F = 2.44, df = 4, p = .045$); the interaction with Mental Health Problems was marginal. In both domains, discomfort with sexual orientation and sexual orientation interacted to produce worse health risk scores. GLB youth who were uncomfortable had the highest risk scores, while heterosexual youth who were comfortable had the lowest scores for Mental Health Problems. With General Health Problems, the pattern was similar, but discomfort with sexual orientation had more of an effect than sexual orientation itself.

DISCUSSION

The 6% rate of self-identification as homosexual and bisexual and the 13% rate of uncertainty about sexual orientation are consistent with published data. Increased problems with Mental Health Problems, Sexual Victimization and Risk, and General Health Problems for self-identified GLB youth compared with self-identified heterosexual youth is also consistent with data derived from other reports. However, the finding of no increased rates for other high-risk behaviors (e.g., substance use, running away, recklessness) differs from findings in

TABLE 2
Mental and Physical Health Predictors of Youth Who Are Unsure of Their Sexual Orientation Compared With Heterosexual Students (by Logistic Regression)

Health Domains	Standardized Estimate	Wald χ^2	<i>p</i> Value	Odds Ratio	Confidence Interval
General Risk Taking	0.0696	1.42	.233	1.90	(0.89, 1.58)
Mental Health Problems	-0.199	15.3	.0001	0.636	(0.57, 0.79)
Sexual Victimization and Risk	-0.0989	3.16	.0757	0.725	(0.51, 1.0)
Eating and Dietary Problems	0.0419	0.716	.397	1.12	(0.86, 1.46)
General Health Problems	-0.0739	2.41	.121	0.791	(0.73, 1.31)
Self-Deception	0.0897	3.75	.0527	1.39	(0.99, 1.94)

TABLE 3
Comparisons of Mean Scores on Health Domains Between Self-Identified Sexual Orientation Groups
(Kruskal-Wallis Group Comparisons)

Health Domains vs. Group Membership	Heterosexual	Unsure	Gay, Lesbian, or Bisexual	χ^2	p Value
General Risk Taking	1.93	2.00	2.25	1.19	.55
Mental Health Problems	1.79	2.17	2.28	51.64	.0001
Sexual Victimization and Risk	1.48	2.17	2.28	1.38	.50
Eating and Dietary Problems	1.73	1.64	2.01	32.00	.0001
General Health Problems	1.61	1.82	1.92	18.63	.0001
Deception of Others	1.07	1.10	1.2	17.52	.0002
Self-Deception	0.60	0.54	0.56	3.69	.16

convenience and clinical samples, as well as the community study of GLB youth conducted by Garofalo et al. (1998). Finally, evidence of an interaction between discomfort with sexual orientation and self-identified GLB youth was found to increase risk scores in the General Health Problems domain.

The principal strengths of our study are the use of a young adolescent high school community sample and a high participation rate. The data derived from this study support our 3 main hypotheses. Self-identified GLB youth are at increased risk for mental health and physical health problems. In addition, youth who are unsure of their sexual orientation are at increased risk compared with self-identified heterosexual youth, but their risks are less than those of GLB youth. Finally, GLB youth are less comfortable with their sexual orientation than heterosexual youth, and this contributes to an increased general health risk in GLB youth.

TABLE 4
Interaction Effects of Sexual Orientation and Comfort With Sexual Orientation

Comfort	Health Domain: Mental Health Problems ^a		
	Heterosexual	Unsure	GLB
Comfortable	1.74 (0.76)	2.08 (0.84)	2.03 (0.85)
Somewhat	2.09 (0.93)	2.38 (0.98)	1.95 (0.73)
Uncomfortable	2.06 (0.81)	2.64 (0.79)	2.88 (0.77)
Comfort	Health Domain: General Health Problems ^b		
	Heterosexual	Unsure	GLB
Comfortable	1.64 (0.61)	1.81 (0.56)	1.61 (0.57)
Somewhat	1.83 (0.63)	1.74 (0.53)	1.61 (0.66)
Uncomfortable	1.83 (0.73)	2.33 (0.87)	2.01 (0.71)

Note: Values represent mean (SD). GLB = gay, lesbian, and bisexual.

^a Interaction: $F = 2.31$, $p = .06$.

^b Interaction: $F = 2.44$, $p = .045$.

Limitations

Conclusions drawn from the data reported should be considered in the context of a variety of limitations. First, the study reports on cross-sectional data derived from a self-report measure. In addition, the instrument used is not highly standardized or oriented toward conventional symptom domains or diagnostic equivalents. Another limitation of the study is the amalgamation of GLB youth into one subgroup. Bisexual self-identification is more common in adolescence and may currently have social value in certain adolescent subgroups. Lesbian identification may also be more tolerated than male homosexual identification in high school, since studies suggest that males tend to be more homophobic than females (Herek, 1994).

Our study site carries with it certain limitations as well. It is an upper middle class area with comparatively lower rates of some racial and ethnic groups, particularly African-American and Hispanic adolescents, compared with the region as a whole. The community is also unusually well-educated, is near a major university, and is close to 2 major metropolitan areas with significant GLB communities. One might expect that these variables would considerably lessen the health risks of GLB youth; however, our study still found significant differences.

The questionnaire used in our study was designed to provide a general health profile and did not target the issue of sexuality in particular. While it would be desirable to conduct such a study, it is difficult to do so at this time because of substantial parental resistance to exploration of sexuality, school administrative anxieties about a specific focus on sexual issues, and the consequent difficulties of using a passive consent process essential for ensuring the inclusion of the entire sample.

Finally, the overall sample of 1,769, though not small, is not an overly large sample of adolescents from which to generalize. In addition, the 106 self-identified GLB students are a small sample from which to generalize as well. The fact that they were part of a community-based sampling procedure, however, helps to strengthen the significance of findings extrapolated from their responses. Even with these limitations, this study is a step toward a better understanding of GLB youth in community settings.

Implications of Study

In this study we found rates of self-identification as GLB at expected levels; the findings support the available information about rates of occurrence of homosexuality and bisexuality. Although we examined the data for evidence of increasing rates of self-identification as GLB with increasing age, since existing studies suggest that self-identification of gay males occurs between the ages of 14 to 16 and of lesbians between the ages of 16 to 18 (Remafedi, 1990), no evidence of this age-related trend was found in our sample. It is possible that the numbers of adolescents who self-identified as GLB in each year was not large enough for us to detect this pattern.

Our results are similar to those of studies of convenience samples in finding that self-identified GLB youth experienced more problems in the areas of mental health, sexual risk-taking, and general health. As interesting, however, was that risks in other domains were not significantly different. Other reports based mostly on data derived from convenience and clinical samples report significant problems with runaway behavior, truancy, drug use, and eating disorders among boys (Carlat et al., 1997). It is possible that this discrepancy between our data and those of convenience samples results from protective factors associated with the socioeconomic status of our sample population. However, it is also possible that convenience samples do not provide an accurate picture of health risks of GLB youth in the community.

The etiology of problems among sexual minority youth is unclear. What seems to be a risk factor are homophobic attitudes—internalized or experienced (Shidlo, 1994). Data from this study support the notion that internalized homophobia insofar as it is measured by comfort with sexual orientation seems to be correlated with more psychosocial difficulties, and these difficulties overlap, not surprisingly, with some of those health domains (Mental Health Problems and General Health Problems) that were problems for GLB youth.

Although a direct analysis of the interrelationship between sexual orientation, comfort with sexual orientation, and the health domains supported only significantly increased risk scores in General Health Problems and marginal ones in Mental Health Problems, elevated interactive scores were found in all domains. It is likely our sample was not large enough to capture all the risks associated with the interaction of discomfort with sexual orientation and health domains. Nonetheless, it appears that the self-identified GLB group was both the most uncomfortable with their sexual orientation and at greater risk for health problems in the areas discussed. Alternatively, the problems of GLB youth may be secondary to existing mental health or sexual identity problems (Goff, 1990). In this vein, increased reports of histories of sexual assault (both victims and perpetrators) were found in our sample of GLB youth. Although other studies have reported similar findings, explanations for this are inadequate. Nonetheless, histories of molestation are associated with increased mental health problems and may contribute to the increased risks of GLB youth.

It is also possible that GLB status itself makes youth more vulnerable to psychological illness from intrinsic rather than reactive causes. However, evidence to date does not support this formulation (Edwards, 1996; Hart et al., 1978; Hooker, 1957; Ross, 1988). It is impossible to know the definitive answer on this issue without further study.

The finding that GLB youth had elevated scores on the covariate Deception of Others is worthy of comment. It is perhaps not surprising that teenagers who recognize that they are likely to be subject to discrimination and harassment might consider it a survival skill to learn to deceive others (Martin, 1982). It is also interesting that those who were unsure of their sexual orientation differed from GLB youth by being more self-deceptive. It may be that for some GLB youth it is a reasonable strategy to be unsure of one's sexual orientation if it means that you will be accepted socially and avoid harassment.

Implications for Research

It is clear that we do not fully understand the mechanisms for the development of vulnerability in GLB youth. Our limited appraisal of the relationship between discomfort with sexual orientation, homophobia, and health risks suggests that an important area of future research might focus more directly on the issue of inter-

nalized homophobia and health. Alternatively, the hypothesis that external experiences of victimization and chronic psychosocial assaults account for the difficulties of sexual minority youth also warrants further investigation. Another approach to understanding the source of problems in GLB youth is suggested from our findings of elevated scores on the Deception of Others scale among GLB youth. It suggests a need for further research into the psychological coping strategies that these teenagers use. In other studies, coping styles have been found to predict health care behaviors (Ebata and Moos, 1991; Moos and Schaefer, 1993).

Additional information on the effects of gender on any of these issues would be helpful. Our sample size did not permit statistical analysis at this level. Future studies would be helpful in this area as our understanding of lesbian youth, as with lesbian adults, is even less than that of homosexual males.

Of course, most importantly, although cross-sectional data are helpful as a starting point, we need to conduct larger longitudinal studies in community samples to refine our understanding of GLB youth. Among the difficulties faced by researchers is the presence of homophobic attitudes and anxieties about adolescent sexuality among school administrators, teachers, and parents. These attitudes impede access to nonclinical populations and hamper the collection of normative data. In addition, data from screening instruments are inadequate to appreciate the complex nature of the interaction between sexual orientation and behavior (Lock and Kleis, in press). To do this, in-depth clinical interviews will be required.

Clinical Implications

Taken together, these results continue to provide evidence of the health risks of GLB youth, even in an educated, relatively affluent, and generally tolerant larger community. This suggests that efforts in the larger community to support GLB adults may not have sufficient impact on adolescents at risk. On the other hand, a number of studies support the idea that homophobia may be more common in adolescence because of the difficulties some teenagers experience in their efforts to consolidate their sexual orientation (Remafedi, 1990; Rotheram-Borus et al., 1995; Hershberger and D'Augelli, 1995). Clinicians who work with GLB youth in referral centers are already aware of many of the problems identified in this study. Clinicians who work in community settings,

consult with schools, or work individually with GLB youth need to be vigilant in their practices about the health risks of their patients and develop strategies to assist them (Lock, 1998a,b).

This study supports the need for interventions to assist GLB youth that address the problem of social intolerance of homosexuality in the adolescent community itself, e.g., in high schools. A small group of studies now support the usefulness of interventions at this level (Uribe, 1994; Uribe and Harbeck, 1992). Still, systematic studies of how to assist GLB youth are extremely limited. Needs of GLB youth remain largely unexamined, while strategies to change attitudes and behaviors toward GLB youth are also limited. Clinicians who consult to schools can assist GLB youth (and society as a whole) by considering the following: (1) supporting gay/straight alliance groups in high schools; (2) initiating a referral system to support groups for GLB youth; and (3) developing ways of working with concerned families of both GLB and non-GLB youth.

Conclusion

This study of a nonclinical sample supports the findings of increased vulnerability of GLB youth for mental health and sexual risk-taking behaviors found in clinically referred samples. It also identifies significant problems in mental health for youth who are unsure of their sexual orientation. The study suggests that other variables, such as socioeconomic status and educational level of the community, may reduce risks for certain problems, e.g., running away, substance abuse, and physical recklessness in GLB youth. Evidence from the study supports the hypothesis that the origin of problems in GLB youth may be due in part to internalized homophobia. The study also provides data that support the need for interventions for GLB youth in high schools to help prevent them from developing serious mental and physical health problems.

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When They Grow Up: The Growth of Extremely Low Birth Weight (≤ 1000 gm) Infants at Adolescence. Toshiko Hirata, MD, Elena Bosque, RN, PhD

The growth of 32 extremely low birth weight infants (1000 grams or less) was determined at adolescence. Their height, weight, and head circumference were measured twice in the first year of life and then at ages 2, 3, 5, 8, 10 years, and during adolescence (12 to 18 years). The mean height, weight, and head circumference of the adolescents were at the 50th percentile. Female heights were \geq their mothers; male heights were in the same or greater percentile than those of their fathers. Extremely low birth weight infants experience "catch-up" growth up to and into adolescence and attain predicted biparental genetic height. **J Pediatr** 1998;132:1033-1035