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Lesbian, Gay, and Bisexual College Student Experiences: An Exploratory Study

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The current status of higher education research on lesbian, gay, and bisexual (LGB) students offers an incomplete picture of their overall college experiences (ERIC Clearinghouse on Higher Education, 2001). Much of the literature on LGB college students discusses overt and covert forms of discrimination (e.g., Aberson, Swan, & Emerson, 1999; D'Augelli, 1992; White & Kurpius, 2002). Another portion of the LGB literature focuses on psychological issues and counseling treatments (DeBord, Wood, Sher, & Good, 1998; Fassinger, 1991; Lipton, 1996; Sweet, 1996) and alcohol use (DeBord et al.). A final domain of research focuses on heterosexual students' attitudes toward LGB students (e.g., Bowen & Bourgeois, 2001; Engstrom & Sedlacek, 1997; Liang & Alimo, 2005; Simoni, 1996).

Although valuable, the extant literature is incomplete because LGB students are also *students* who attend class, interact with faculty and peers, participate in cocurricular activities, live on campus, and are academically and socially influenced by their college environments. However, very little research exists on how LGB students perceive their broader college experience, including how these

experiences may be similar to or differ from those of heterosexual students. Sanlo (2004), for example, in a thorough review of the research, found no work on LGB college students' retention, academic success, or resilience. Accordingly, in this exploratory quantitative study, we examined differences in involvement in various college environments and self-reported outcomes among lesbian, gay, bisexual, and heterosexual college students at 34 postsecondary institutions. This research contributes to the literature by offering a portrait of the national college experience for LGB students, which may help campus educators and practitioners facilitate an environment conducive for LGB students' learning and development.

Campus Climate for LGB Students

LGB students often remain closeted because of the hostile climate they experience on college campuses (Rankin, 2003). Research conducted in the late 1980s documented LGB students' experiences in unwelcoming, threatening, and unsafe campus environments. In a study of lesbian, gay, and bisexual students at Yale University, 26% reported threats of

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physical violence, 50% reported two or more incidents of verbal assault, and 48% felt that future harassment was fairly or very likely to occur (D'Augelli, 1989). D'Augelli and Rose (1990) found that 29% of heterosexual first-year students believed that their institution would be better if only heterosexuals attended and reported that they often heard disparaging remarks about lesbians and gays.

More recent research indicated that harassment and negative attitudes toward LGB students was still prevalent on college campuses. Rankin (2003) reported that 74% of LGB undergraduate and graduate students rated their campus as homophobic, and 60% of LGB students reported concealing their sexual orientation or gender identity to avoid discrimination. In addition, 40% of the study participants indicated that they would likely hide their sexual orientation to avoid discrimination, and 36% experienced harassment within the year prior to taking the survey (Rankin). An investigation of student attitudes toward gays, lesbians, and bisexuals found that 25% of randomly selected students indicated anti-LGB attitudes were prevalent on their campus (Malaney, Williams, & Geller, 1997). Because there are widely varying perspectives and attitudes regarding the climate for LGB issues, multiple approaches are needed to address and improve the campus environment for LGB students (Brown, Clarke, Gortmaker, & Robinson-Keilig, 2004).

The Campus Environment and LGB Identity

The campus climate for LGB students affects the process of LGB identity development (Evans & Broido, 1999). However, research about LGB college students does not always include discussions of how sexual identity development is related to LGB students' college experiences (DeBord et al., 1998; Sanlo, 2004). The importance of connecting the

environment to identity is particularly relevant with the LGB student population, given that the college environment is often the context for the coming out process (Evans & Broido, 1999). Student development theory suggests that sexual identity formation is a developmental task of the college years (D'Augelli, 1991; Evans, Forney, & Guido-DiBrito, 1998).

The process of developing an LGB identity is complex; it is psychological (e.g., Cass, 1979), social (e.g., D'Augelli, 1994), and age-related (D'Augelli, 1991). It is likely that LGB students in various phases of sexual identity development have varying campus associations, because coming out depends upon the environmental context (Evans & Broido, 1999). Moreover, the coming out process continues for many years, and the extent to which a student identifies as lesbian, gay, or bisexual is likely to influence whether an LGB student identifies as such on a survey, and subsequently, what findings emerge from research (D'Augelli, 1991; Harry, 1986; Rhoads, 1995). Although the complex relationship between stages of sexual identity development and students' college experiences is beyond the scope of this exploratory study, we attempt to shed further light on the broader college environments and outcomes for students who self-identify as LGB.

Residence Hall and Classroom Environments for LGB Students

An element of the college environment influencing the experience of LGB college students is the residence halls. In their study about the coming out process, Evans and Broido (1999) found that the residence hall environment was an influential factor. Lesbian, gay, and bisexual students indicated that being around supportive people, perceiving the overall environment as supportive, and having LGB role models in the residence hall en-

couraged students to come out. On the other hand, a lack of community among residents, a perceived lack of support, and open hostility all served to discourage students from coming out to others in the residence hall. Students also indicated that coming out to their roommates was awkward and challenging, regardless of whether their roommate was heterosexual or LGB (Evans & Broido, 1999).

In a study on the experiences of lesbian and bisexual women in the residence halls, Evans and Broido (2002) identified several factors that positively influenced the residence hall environment. These included the presence of out LGB resident assistants; halls that were academically oriented; residents, RAs and professional staff members who confronted homophobic remarks; programming about LGB issues and visible signs and symbols of support; and supportive roommates. Negative influences on the resident hall climate included lack of community in the hall, harassment or homophobic remarks, and defacement of flyers for LGB events (Evans & Broido, 2002).

The classroom environment is another aspect of the campus environment to consider in understanding the experiences of LGB students. DeSurra and Church's (1994) research described a continuum of classroom environments experienced by LGB students. The most hostile environments were ones in which LGB students experienced homophobic behaviors, attitudes, and messages from instructors and students. Less hostile environments were those in which students experienced homophobia and heterosexism in subtle and indirect ways. This type of environment was thought to be the most common. On the other end of the continuum, supportive classroom environments were those in which instructors or students challenged homophobic comments. Finally, the most supportive environments for LGB students were those in which LGB issues and perspec-

tives were an integral part of the curriculum (DeSurra & Church).

In summary, research about the ways in which lesbian, gay, and bisexual students experience the college environment has focused on homophobia and heterosexism, particularly in residence halls and classrooms. What is unknown relates to LGB students' broader college experiences, particularly their overall cocurricular involvements and academic and social outcomes. This omission is partly due to the fact that, previously, no national survey instrument on the college student experience has queried respondents on their sexual orientation. Thus, in this exploratory study we sought to redress this omission by using a new national survey instrument that includes a sexual orientation question to examine (a) whether LGB students differ from their heterosexual peers in their overall college experiences and (b) whether any differences exist between men and women among the sexual identity groups.

METHODS

Sample

This study is a secondary analysis of data collected for the 2004 National Study of Living-Learning Programs (NSLLP; Inkelas et al., 2004). Data were collected from 34 universities in 24 states and the District of Columbia. The total sample selected included 71,728 students, of which 23,910 responded to the survey, resulting in a response rate of approximately 33.3%. An item on the survey asked students to identify their sexual orientation as lesbian or gay; bisexual; or heterosexual. LGB students comprised 4.0% of this sample (28.6% of the sample did not report information on their sexual orientation).

For this study, all LGB students were filtered from the overall response pool. After cases with missing data were eliminated, the

final sample included 52 lesbians, 182 gay men, 148 bisexual men, 302 bisexual women, and 16,776 heterosexual students. To balance the sample sizes among the different subgroups for statistical analysis, the full subsample of 52 lesbian students and random subsamples of 55 gay, 110 bisexual (55 men and 55 women), and 110 heterosexual (55 men and 55 women) students were chosen for this study.

All students in this study resided on campus, either in a living-learning program (61.0%) or in a traditional residence hall setting (39.0%). The large proportion of students in living-learning programs is due to the fact that the source of the data is from a national study of living-learning programs. The majority of the sample were first-year students (51.4%); 30.8% were sophomores; 10.5% were juniors; and 7.3% were seniors.

Data Collection and Instrumentation

The data were collected between late January and mid-March 2004 using an Internet survey. Respondents were contacted via email solicitations, and some institutions elected to use incentives to increase response rates. The survey instrument for the study was created through several years of development and pilot testing. A number of composite scales were developed to represent major constructs in the questionnaire. All composite scales were created using exploratory factor analysis with orthogonal rotation and Cronbach alpha internal consistency tests. Cronbach alpha scores for the composite scales ranged from .624 to .898. Content validity of the instrument was assessed through pilot testing for 2 years prior to the full data collection, with subsequent review by living-learning program directors, students, and survey methodology researchers. Convergent and discriminant validity tests revealed that significant differences and correlations among the scores on the scales occurred in ways consistent with

prior theory and research. For a detailed description of the reliability and validity of the composite scales, see Inkelas, Vogt, Longerbeam, Owen, and Johnson, 2006. See Appendix A for a list of factor loadings and Cronbach alpha scores for all composite scales used in this study.

Conceptual Framework and Measures in the Study. The organizing framework for the NSLLP and the current study is Astin's (1991) input-environment-outcome model of college impact. This approach is useful because it is "specifically designed to produce information on how outcomes are affected by different educational policies and practices [environments]" (Astin, p. 37). For this study, we examined several college environments and student outcomes and compared experiences among lesbian, gay, bisexual, and heterosexual students.

Because this was an exploratory study, we investigated several aspects of the college student environment, including peer and faculty interactions, involvement in cocurricular activities, alcohol use and behaviors, use of residence hall resources, perceptions of the residence hall climate, and perceptions of the campus racial climate. Student outcomes were also measured, including perceptions of the transition to college, growth in intellectual abilities, levels of self-confidence, civic engagement, diversity appreciation, and overall college satisfaction. These college environments and outcomes were selected for this study because they were the constructs included in the broader NSLLP study (see Inkelas et al., 2006), and because they represent some of the most routinely and thoroughly researched constructs in college impact research (Pascarella & Terenzini, 2005).

Data Analyses

To understand differences in college participation and outcomes among students of

various sexual orientations, we conducted initial tests of difference using background characteristics, college environments, and student outcomes for: (a) lesbian and gay; (b) bisexual; and (c) heterosexual students. Because this subsample included a higher percentage of LGB than heterosexual students in living-learning programs, we conducted analyses of covariance (ANCOVAs) for continuously scaled measures using living-learning participation as the covariate to remove its variance contribution to each dependent variable. In addition, we used 2×3 ANCOVAs to test for the main effects of gender, sexual orientation, and the interaction effects of gender and sexual orientation. For items that were categorically scaled, we conducted chi-square analyses using six groups: lesbians, gay men, bisexual men, bisexual women, heterosexual men, and heterosexual women.

RESULTS

The demographic characteristics of the sample of lesbian, gay, bisexual and heterosexual students were remarkably similar. There were no significant differences in the racial or ethnic backgrounds, parental educational attainment, family income, high school GPA, and SAT scores of all groups. The only significant demographic difference was in students' religious affiliations. The LGB students were more likely to indicate that they had no religious affiliation, whereas the heterosexual students were more likely to respond that they were Christian.

Results of the 2×3 ANCOVA testing for the main effect of sexual orientation indicated significant differences on several involvements and outcomes (see Table 1). Lesbian and gay students reported significantly more involvement in arts and music activities, as well as in political and social activism, whereas heterosexual students were more likely to report

involvement in intramural sports and ROTC. Lesbian and gay students reported more discussion with peers about sociocultural issues, such as human rights, multiculturalism, and politics. Heterosexual students were the most likely to report using cocurricular resources offered by their residence hall (e.g., career workshops, study groups, or peer counselors).

There were also significant differences by sexual orientation among some of the intellectual outcomes. Lesbian and gay students were the most likely to report increased growth in critical thinking and analysis abilities and growth in their liberal learning. *Liberal learning* refers to openness to broad perspectives and an appreciation of a wide range of intellectual topics (see Appendix A for a description of the composite measures). There were no significant differences by sexual orientation for appreciation for racial and ethnic diversity, academic self-confidence, and positive perceptions of the residence hall environment and the campus racial climate.

Results of the 2×3 ANCOVA testing the interaction of gender and sexual orientation on several measures indicated further differences among LGB and heterosexual students (see Table 2). Differences occurred in three areas: (a) intellectual outcomes, (b) peer interaction, and (c) cocurricular activities. For example, with regard to one intellectual outcome—cognitive complexity—the interaction between sexual orientation and gender on growth was significant, so the simple main effects were tested ($\alpha = .025$). There were significant differences between gender within sexual orientation (gay men and lesbians): ($F = 9.3$, $p = .003$). Follow-up pairwise comparisons were conducted to test for the effect of sexual orientation within gender ($\alpha = .008$). There were significant differences between gay men and heterosexual men, ($F = 19.9$, $p = .000$). Using the same analysis on another intellectual

TABLE 1.
ANCOVA of Main Effects for Sexual Orientation, With Living-Learning
Participation as Covariate (Estimated Marginal Means)

Measure	Gay or Lesbian (n = 107)	Bisexual (n = 110)	Hetero- sexual (n = 110)	F Sexorien Only	df	Partial Eta Squared
<i>Involvement in Extra- and Co-curricular Activities</i>						
Time spent exercising ^a	2.1	2.0	2.5	11.3 ***	2	.067
Involvement in intramural/ club sports	1.3	1.2	1.6	9.8***	2	.059
Involvement in arts/music performance activities	2.0	1.9	1.5	4.2 **	2	.026
Involvement in political/social activism	1.8	1.5	1.3	12.0 ***	2	.071
Involvement in ROTC	1.0	1.0	1.2	5.8 **	2	.036
<i>College Interactions and Environments</i>						
Discussed sociocultural issues with peers ^a	2.9	2.8	2.6	7.4 ***	2	.045
Faculty mentorship ^a	1.5	1.4	1.3	4.5 *	2	.028
Use of cocurricular residence hall resources ^a	1.5	1.6	1.7	3.4 *	2	.027
Residence hall climate is academically supportive	2.7	2.7	2.8	0.5	2	.003
Residence hall climate is socially supportive	2.8	2.8	2.9	0.6	2	.004
Perceptions of positive campus diversity climate	2.9	2.8	2.9	0.3	2	.002
<i>Student Outcomes</i>						
Growth in critical thinking/ analysis abilities	3.1	3.1	2.9	4.0 *	2	.025
Growth in liberal learning ^a	2.8	2.7	2.5	6.5 **	2	.041
Racial/ethnic diversity appreciation	2.7	2.7	2.7	0.3	2	.003
Academic self-confidence	3.1	3.0	3.0	0.4	2	.006

^a Denotes a nonsignificant result for Levene's test of equality of error variance.

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

outcome, gay men were more likely than lesbians ($F = 6.6, p = .011$) and heterosexual men ($F = 22.7, p = .000$) to experience growth in their ability to apply knowledge in different contexts.

Similarly, we found significant results on peer interaction and cocurricular activities. Gay men were more likely than heterosexual men ($F = 10.2, p = .002$) and lesbians ($F = 5.8, p = .016$) to report discussing academic or career issues with their peers. Heterosexual men were more likely than gay ($F = 19.6, p = .000$) and bisexual men ($F = 12.3, p = .001$) to report involvement with intramural sports; heterosexual men were also more likely than gay men ($F = 17.1, p = .000$) and heterosexual women ($F = 23.9, p = .000$) to play video or computer games. Complete results, including interaction effects and follow-up analyses, are presented in Table 2.

Results of the chi-square analyses indicated that heterosexual men were the most likely to report socializing with friends from home, whereas gay men were the least likely to report this type of peer interaction (see Table 3). Lastly, a series of questions related to alcohol use and behavior were asked. Results revealed that gay men were more likely than students in other sexual identity groups to report drinking in order to fit in, to feel more comfortable in social situations, or because alcohol was free or cheap.

A follow-up chi-square analysis, using a Bonferroni correction with a significance level of .003 (15 pairwise comparisons), indicated significant differences among the groups. Gay men were significantly more likely than heterosexual women to drink to fit in ($\chi^2 = 10.56, df = 1, p < .001$) and to feel more comfortable in social situations ($\chi^2 = 8.64, df = 1, p < .003$). Gay men were also significantly less likely to socialize with friends from home than were heterosexual men ($\chi^2 = 10.64, df = 1, p < .001$).

DISCUSSION

The results of this exploratory study reveal a rich and multifaceted portrait of the LGB college experience. However, there are several limitations to the study. First, the only LGB students included in the sample were those who self-identified as lesbian, gay, or bisexual. Thus it is unknown how LGB students who did not identify themselves as such may have experienced the college environment. Another limitation involves the decision to use a college impact framework for this study. College impact researchers often consider the ways in which students' social identities (such as their race, gender, or socioeconomic status) interact with college environments and outcomes, and it is commonly recognized that these background characteristics may affect the way students experience college (Astin, 1993; Pascarella & Terenzini, 2005). However, sexual orientation is not a student background characteristic examined in most college impact research, and thus the empirical literature using college impact theory may be biased toward the heterosexual college student experience due to heterosexual assumptions. Another limitation in the design used in this study is that it compares LGB students to heterosexual students as a means to understand the effects of the college environment. Such comparisons may unintentionally imply that the norm is the heterosexual college student experience. A final limitation is that approximately half of the LGB respondents in the sample were first-year students, and the majority attended large universities. Therefore, results of this study may not be representative of the LGB college student population. Moreover, given the dearth of quantitative research on LGB college populations using national samples, it is difficult to assess the representativeness of this study sample. Representation is a pervasive challenge in

TABLE 2.
ANCOVA of Significant Interactions of Gender and Sexual Orientation, With Living-Learning Participation as Covariate (Estimated Marginal Means)

Measure	1 Gay Male (n = 55)	2 Lesbian (n = 52)	3 Bisexual Male (n = 52)	4 Bisexual Female (n = 52)	5 Hetero- sexual Male (n = 52)	6 Hetero- sexual Female (n = 52)	F Gender* Sex Orient	df	Partial Eta ²	Follow-Up Analyses ^b
<i>Involvement in Extra- and Co-Curricular Activities</i>										
Time spent playing video/computer games	1.6	1.8	2.1	1.7	2.4	1.4	8.2***	2	.049	5 > 1, 6; 3 > 1
Involvement in intramural/club sports	1.1	1.4	1.3	1.2	1.8	1.5	3.9 *	2	.024	5 > 1, 3
<i>Peer Interaction</i>										
Discussed academic/career issues with peers ^a	3.5	3.2	3.3	3.2	3.1	3.5	7.0***	2	.042	1 > 2, 5; 6 > 5
<i>Student Outcomes</i>										
Ease with academic transition to college ^a	4.0	3.5	3.7	3.8	3.7	3.8	3.2 *	2	.020	1 > 2
Application of knowledge abilities ^a	3.4	3.2	3.2	3.2	3.0	3.1	4.9 **	2	.030	1 > 2, 5; 3 > 5
Growth in cognitive complexity ^a	3.2	2.8	3.0	2.8	2.7	2.9	7.4***	2	.046	1 > 2, 5
Growth in personal philosophy ^a	3.2	3.1	3.1	2.9	2.8	3.0	3.5 *	2	.022	1 > 5
Sense of civic empowerment ^a	4.3	4.1	4.0	4.2	3.9	4.1	4.0*	2	.025	1 > 3, 5
Sense of belonging ^a	3.4	3.0	3.2	3.1	3.2	3.4	4.2*	2	.030	1, 6 > 2

^a Denotes a nonsignificant result for Levene's test of equality of error variance.

^b Main effects $\alpha = .025$; pairwise comparisons $\alpha = .008$.

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

TABLE 3.
Chi Square Distributions for College Environments and Students Outcomes by Sexual Orientation

	Gay Male (n = 55)	Lesbian (n = 52)	Bisexual Male (n = 55)	Bisexual Female (n = 55)	Hetero- sexual Male (n = 55)	Hetero- sexual Female (n = 55)	χ^2	df
<i>Factors Influencing How Much To Drink (Percent responding "yes")</i>								
To fit in	21.8	5.8	14.5	5.5	9.1	1.8	16.5**	5
To feel more comfortable in social situations	41.8	19.2	29.1	34.5	27.3	16.4	12.1*	5
If it is free or cheap	58.2	28.8	40.0	45.5	34.5	34.5	12.3*	5
<i>Socialized With (Percent responding "yes"):</i>								
Friends from home	40.0	48.1	60.0	61.8	70.9	60.0	13.4*	5
Peers in residence hall	65.5	61.5	30.0	52.7	61.8	72.7	5.1	5
<i>Intentions To Participate In (Percent responding "yes"):</i>								
Culminating senior experience (thesis, capstone course)	38.2	30.8	34.5	34.5	29.1	47.3	5.0	5
Internship	69.1	65.4	60.0	67.3	69.1	69.1	1.6	5
Study abroad	54.5	38.5	54.5	58.2	40.0	50.9	7.3	5
Research with professor	43.6	34.6	38.2	43.6	34.5	32.7	2.7	5
Volunteer work or community service	40.0	44.2	34.5	49.1	36.4	52.7	5.8	5

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

studies of the LGB population partly due to various ages and stages of coming out (D'Augelli, 1991; Harry, 1986).

Yet, this last limitation offers a lens through which to view some LGB students: those for whom sexual identity is salient and college life is still a relatively new experience. The results of this study suggest that these LGB students may be strongly influenced by a well-defined college peer culture. For example, gay men are less likely than heterosexual men to socialize with friends from home (i.e., high school friends), suggesting that their social activities focus on college peers. Loneliness is a pervasive problem for lesbian and gay youth, and college peers may fill an important role in reducing alienation (Martin & D'Augelli, 2003). LGB students, even when considering that the majority of the sample is populated with first-year students, may be choosing their cocurricular involvements based in part on perceived peer-environment fit. For example, lesbian and gay students are more likely than heterosexual students to participate in arts and music activities, and gay and bisexual men are less likely than heterosexual men to participate in intramural sports.

The influence of students' peers has been well supported by the higher education literature. Astin (1993) has called the peer group the "single most potent source of influence on growth and development during the college years" (p. 398). Indeed, the results of Astin's national longitudinal study of college students indicate that students' beliefs, values, and behaviors on a wide range of activities and opinions mirror those of their peer group. Moreover, Newcomb (1962) asserted that peer groups exert the most powerful influence when students form small social groups and live in close proximity to one another.

Perhaps the strongest example of peer group interaction and subsequent influence in this study is the portrait of the college

experiences of gay men (there are fewer positively significant results for lesbians and bisexual men and women in this study). Gay men appear to benefit academically and intellectually from their peers. They are the least likely to have social ties from home, and are more likely than heterosexual men and lesbians to discuss academic and career issues with their peers. Gay men also have the highest mean scores for an array of intellectual outcomes, including applying acquired knowledge to different contexts, growth in cognitive complexity, and development of a personal philosophy. These same intellectual outcomes are the constructs identified by Pascarella and Terenzini (2005) to be associated with peer interaction. Finally, gay men have the highest perceptions in comparison to all other groups of ease with the academic transition to college and a sense of belonging. Given the well-documented hostile climate toward LGB students on college campuses (e.g., Aberson et al., 1999; D'Augelli, 1992; Rankin, 2003; White & Kurpius, 2002), it is remarkable that gay men express such a strong sense of belonging in such a potentially negative atmosphere.

Yet, strong peer groups can have negative influences as well. Although gay men in this study are associated with positive academic and intellectual outcomes, they are also more likely to drink alcohol as a result of factors related to peer pressure. For example, gay men are significantly more likely than other groups to consume alcohol to fit in and to feel more comfortable in a social setting. The desire to fit in and be comfortable is consistent with findings that gay men seek to fit in by limiting their visibility; less visibility is predictive of a more positive self-perception (Frible, Wortman, & Joseph, 1997). Thus, there may be something positive about the peer culture of gay men that supports growth in intellectual areas, yet this peer influence can be negative

when it comes to alcohol-related behaviors. Further research about the peer culture of gay men is necessary to understand the complex nature of its impact on their college experiences.

The results from this study indicate that lesbian and gay students perceive higher growth in critical thinking and liberal learning (or being open to new perspectives). Perhaps the challenges that lesbian and gay students face in reaction to prejudice and hostility foster a greater sense of tolerance and acceptance. It may also be that the cognitive processes associated with developing an identity that is not part of the dominant group assist lesbian and gay students in their ability to think with more complexity about broader intellectual and social issues (Jones & McEwen, 2000).

On the other hand, a heightened gay identity may not always lend itself to appreciation of all types of diversity. The results show that LGB students are not significantly more likely than heterosexual students to indicate an appreciation for racial and ethnic diversity. Jones and McEwen (2000) asserted that an individual's multiple identities can rise and decline in salience, depending upon the prominence of one or another identity at any point in time. Thus, LGB students, at the point of high affiliation with their sexual identity, may not recognize or appreciate other forms of identity, including dimensions of racial and ethnic identity.

Implications for Practice and Future Research

There are several implications for faculty and staff in higher education institutions as a result of the findings from this study. Further study is needed on the influence of the peer group and on the intellectual growth outcomes for gay men, especially given the classroom and residential climate issues for LGB students (DeSurra & Church, 1994; Evans & Broido,

2002; Lopez & Chism, 1993; Rhoads, 1995). In addition, more attention should be given by campus health and counseling staff to the reasons for and treatment of negative alcohol behaviors of gay men (DeBord et al., 1998). Given the apparent salience of the peer group for gay men, perhaps successful alcohol intervention programs can be designed to tap the positive ways in which group norms about alcohol consumption can be changed, which could subsequently influence healthy individual decision-making.

Further research is needed on another sexual minority group, transgender students. Although sexual orientation and gender identity are distinct identity groupings, it is interesting to note that the NSLLP, in addition to asking sexual orientation, asked students to identify their gender as male, female, or transgender. However, there are only 15 valid transgender respondents in the study, too few for quantitative analysis.

Finally, a word of caution on the lack of significant differences in LGB students' perceptions of their residence hall environments. Contrary to prior research (e.g., Evans & Broido, 1999, 2002; Rhoads, 1995) the results in this study do not indicate that LGB students perceive a more hostile or negative climate in the residence halls than heterosexual students. However, administrators are cautioned not to assume that the residence hall climate is no longer a pertinent issue for LGB students. The students in this study, most of whom were in their first year of college, may not have had enough experience with the residence hall climate to label it as hostile or unwelcoming. Indeed, in one study, LGBT juniors perceived the campus climate more negatively than did LGBT freshmen (Brown et al., 2004). Alternatively, some students may not have been publicly out and therefore may not have been subjected to a hostile climate. Because coming out in the residence hall, particularly to a

heterosexual roommate, is high risk, Evans and Broido (1999) suggested proactive LGB programming in all residence halls, regardless of the presence of out LGB students.

This study offers a rare glimpse into the overall college experience of lesbian, gay, and bisexual students, and it was made possible by including one question item about respondents' sexual orientation on a survey instrument for a national study. Currently, other than the NSLLP, no large-scale national studies of college students ask respondents to indicate their sexual orientation. As Croteau and Lark (1995) stated, "Assumed heterosexuality may be the single most pervasive and quietly

damaging practice of all" (p. 476). Therefore, researchers—especially those working with large, multiple institution data—are encouraged to include such items on surveys as a way of capturing the LGB student experience, even when their research is not explicitly about LGB issues. This is one simple way to expand the body of knowledge about the LGB college student population.

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APPENDIX A. NSLLP 2004 Composite Scales

	2003 Pilot Test Factor	2003 Pilot Test Cronbach	2004 NSLLP Cronbach
COLLEGE ENVIRONMENTS			
PEER INTERACTIONS			
<i>Discussed Academic and Career Issues With Peers</i>		.751	.737
Discussed something learned in class	.743		
Shared concerns about classes and assignments	.725		
Talked about current news events	.672		
Talked about future plans and career ambitions	.497		
<i>Discussed Sociocultural Issues With Peers</i>		.864	.864
Discussed social issues such as peace, human rights, justice	.760		
Discussions with students whose personal values differ	.726		
Discussed views about multiculturalism and diversity	.721		
Held discussions with those with different religious beliefs	.703		
Talked about different lifestyles and customs	.702		
Discussions with students whose political opinions greatly differ	.697		
FACULTY INTERACTIONS			
<i>Faculty Mentorship</i>		.775	.746
Worked with instructor on independent project	.724		
Worked with instructor involving his/her research	.592		
Discussed personal problems or concerns with instructor	.534		
Visited informally with instructor on social occasion	.532		
Went to a cultural event with instructor or class	.531		
Discussed career plans and ambitions with instructor	.478		

appendix continues

APPENDIX A. *continued*
NSLLP 2004 Composite Scales

	2003 Pilot Test Factor	2003 Pilot Test Cronbach	2004 NSLLP Cronbach
RESIDENCE HALL RESOURCES			
<i>Use Cocurricular Residence Hall Resources</i>		.735	.718
Career workshops	.688		
Community service projects	.610		
Peer counselors	.561		
Peer study groups	.542		
Social activities	.435		
RESIDENCE HALL CLIMATE			
<i>Residence Hall Climate is Academically Supportive</i>		.793	.808
Environment supports academic achievement	.706		
Most students study a lot	.612		
Most students value academic success	.555		
It's easy to form study groups	.529		
Adequate study space is available	.513		
Staff helps with academics	.501		
<i>Residence Hall Climate is Socially Supportive</i>		.867	.868
Appreciate different races/ethnicities		.747	
Appreciate different religions		.705	
Help and support one another		.699	
Would recommend this residence hall		.584	
Intellectually stimulating environment		.548	
Different students interact with each other		.545	
Appreciation for different sexual orientation		.544	
Peer academic support		.481	
DIVERSITY INTERACTIONS AND CLIMATE			
<i>Positive Diversity Climate</i>		.808	.812
Transracial student interaction	.738		
Transracial friendship	.723		
Transracial trust and respect	.674		
Campus commitment to success of students of color	.628		
Transracial dating	.585		
Professors respect students of color	.523		
STUDENT OUTCOMES			
TRANSITION TO COLLEGE OUTCOMES			
<i>Ease With Academic Transition to College^a</i>			.634
Ease in communicating with instructors outside class	.748		
Ease with seeking academic or personal help when needed	.710		
Ease with forming study groups	.499		
INTELLECTUAL ABILITIES			
<i>Critical Thinking/Analysis Abilities</i>		.725	.707
Explore meaning of facts when introduced to new ideas	.608		
Have disagreed with author of book/article was reading	.581		
Challenge professors' statements before accept as right	.542		
Develop own opinions by analyzing different points of view	.536		
Enjoy discussing issues with people who disagree with me	.475		
Prefer courses requiring organize/interpret ideas over facts	.369		

appendix continues

APPENDIX A. *continued*
NSLLP 2004 Composite Scales

	2003 Pilot Test Factor	2003 Pilot Test Cronbach	2004 NSLLP Cronbach
<i>Application of Knowledge Abilities</i>		.690	.716
Something learned in one class helped to learn in another	.507		
Applied course material to other areas of life	.472		
Discovering new ways to understand motivates me	.433		
Learning gives me greater control over my life	.420		
Have discussions with other students about class ideas/topics	.420		
Became excited about field/major as result of course	.413		
INTELLECTUAL GROWTH			
<i>Growth in Cognitive Complexity</i>		.821	.817
Ability to critically analyze ideas and information	.694		
Ability to learn on own, pursue ideas, find information needed	.595		
Learning more about things that are new to you	.579		
Ability to put ideas together, see relationships between ideas	.534		
<i>Growth in Liberal Learning</i>		.816	.803
Openness to views that you oppose	.740		
Ability to discuss controversial issues	.596		
Motivation to further explore ideas presented in class	.516		
Gaining a broad general education about different fields of knowledge	.515		
Appreciation of art, music, drama	.440		
Increased appreciation of racial/ethnic differences	.440		
<i>Growth in Personal Philosophy</i>		.808	.799
Developing own values and ethical standards	.706		
Understanding self and own abilities, interests, personality	.649		
Becoming more aware of different philosophies, lifestyles, cultures	.567		
Improving ability to get along with different kinds of people	.556		
SELF-CONFIDENCE			
<i>Academic Self-Confidence</i>		.760	.748
Research ability	.679		
Problem-solving ability	.625		
Working independently	.582		
Computer ability	.565		
Library skills	.463		
DIVERSITY OUTCOMES			
<i>Racial/Ethnic Diversity Appreciation</i>		.736	.729
Learned a great deal about other racial and ethnic groups	.724		
Awareness of complexities of cross-race interaction	.708		
Greater commitment to own racial/ethnic identity	.633		
Campus fosters more racial division than understanding (reverse code)	.504		
CIVIC ENGAGEMENT			
<i>Sense of Civic Empowerment^a</i>			.758
Ordinary people can make difference in community	.766		
Have power to make difference in community	.740		
Little I can do that makes difference for others (reverse code)	.686		
I am willing to act for rights of others	.638		

appendix continues

APPENDIX A. *continued*
NSLLP 2004 Composite Scales

	2003 Pilot Test Factor	2003 Pilot Test Cronbach	2004 NSLLP Cronbach
SATISFACTION AND SENSE OF BELONGING			
<i>Overall Sense of Belonging</i>		.868	.898
I feel a sense of belonging	.845		
I feel a member of the campus community	.826		
I feel comfortable on campus	.726		
I would choose the same college again	.704		
My college is supportive of me	.692		

Note. 2003 Pilot test: $n = 5,437$; 2004 NSLLP: $n = 24,538$. NSLLP = National Study of Living-Learning Programs.

^a Factor loading from 2004 NSLLP data.

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