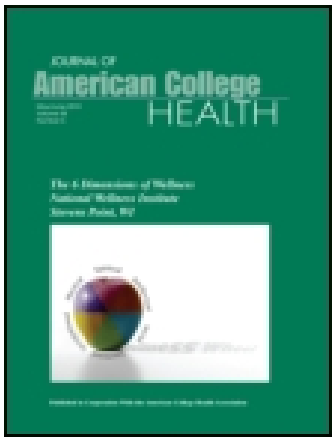

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A Comparison of Lesbian, Bisexual, and Heterosexual College Undergraduate Women on Selected Mental Health Issues

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Major Article

A Comparison of Lesbian, Bisexual, and Heterosexual College Undergraduate Women on Selected Mental Health Issues

Dianne L. Kerr, PhD, MCHES; Laura Santurri, PhD, CPH; Patricia Peters, MA

Abstract. **Objective**: To investigate selected mental health characteristics of lesbians and bisexual undergraduate college women as compared with heterosexual college women. **Participants**: Self-identified lesbians and bisexual and heterosexual female college students who took part in the American College Health Association National College Health Assessment II (ACHA-NCHA-II) in Fall 2008, Spring 2009, and Fall 2009. **Methods**: A secondary analysis of the ACHA-NCHA-II data set for 3 semesters was conducted. Comparisons of lesbians and bisexual and heterosexual female college students were made. **Results**: Bisexual women reported the worst mental health status in all areas studied including anxiety, anger, depressive symptoms, self-injury, and suicidal ideation and attempts. Both bisexual women and lesbians had a far greater likelihood of having these mental health issues when compared with heterosexual women. Lesbians and bisexual women utilized significantly more mental health services (with the exception of clergy) than heterosexual women. **Conclusions**: College health professionals should recognize and address the mental health needs of bisexual and lesbian undergraduate college women.

Keywords: counseling, gender, mental health

Lesbian, gay, bisexual, and transgender (LGBT) individuals face many health disparities.[1–3] Despite repeated calls to improve research to identify and understand contributing factors to health disparities among LGBT individuals,[1–3] few national population-based studies have been conducted on this population. Mental health disparities of LGBT populations are of special concern, particularly as they relate to suicide ideation and attempts. A review article on mental disorder, suicide, and deliberate self-harm in lesbian, gay, and bisexual people (1966–2005) revealed they are at higher risk of mental disorders, suicidal ideation, and deliberate self-harm than heterosexual individuals.[4]

For purposes of the present study, the investigators chose to investigate only lesbians and bisexual undergraduate women and to compare them with their heterosexual counterparts to highlight disparities among the groups. Lesbians and bisexual women have been shown to exhibit disparities in mental health outcomes including anxiety disorder and mental distress,[5–8] sadness/depression,[8–10] and suicide ideation and attempts[6,8] when compared with their heterosexual counterparts, yet few studies have been conducted on college populations. This study uses a large college health data set to provide additional evidence that undergraduate college lesbians and bisexual women exhibit similar disparities in mental health outcomes.

Anxiety Disorder and Mental Distress

Anxiety disorder and mental distress[5–8] are prevalent in lesbians and bisexual women. A population-based study using secondary data from the 1995 National Survey of Midlife Development in the United States found that lesbian/bisexual women showed more anxiety disorder than heterosexual women and used mental health services more frequently than their heterosexual counterparts.[7] An additional population-based study using aggregated data from the Massachusetts Behavioral Risk Factor Surveillance System (BRFSS) (2001–2008) revealed bisexual women were 2.82 times more likely to report feeling tense/worried on 15 of the prior 30 days when compared with their heterosexual counterparts.[8]

Research also indicates that these mental health disparities may be lifelong, as lesbians and bisexual women report

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experiencing more emotional stress as teens than heterosexual women[6] and older lesbians and bisexual women (50–79 years of age), have lower scores on measures of mental health and social support, and a greater likelihood of depression than heterosexual women.[9] In addition, lesbians have been found to have elevated risk of mental distress during midlife.[5]

Depression, Suicide Ideation, and Suicide Attempts

Higher rates of depression, suicide ideation, and suicide attempts are found among lesbians and bisexual women when compared with heterosexual women.[6,8–12] The Massachusetts BRFSS results found that bisexual women were 2.48 times more likely to feel sad/blue on 15 or more of the prior 30 days and 20.56 times more likely to have seriously considered suicide in the prior year when compared with their heterosexual counterparts.[8] In addition, lesbians who are "closeted" and bisexual women who are not have been shown to be 2–2.5 times more likely to have suicide ideation in the past year and more likely to attempt suicide than heterosexual women.[6] Findings from The Women's Health Initiative Sample determined lifetime lesbians, bisexuals, and adult lesbians more likely to be depressed than heterosexual women or women having never had adult sex.[9]

Many researchers contend that these higher rates of mental health problems are linked to stress brought on by the stigma associated with a lesbian or bisexual orientation.[13–15] Research has found that individuals who report more gay-related stress (stress uniquely related to sexual orientation) have more depressive symptoms.[15]

The preceding studies were all conducted on lesbian and bisexual adults. Many of the studies combined lesbians and bisexual women into 1 group for analyses despite the recommendation that lesbians and bisexual women be investigated as distinct groups.[3,5]

Few studies investigate subgroups of LGBT populations such as college students. Most studies of LGBT college students, like those of LGBT adults, have used small convenience samples that severely limit generalizability, and combined groups of the LGBT spectrum for analysis purposes, which may mask differences between the groups.

College Student Studies

The college student population of lesbian and bisexual undergraduate women may be at greater risk for mental health problems than other college women, as in addition to undergoing the many stressors of adjusting to college life, they may be having difficulties with identity development, and experiencing negative attitudes and harassment on campus. Although campus climate has changed much for LGBT students in the past decade, in a recent survey of campus climate (2010), almost a quarter of lesbian, gay, bisexual, and "queer" respondents had experienced harassment or violence on campus due to their sexual identity, and over half of lesbian and bisexual students reported they did not come out due to fear of mistreatment, with some even reporting going back into the closet when entering college due to a lack of support networks.[16]

Although few large studies of college students have been conducted that include analyses of LGBT students, and none are specific to lesbians' and bisexual women's mental health, the studies that have been conducted confirm higher levels of loneliness, depression, suicidal ideation, and suicide attempts among the LGBT population as a whole.[10–12]

One study of college students compared 70 gay, lesbian, and bisexual subjects (male and female) with 154 heterosexual students from 5 diverse colleges and universities in the Midwest.[10] Students were volunteers recruited from LGBT groups on the campuses. Measures of loneliness and depression indicated that the lesbian, gay, and bisexual sample was significantly more depressed and lonely and reported fewer reasons for living than the heterosexual sample.[10]

Additional published studies of college students are secondary analyses of larger data sets including individuals of all sexual orientations. For example, 2 studies of National College Health Assessment (NCHA) data investigated the mental health of college students overall (one on suicidal behavior, depression, and treatment in college students,[11] and the other on correlates and predictors of depression[12]). In the first study of 1999–2000 NCHA data, those who reported being LGBT had an odds ratio 2.6 times higher than the heterosexual students for seriously considering attempting suicide.[11] In the second study of Spring 2000 NCHA data, an LGBT orientation was among factors predictive of having ever been diagnosed with depression and current diagnosis for depression.[12] These studies did not break out specific groups of the LGBT spectrum.

The current study investigates only lesbians and bisexual and heterosexual female undergraduate college students and looks at these groups individually rather than in a combined fashion. The study is important in that it is a secondary analysis of a large database that includes high numbers of self-identified lesbians and bisexual female undergraduates and is one of the few studies addressing mental health outcomes among college women with these sexual orientations. A review of recent literature revealed no studies of large numbers of LGBT college students and no large-scale studies specific to lesbians and bisexual female college undergraduates.

The purpose of this study was to determine if self-identified lesbians and bisexual undergraduate college women were significantly more likely to report negative mental health outcomes than their heterosexual counterparts. To that end, the researchers combined 3 semesters of American College Health Association National College Health Assessment II (ACHA-NCHA-II) data to investigate lesbians ($N = 849$) and bisexual ($N = 2{,}456$) undergraduate college women, analyzed them as separate groups, and compared them with a group of their heterosexual counterparts ($N = 3{,}384$) on a variety of mental health items. In addition, the women's self-reported depression diagnoses and mental health services utilization was investigated.

METHODS

Procedure and Sample

The American College Health Association was contacted to inquire about secondary analysis of ACHA-NCHA-II data, and a data request form was completed to obtain 3 semesters of ACHA-NCHA-II data. A secondary analysis of 3 semesters of data was used to increase statistical power and enable a large enough sample of self-identified lesbians and bisexual women to be included in the analysis. Because the ACHA-NCHA-II is administered only to random classrooms and participants, the likelihood that participants would be duplicated in subsequent semesters is minimal. Institutions participating in the ACHA-NCHA-II included 40 in Fall 2008 ($N = 26{,}685$), 117 in Spring 2009 ($N = 87{,}105$), and 57 in Fall 2009 ($N = 34{,}208$).[17] Approval was granted, and a data disk was received with all institutional and student identifiers removed.[18]

The university's institutional review board approved the secondary analysis. The total number of females in the NCHA data set was 94,142. Those with missing data about sexual orientation as well as those selecting "transgender" ($n = 216$) or "unsure" (about 2% of the sample) were removed from the sample because investigators sought only to study those who self-identified as lesbians or bisexual women. Sexual orientation and gender orientation are separate but related concepts that the investigators did not desire to combine in the present study, although investigation of transgender students and those who are unsure about their sexual orientation is important and needed.

Graduate students ($n = 626$) were removed from the subsample. Further, only undergraduate women aged 18–25 years were included in the final subsample in order to ensure representation of traditional-age undergraduate students.

The heterosexual female sample of 88,005 was randomly reduced to allow more equitable comparisons between the groups of lesbians, bisexual women, and heterosexuals. This was done for ease of data analysis and because roughly equal group sizes are recommended for some analyses.[19] The original ratio of lesbians/bisexuals to heterosexuals was 4,405/88,005 or approximately 5%. To reduce the heterosexual sample, 3 randomly selected subsamples of 4,387 of the original sample of heterosexual women were drawn using the SPSS random sampling procedure (SPSS, Chicago, Illinois). Comparisons on demographics and other select variables were made to assure that there were no significant differences among/between the heterosexual subsamples and that they were representative of the larger group of heterosexual women. After determining that this was the case, 1 of the 3 heterosexual subsamples was randomly selected for comparison purposes.

The final sample used for comparison purposes included 3,384 self-identified heterosexual women, 849 lesbians, and 2,456 bisexual women for a total sample of 6,689 undergraduate women. Lesbians, bisexual, and heterosexual undergraduate women from these 3 semesters were compared on selected mental health constructs and demographic characteristics.

Measures

The initial data were collected with the ACHA-NCHA-II questionnaire. The ACHA-NCHA data are not gathered from a nationally representative sample, as colleges and universities self-select and pay a fee to take part in the survey. The ACHA-NCHA-II is administered only to randomly selected students or randomly selected classrooms. Developers of the ACHA-NCHA-II state that although it is not possible to generalize to college and university students in the United States with the instrument, the database serves as a "reference group" and a set of schools with which one can compare data that appear to be "both reliable and valid and of empirical value for representing the nation's students."[20]

The ACHA-NCHA-II has been administered since Fall 2008. In developing the revised instrument, some of the ACHA-NCHA questions were modified, and new questions were added. Pertinent to this study were new items on self-injury and an expansion of the mental health section of the instrument.[21]

For purposes of the current study, selected questions from 3 previous administrations (Fall 2008, Spring 2009, and Fall 2009) of the ACHA-NCHA-II were analyzed. Of particular interest was mental health question 30 which included multiple items (see Table 2 for questions). Response options for question 30 included *Yes, in the last 12 months*; *Yes in the last 30 days*; *Yes, in the last 2 weeks*; *No, not in the last 12 months*; *No, never* for each of the mental health items. According to the developers of the ACHA-NCHA-II, the overarching construct these items are measuring is psychological distress and suicide. They are stand-alone items measuring different elements of psychological distress. A principal components analysis by ACHA-NCHA-II developers identified 3 components with eigenvalues over 1. The first component labeled "Mental Health" included items 30A, 30D, and 30E–30H. The second component labeled "Mental Health Harm" included items 30J, 30K, and 30I. The third item labeled "Mental Health Overwhelmed/Exhausted" included 30B and 30C (Table 2) (personal e-mail correspondence with M. Hoban, PhD, American College Health Association in consultation with Alejandro Martinez, PhD, ACHA-NCHA-II Advisory Committee Chair, regarding ACHA-NCHA-II Reliability and Validity Analyses; October 10, 2012).

Also included in the present study were ACHA-NCHA-II item 32: "Have you ever been diagnosed with depression?" (*No, Yes*); item 34: "Have you ever received psychological or mental health services from any of the following?" (see Table 3 for response options); item 35: "Have you ever received psychological or mental health services from your current college/university's Counseling or Health Service?" (*No, Yes*); and item 36: "If in the future you were having a personal problem that was really bothering you, would you consider seeking help from a mental health professional?" (*No, Yes*).

TABLE 1. Sociodemographic Variables of the Sample by Sexual Orientation

	Heterosexual		Bisexual		Lesbian		Total	
Sociodemographic variable	*n*	%	*n*	%	*n*	%	*n*	%
Sexual orientation	3,384	50.6	2,456	36.7	849	12.7	6,689	100.0
Year in school								
1st year undergraduate	1,107	32.7	703	28.6	247	29.1	2,057	30.8
2nd year undergraduate	778	23.0	578	23.5	199	23.4	1,555	23.2
3rd year undergraduate	742	21.9	566	23.0	190	22.4	1,498	22.4
4th year undergraduate	606	17.9	460	18.7	169	19.9	1,235	18.5
5th year undergraduate or more	151	4.5	149	6.1	44	5.2	344	5.1
Relationship status								
Not in a relationship	1,663	43.9	1,087	44.4	359	42.4	3,109	46.7
In relationship, not living together	1,439	42.7	996	40.7	348	41.1	2,783	41.8
In relationship, living together	269	8.0	363	14.8	139	16.4	771	11.6
Marital Status								
Single	3,177	94.4	2,218	90.6	729	86.1	6,124	91.9
Married/Partnered	102	3.2	122	5.0	59	7.0	288	4.3
Separated	2	0.1	7	0.3	1	0.1	10	0.2
Divorced	5	0.1	15	0.6	0	0.0	20	0.3
Other	76	2.3	86	3.5	58	6.8	220	3.3
Residence								
Campus residence hall	1,598	47.4	1,157	47.2	441	52.0	3,196	47.9
Fraternity/Sorority house	46	1.4	12	0.5	2	0.2	60	0.9
Other campus housing	204	6.0	157	6.4	52	6.1	413	6.2
Parent/Guardian's home	503	14.9	327	13.3	82	9.7	912	13.7
Other off-campus housing	925	24.7	718	29.3	237	27.9	1,880	28.2
Other	96	2.8	80	3.3	34	4.0	210	3.1
Race/Ethnicity								
White, not any other	2,420	71.5	1,652	67.3	542	63.8	4,614	69.0
Black	189	5.6	148	6.0	88	10.4	425	6.4
Hispanic	216	6.4	146	5.9	146	5.9	423	6.3
Asian/Pacific Islander	329	9.7	181	7.4	181	7.4	558	8.3
Native American	37	1.1	45	1.8	45	1.8	102	1.5
Multi	142	4.2	225	9.2	225	9.2	435	6.5
Other, no response	51	1.5	59	2.4	59	2.4	132	2.0

Demographics

Demographic information included age, sexual orientation, year in school, enrollment status, race/ethnicity, relationship status, marital status, place of residence, primary source of health insurance, and cumulative grade point average. This sociodemographic information can be found in Table 1. Most of the women in our sample (95.7%) were full-time students. The mean age of the sample was 20.01 years ($SD = 1.65$). Over 80% of all groups (lesbians, bisexual, and heterosexual) described their grade averages as As or Bs. Over 70% of students had insurance and were on their parents' health insurance plan. Bisexual women in the sample were significantly less likely to have health insurance when compared with heterosexual women, and the lack of health insurance approached significance among the lesbians as well when compared with the heterosexual women.

There was no significant difference between lesbians and bisexual women in health insurance coverage, race, relationship status, or age. Both lesbians and bisexual women were significantly less likely to be white, more likely to be in a relationship, and more likely to be slightly older than the heterosexual sample. Table 1 shows more details on year in school, relationship status, marital status, place of residence, and race/ethnicity by sexual orientation.

Statistical Analyses

The Statistical Package for the Social Sciences (SPSS) version 16 (SPSS, Chicago, Illinois) was used for data analysis. Frequencies and descriptive statistics were calculated for all demographic and mental health characteristics. Chi-square analyses were used to compare heterosexual women with lesbians, heterosexual women with bisexual women, and bisexual women with lesbians to determine if there were differences in race (white or not white), health insurance (insurance or no insurance), and relationship status (in a relationship, not in a relationship). Independent-sample *t* tests were used to compare the same groups with respect to age. A chi-square analysis was used to compare groups on mental health services utilization.

Logistic regression models were used to compare groups on mental health constructs, controlling for age, race, health insurance, and relationship status. These demographic

variables were controlled to increase the power of the findings. Odds ratios were computed to compare heterosexual women with lesbians and bisexual women on mental health issues (item 30, *Yes, in the last 12 months*) and whether or not they had been diagnosed with depression (item 32).

RESULTS

Analyses revealed bisexual college women were significantly more likely to report all mental health problems studied than lesbians or heterosexual college women with the exception of *felt overwhelmed by all you had to do*. In the Mental Health Overwhelmed/Exhausted component, bisexual women were 1.4 times (confidence interval [CI] [1.2, 1.7]) more likely to report exhaustion in the last year when compared with the heterosexual women. In the Mental Health component in the past year, bisexual women were more than twice as likely to have *felt overwhelming anxiety* and *felt overwhelming anger* than heterosexual women. They were also twice as likely to have *felt things were hopeless*, *felt very lonely, felt very sad*, and *felt so depressed it was difficult to function*. In addition, the odds of bisexual women having a depression diagnosis were 3.1 times (CI [2.8, 3.6]) higher than heterosexual women (see Table 2). The Mental Health Harm component revealed bisexual undergraduate women were 4.7 times (CI [4.0, 5.7]) more likely to report intentional self-injury (*intentionally cut*, *burned*, *bruised, or otherwise injured yourself*), 4.9 times (CI [4.1, 5.9]) more likely to have *seriously considered suicide*, and 5.1 times (CI [3.4, 7.8]) more likely to have *attempted suicide* than heterosexual undergraduate women.

Lesbian college students in our sample were significantly more likely to report all mental health issues studied than heterosexual women with the exception of *felt overwhelmed by all you had to do,* and *felt exhausted (not from physical activity)*. Therefore there were no significant differences between lesbians and heterosexual women in the Mental Health Overwhelmed/Exhausted component. Results from the Mental Health component revealed lesbians were significantly more likely to have *felt overwhelming anxiety* and *felt overwhelming anger* when compared with heterosexual college women. They also were more likely to have *felt things were hopeless, felt very lonely, felt very sad, and felt so depressed that it was difficult to function* (see Table 2 for odds ratios). The odds of lesbians reporting a depression diagnosis were 2.4 times (CI [2.0, 2.9]) higher than their heterosexual counterparts. Analysis of the Mental Health Harm component revealed the odds of lesbians intentionally self-injuring were 4.7 times (CI [3.8, 6.0]) higher, seriously considering suicide 3.8 times (CI [3.0, 4.9]) higher, and attempting suicide 4.4 times (CI [2.6, 7.3]) higher than their heterosexual counterparts.

As seen in Table 2, comparisons of lesbians and bisexual college women showed smaller odds ratios than comparisons involving their heterosexual counterparts. The lesbian and bisexual women in our sample were not significantly different on the Mental Health Overwhelmed/Exhausted component. In the Mental Health component, they were not significantly different on the *felt overwhelming anger* item but were significantly different on the other measures. Bisexual women had significantly higher odds than lesbians of feeling *overwhelming anxiety* in the prior 12 months. In addition, the odds ratios of bisexual women that *felt things were hopeless*, *felt very lonely*, *felt very sad*, and *felt so depressed it was difficult to function* were significantly higher when compared with lesbian women (see Table 2).

Finally, on the Mental Health Harm component, lesbians and bisexual women were not significantly different on the *intentionally cut*, *burned*, *bruised, or otherwise injured yourself* and *attempted suicide* items but were significantly different on the *seriously considered suicide* item, with the odds of bisexual women seriously considering suicide 1.26 times (CI [1.02, 1.55]) higher than lesbians.

With regard to mental health services utilization, lesbians and bisexual women were significantly more likely than their heterosexual counterparts to have utilized all of the mental health services with the exception of clergy (see Table 3). When compared with each other on mental health services utilization, bisexual women were more likely than lesbians to have been to all of the mental health professionals with the exception of clergy and university mental health and counseling services. Chi-square analyses indicated that bisexual women were significantly more likely to say they would seek mental health counseling in the future than heterosexual or lesbian women. Lesbians were no more likely to report that they would seek mental health counseling in the future than heterosexual women.

COMMENT

Similar to previous studies,[4–12] the results of this study indicate that lesbians and bisexual women report significantly more negative mental health outcomes than their heterosexual counterparts. We found higher odds ratios for the mental health disorders among our sample of lesbians and bisexual undergraduate college women than those found for LGBT individuals overall.[4] Most striking were the odds ratios of the Mental Harm Health component including self-injury behaviors, suicide ideation, and suicide attempts.

We found higher odds ratios when comparing lesbians' suicide ideation with that of heterosexual women (3.8 times; CI [3.0, 4.9]) and bisexual women's suicide ideation with that of heterosexual women (4.9 times; CI [4.1, 5.9]) than Koh and Ross.[6] Reasons for this increased suicide ideation were not investigated in this study, although previous research indicates that bisexual adults report lower levels of self-disclosure and community connectedness than gay/lesbian adults[22] and may be the victims of increased harassment and violence for being out rather than hiding same-sex attractions. In addition, many college students mistakenly believe bisexuals are "confused" or "unable to make up their minds" in terms of sexual attraction and orientation. Thus, being open about bisexuality may result in additional harassment by those who don't understand this orientation. One previous study found that bisexual adults feel members of the gay and lesbian community consider bisexuals "promiscuous"

TABLE 2. Odds Ratios for Mental Health Items Comparing Heterosexual, Bisexual, and Lesbian Females

				Bisexual vs Heterosexual			Lesbian vs Heterosexual			Bisexual vs Lesbian		
Mental health issue/Item number	Heterosexual (%)	Bisexual (%)	Lesbian (%)	Adjusted OR	*p* value	95% CI for OR	Adjusted OR	*p* value	95% CI for OR	Adjusted OR	*p* value	95% CI for OR
Within the last 12 months												
Felt things were hopeless/30A	50.97	68.44	63.36	2.08	.000*	1.85, 2.33	1.70	.000*	1.44, 2.00	1.22	.024*	1.03,1.45
Felt overwhelmed by all you had to do/30B	93.29	93.25	91.50	0.95	.643	0.77, 1.18	0.80	.124	0.60, 1.06	1.17	.297	0.87, 1.58
Felt exhausted/30C	86.67	90.47	88.05	1.38	.000*	1.16, 1.65	1.15	.264	0.90, 1.46	1.20	.169	0.93, 1.55
Felt very lonely/30D	63.35	79.18	72.93	2.24	.000*	1.98, 2.54	1.71	.000*	1.43, 2.04	1.30	.006*	1.08, 1.55
Felt very sad/30E	69.01	82.19	77.05	2.05	.000*	1.80, 2.34	1.57	.000*	1.30, 1.88	1.29	.011*	1.06, 1.58
Felt so depressed that it was difficult to function/30F	32.09	56.73	50.83	2.79	.000*	2.50, 3.13	2.27	.000*	1.94, 2.67	1.22	.016*	1.04, 1.44
Felt overwhelming anxiety/30G	52.99	70.76	65.72	2.08	.000*	1.85, 2.33	1.71	.000*	1.45, 2.02	1.21	.036*	1.01, 1.44
Felt overwhelming anger/30H	40.02	59.75	57.91	2.21	.000*	1.98, 2.47	2.11	.000*	1.80, 2.48	1.04	.688	0.88, 1.22
Intentionally cut, burned, bruised, or otherwise injured yourself/30I	5.65	22.50	21.42	4.74	.000*	3.95, 5.69	4.73	.000*	3.76, 5.95	1.00	.977	0.88, 1.22
Seriously considered suicide/30J	5.61	22.25	17.99	4.92	.000*	4.09, 5.92	3.84	.000*	3.02, 4.88	1.26	.030*	1.02, 1.55
Attempted suicide/30K	0.89	4.67	3.67	5.13	.000*	3.36, 7.84	4.35	.000*	2.58, 7.33	1.15	.502	0.76, 1.74
Ever been diagnosed with depression/31A6	17.38	40.54	32.97	3.13	.000*	2.75, 3.56	2.39	.000*	1.99, 2.87	1.33	.002*	1.11, 1.58

Note. OR = odds ratio; CI = confidence interval.
*$p < .05$.

TABLE 3. Differences in Mental Health Services Utilization by Heterosexual, Bisexual, and Lesbian College Females

	Heterosexual		Bisexual		Lesbian		Bisexual vs Heterosexual		Lesbian vs Heterosexual		Bisexual vs Lesbian	
Metal health service	*n*	%	*n*	%	*n*	%	χ^2, $df = 1$	*p* value	χ^2, $df = 1$	*p* value	χ^2, $df = 1$	*p* value
Mental health professional												
Counselor/Psychologist												
Yes	1,137	33.8	1,514	62.0	473	56.2	450.81	.000*	141.98	.000*	8.81	.003*
No	2,222	66.2	929	38.0	369	43.8						
Psychiatrist												
Yes	377	11.2	741	30.5	211	25.2	333.85	.000*	108.28	.000*	8.31	.004*
No	2,976	88.8	1,692	69.5	626	74.8						
Other medical provider												
Yes	475	14.2	675	27.7	181	21.7	162.2	.000*	28.39	.000*	11.75	.001*
No	2,874	85.8	1,760	72.3	654	78.3						
Clergy												
Yes	220	6.6	184	7.6	53	6.3	2.2	.138	0.08	.777	1.52	.218
No	3,116	93.4	2,235	92.4	785	93.7						
University health/counseling												
Yes	477	14.3	767	31.5	247	29.9	248.42	.000*	112.43	.000*	0.80	.370
No	2,866	85.7	1,665	68.5	580	70.1						
Would you consider help from a mental health professional in the future?												
Yes	2,390	71.2	1,904	78.2	616	73.2	35.96	.000*	1.34	.248	8.74	.003*
No	965	28.8	530	21.8	225	26.8						

*$p < .05$.

or consider bisexual identity as "inauthentic," which has led bisexuals to conceal their identity to blend into gay/lesbian or heterosexual social spaces.[23] This hiding of same-sex attractions or feelings of guilt about holding on to heterosexual privilege may cause distress among some of these women that may contribute to depression, suicide ideation, or suicide attempts.

Results indicate that lesbians and bisexual female college undergraduates are significantly more likely to participate in self-injury (also called nonsuicidal self-injury [NSSI]) than their heterosexual counterparts. This concurs with previous research that found a nonheterosexual orientation among college students to be an independent predictor of both past-year and lifetime NSSI and more women participating in this behavior than men.[24]

With regard to mental health services utilization, findings indicate that both lesbians and bisexual women were significantly more likely to use nearly all of the mental health service providers (psychologists/counselors, psychiatrists, other medical providers, college/university counseling, or health services) than heterosexual women. This is a different finding from a previous study that found lesbians more likely to use psychotherapy than bisexual or heterosexual women.[6] In this study, there was no significant difference in lesbians' and bisexual women's reports of utilization of campus mental health services, although both groups were significantly more likely to use these services than their heterosexual counterparts. Being in a campus environment that may provide free access to mental health counseling may have some bearing on these findings. It should also be noted that these services were sought out despite the fact that bisexual women were significantly less likely to have health insurance coverage than their heterosexual counterparts, and lesbians approached significance in this realm as well. This finding indicates that bisexual women, and to a lesser extent lesbians, in our sample may have less access to health care. Currently, due to the Affordable Care Act, students may stay on their parents insurance up until the age of 26.[25] This change in health care coverage may assist in providing more health insurance coverage to lesbians and bisexual female undergraduate students now and in the future.

In the current study, one exception in mental health services utilization for the lesbians and bisexual women was seeking help from clergy. Neither lesbians nor bisexual women were more likely than heterosexual women to ever receive counseling from clergy. Because they were more likely to have seen all of the other mental health providers, the lack of difference in receiving counseling from clergy is noteworthy. Lesbians and bisexual women may be deterred from seeking counseling from clergy due to religious proscriptions against homosexuality and bisexuality and sexual prejudice practiced by some clergy.

Recent research (2010) has found bisexual women more likely to have frequent mental distress and poor general health than lesbians.[5,8] Similarly, findings here determined bisexual women reported the most mental distress of all 3 groups. They had significantly more anxiety (*felt overwhelming anxiety* [$p = .04$]) and depression symptoms (*felt things were hopeless* [$p = .02$); *felt very lonely* [$p = .01$]; *felt very sad* [$p = .01$]; *felt so depressed it was difficult to function* [$p = .02$]) than lesbians in the sample. The bisexual women also reported seriously considering suicide significantly more than lesbians ($p = .03$) and were significantly more likely to report a diagnosis of depression ($p < .01$) than lesbians. This finding implies more mental health interventions should target bisexual women in particular. In addition, more educational programs should assist college students to better understand bisexuality so that stigma surrounding this orientation may be reduced.

Meyer's conceptual framework of minority stress indicates that "stigma, prejudice, and discrimination create a hostile and stressful social environment that causes mental health problems."[13(p164)] This concept has been reinforced by other investigators addressing the issue of minority stress.[22,23] Consistent with the conclusions of these researchers, we suspect that discrimination in the form of sexual prejudice may play a role in the higher levels of stress, anxiety, depression, self-harm, and suicidal ideation and attempts found in the present study. Additional research is planned to examine this relationship.

Although the higher levels of anxiety, depression, self-harm, suicide ideation, and suicide attempts are of major concern, the increased likelihood that lesbians and bisexual women seek out counseling from a variety of mental health professionals is encouraging. Encouraging too is the fact that bisexual women indicated that they would be significantly more likely to seek out mental health counseling in the future than the other 2 groups. This counseling provides an opportunity for appropriate intervention. Thus, it is imperative that mental health care providers and health center personnel receive appropriate training to deal sensitively with sexual minority populations.

Campus mental health screenings, particularly depression and suicide screenings, should be provided and promoted for all students with a special emphasis on those most at risk, including sexual minority groups such as lesbians and bisexual women. Early identification of depression may assist in treatment and may help to prevent future tragic outcomes among these groups.

A campus environment that embraces diversity of all kinds should be cultivated, promoting a sense of belonging for all students, regardless of differences. Support groups specific to sexual minority women and opportunities for social interaction such as that provided by campus pride groups would decrease potential isolation. This would be particularly important for bisexual women who often do not feel the sense of community reported by lesbians. Campus programming specific to the health needs and wellness of sexual minority women should be provided.

In addition, there is some evidence that supportive environments in middle and high school settings may prevent mental health problems for LGBT individuals later in life.[26] School boards and administrators should establish and enforce policies regarding bullying and require programming to prevent

the victimization of LGBT youth. Such victimization appears to have long-lasting effects on their mental health in college and beyond. Once students are in college, education about diverse sexual orientations, such as one would receive in a basic human sexuality course, is recommended. In particular, an increased understanding and acceptance of bisexuality by college students may contribute to more positive mental health outcomes among bisexual individuals.

Limitations

Caution is warranted in generalizing the findings of this study to undergraduate female college students who are lesbian, bisexual, or heterosexual. The ACHA-NCHA-II is a "reference group" that appears to be representative of college students when compared with other representative samples, but because colleges and universities self-select to be included in the ACHA-NCHA-II, the sample cannot be considered to be truly representative. In this case, 3 semesters of ACHA-NCHA-II data were used to obtain a large enough sample of sexual minority women to provide meaningful analysis. There is a chance that some of the participants were duplicative if some of the universities administer the ACHA-NCHA-II annually and the same students were randomly selected in consecutive years. This would be unlikely, however, as many universities do not administer the ACHA-NCHA-II annually, and it is administered only to randomized classrooms or participants. As with any self-report survey research, there are possibilities of response bias. There are also limitations in using a secondary data set that is not designed specifically for lesbians and bisexual female college students. This data set was a subset of a much larger data set investigating college students in the United States.

Conclusions

Lesbians and bisexual female undergraduate women in this sample were significantly more likely to have mental health problems and report self-injury and suicide ideation and attempts than their heterosexual counterparts. Bisexual undergraduate women were more at risk than lesbians and heterosexual undergraduate women for the mental health problems investigated. Most worrisome were the high levels of self-injury, suicide ideation, and suicide attempts reported by lesbians and bisexual undergraduate women as compared with their heterosexual counterparts. An opportunity for intervention exists because these sexual minority women were more likely to see mental health providers than the heterosexual women. In addition, bisexual women were more likely to say they would seek help from a mental health provider in the future if they were experiencing a personal problem that was really bothering them.

More studies of sexual minority groups are recommended to explain their differences and factors associated with negative mental health outcomes. Increasingly, large-scale population-based surveys include a sexual orientation demographic question. This presents an opportunity to use these data to gain more insight on sexual minorities and how sexual prejudice affects their physical and mental health. Finally, more large-scale studies of LGBT college student health are needed, particularly those investigating representative samples of distinct groups of the LGBT spectrum.

NOTE

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