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SEXUAL ORIENTATION AND RELATIONSHIP CHOICE IN BORDERLINE PERSONALITY DISORDER OVER TEN YEARS OF PROSPECTIVE FOLLOW-UP

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The purpose of this study was to assess the prevalence of homosexuality/bisexuality and same-sex relationships in a sample of 362 hospitalized subjects, 290 with borderline personality disorder (BPD) and 72 comparison subjects with other personality disorders. At baseline and at five contiguous 2-year follow-up intervals, subjects meeting DIB-R and DSM-III-R criteria for BPD or at least one other personality disorder were interviewed using a semi-structured interview about their sexual orientation and the gender of intimate partners. Subjects with BPD were significantly more likely than comparison subjects to report homosexual or bisexual orientation and intimate same-sex relationships. There were no significant differences between male and female borderline subjects in prevalence of reported homosexual or bisexual orientation or in prevalence of reported same-sex relationships. Subjects with BPD were significantly more likely than comparison subjects to report changing the gender of intimate partners, but not sexual orientation, at some point during the follow-up period. A reported family history of homosexual or bisexual orientation was a significant predictor of an aggregate outcome variable assessing homosexual/bisexual orientation and/or same sex relationship in borderline subjects. Results of this study suggest that same-gender attraction and/or intimate relationship choice may be an important interpersonal issue for approximately one-third of both men and women with BPD.

Four studies have examined sexual orientation in patients with borderline personality disorder (BPD). Zubenko examined the prevalence of homosexual and bisexual orientation among 19 male and 61 female inpatients with BPD (Zubenko, George, Soloff, & Schulz, 1987). He used DSM-III criteria or the Diagnostic Interview for Borderline Patients (DIB; Gunderson, Kolb, & Austin, 1981) to establish the BPD diagnosis and obtained information

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on sexual history from multiple sources: the DIB, chart review, and clinical interviews. He found significantly higher rates of homosexual orientation among both male and female borderline subjects than among nonborderline outpatients with major depression. He reported rates of homosexual orientation significantly higher among male than among female borderline subjects (58% vs. 16%). In a second study, Stone used DSM-III criteria to diagnose 118 male and 181 female inpatients with BPD by chart review (Stone 1990). He reported rates of homosexual/bisexual orientation of 16% for male subjects and 1% for female subjects. In a third study, Dulit used a checklist methodology based on DSM-III criteria for a retrospective chart review to diagnose 27 male and 110 female inpatients with BPD (Dulit et al., 1993). She found that male but not female borderlines were significantly more likely to have a homosexual orientation than nonborderline inpatient comparison subjects. She reported rates of homosexual/bisexual orientation of 48% among male borderlines and 14% among female borderlines. She found that the prevalence of homosexual orientation, but not the prevalence of bisexual orientation was significantly higher among male than among female borderline subjects. In a fourth study, Paris reported a rate of homosexual orientation of 16.7% in male borderline outpatients compared to 1.7% in male subjects with nonborderline psychopathology (Paris, Zweig-Frank, & Guzder, 1995).

This study improves upon previous studies of sexual orientation in BPD in several ways. First, it assessed borderline personality more systematically, using two different diagnostic instruments. Second, it reports data both about sexual orientation and choice of sexual partner independent of sexual orientation. Third, it reports data about sexual orientation and gender of sexual partners collected systematically over five different follow-up periods. This includes data about reported changes in sexual orientation and changes in gender of intimate partners over time. Finally, the study had a high retention rate.

METHOD

The current study is part of a multifaceted longitudinal study of the course of borderline personality disorder—the McLean Study of Adult Development (MSAD). The methodology of this study has been described in detail elsewhere (Zanarini et al., 1998). Briefly, all subjects were initially inpatients at McLean Hospital in Belmont, Massachusetts. Each patient was screened to determine that he or she: (1) was between the ages of 18–35; (2) had a known or estimated IQ of 71 or higher; (3) had no history or current symptomatology of schizophrenia, schizoaffective disorder, bipolar I disorder, or an organic condition that could cause psychiatric symptoms; and (4) was fluent in English.

After the study procedures were explained at baseline, written informed consent was obtained. Each patient then met with a masters-level interviewer blind to the patient's clinical diagnoses. Three semi-structured di-

agnostic interviews were administered: (1) the Structured Clinical Interview for DSM-III-R Axis I Disorders (SCID-I; Spitzer, Williams, Gibbon, & First, 1992), (2) the Revised Diagnostic Interview for Borderlines (DIB-R; Zanarini, Gunderson, Frankenburg, & Chauncey, 1989); (3) the Diagnostic Interview for DSM-III-R Personality Disorders (DIPD-R; Zanarini, Frankenburg, Chauncey, & Gunderson, 1987). Good levels of inter-rater and test-retest reliability were achieved at baseline for most axis I and II disorders (Zanarini & Frankenburg, 2001; Zanarini, Frankenburg, & Vujanovic, 2002).

Adult sexual experiences were assessed at baseline blind to diagnostic status using a semi-structured interview—the Abuse History Interview (AHI). The psychometric properties of this instrument have been described before (Zanarini, Frankenburg, Reich, Hennen, & Silk, 2005). Briefly, inter-rater kappas based on 45 interviews ranged between .60–1.0 (median = .93). Test-retest kappas based on 30 interviews ranged between .44–1.0 (median = .63).

At each follow-up wave, diagnostic information was assessed via interview methods similar to the baseline procedures by staff members blind to baseline diagnoses. After informed consent was obtained, our diagnostic battery was readministered (a change version of the SCID-I, the DIB-R, and the DIPD-R). This change version of the SCID-I allowed us to rate the presence/absence of each axis I disorder as well as the percentage of the follow-up period that DSM-III-R criteria for that disorder were met. Good inter-rater reliability was also maintained throughout the course of the study for most axis I and II diagnoses (Zanarini et al., 2002; Zanarini & Frankenburg, 2001).

Sexual experiences during the follow-up periods were assessed blind to baseline diagnoses and prior information in this area using the Follow-up Version of the AHI (AHI-FUV). Both conjoint patient interviews and videotapes from previous periods were used to maintain high levels of inter-rater reliability and prevent rater drift throughout the years of follow-up. In terms of the conjoint interviews ($N = 48$), kappas ranged from .76–1.0 (median = .91). For videotaped interviews from earlier follow-up periods ($N = 36$), kappas ranged from .48–1.0 (median = .83). (Zanarini et al., 2005).

For each patient, four binary variables (0/1 for absent/present) were defined: (1) homosexual or bisexual orientation at baseline or during any of the study's follow-up period; (2) same-sex relationship at baseline or any of the follow-up assessments; (3) change in sexual orientation during any of the study's follow-up periods; and (4) change in the gender of intimate partner during any of the follow-up assessments. We then performed four analyses based on generalized linear modeling procedures. The first analysis included baseline diagnostic status as a predictor (explanatory) variable of the two binary outcome variables described above. The second included baseline diagnostic status as a predictor variable for reported change in sexual orientation or change in gender of sexual partner in any

of the follow-up periods. The third included gender as a predictor variable and was restricted to borderline patients. The fourth generalized linear modeling procedure, which was also restricted to borderline patients, included reported childhood sexual abuse and reported family history of homosexual or bisexual orientation as predictor variables. These analyses yielded adjusted risk ratio estimates, together with 95% confidence intervals (95% CIs) and the associated *z*-scores and *p*-values.

RESULTS

At baseline, 290 patients met both DIB-R and DSM-III-R criteria for BPD and 72 met DSM-III-R criteria for at least one nonborderline axis II disorder (and neither set of criteria for borderline personality disorder). In terms of continuing participation, 275 borderline patients were reinterviewed at two years, 269 at four years, 264 at six years, 255 at eight years, and 249 at ten years. In terms of axis II comparison subjects, 67 were reinterviewed at two years, 64 at four years, 63 at six years, 61 at eight years, and 60 at ten years. At the ten-year assessment, 41 borderline patients were no longer in the study: 12 had committed suicide, six died of other causes, 10 discontinued their participation, and 13 were lost to follow-up. By this time, 12 axis II subjects were no longer participating in the study: one had committed suicide, four discontinued their participation, and seven were lost to follow-up. All told, 90.1% ($N = 309$) of surviving patients were reinterviewed at all five follow-up waves.

Demographically, borderline patients and axis II comparison subjects were very similar in terms of their mean age and racial background. More specifically, both patient groups were, on average, in their mid twenties upon entering the study, 26.9 years ($SD = 5.8$) vs. 27.0 years ($SD = 8.0$). Less than 15% were nonwhite (13% vs. 14%). But borderline patients came from a significantly lower mean socioeconomic background than comparison subjects, 3.4 ($SD = 1.5$) vs. 2.8 ($SD = 1.3$, $t = 3.09$, $df = 360$, $p = .002$, as measured by the 5-point Hollingshead-Redlich scale (1 = highest, 5 = lowest; Hollingshead, 1957). In addition, a significantly higher percentage of borderline patients than axis II comparison subjects were female (80.3% vs. 63.9%, $\chi^2 = 7.93$, $df = 1$, $p = 0.0049$).

As shown in Table 1, subjects with BPD were significantly more likely to report homosexual or bisexual orientation than comparison subjects with other personality disorders (RR = 1.78, 95% CI: 1.00, 3.17). The percentage of subjects with BPD reporting homosexual or bisexual orientation at baseline or in one of the follow-up periods was almost twice that reported by comparison subjects with OPD. Similarly, subjects with BPD were significantly more likely than comparison subjects with OPD to report having had a same-sex relationship at some point in time (RR = 2.02, 95% CI: 1.21, 3.39). The percentage of subjects with BPD reporting same-sex relationships was over twice the percentage reported by subjects with OPD.

As shown Table 1, subjects with BPD and comparison subjects did not

TABLE 1. Prevalence of Homosexual/Bisexual Orientation and Same-Sex Relationships Among Borderline Patients and Axis II Comparison Subjects

	(%/N)						
	BPD Subjects (*N* = 290)	**OPD Subjects (*N* = 72)**	**Risk Ratio**	**Robust Standard Error**	**Z Score**	**P-level**	**95% Confidence Interval**
Homosexual/ Bisexual Orientation	27.2 (79)	15.3 (11)	1.78	0.52	1.97	0.049	1.00, 3.17
Same-Sex Relationship	36.6 (106)	18.1 (13)	2.02	0.53	2.68	0.007	1.21, 3.39
Homosexual/ Bisexual Orientation and/or Same-Sex Relationship	37.6 (109)	18.1 (13)	2.08	0.55	2.79	0.005	1.24, 3.48
	BPD Subjects (*N* = 275)	OPD Subjects (*N* = 67)					
Sexual Orientation Changed	17.8 (49)	10.5 (7)	1.71	0.65	1.40	0.161	0.81, 3.60
Sexual Relationship Changed	24.7 (68)	9.0 (6)	2.76	1.12	2.51	0.012	1.25, 6.10

differ significantly in reported change of sexual orientation over time. However, subjects with BPD were significantly more likely to report change in the gender of intimate partners over time. BPD subjects were almost three times as likely as OPD subjects to report such a change in one of the follow-up periods (RR = 2.82, 95% CI: 1.27, 6.23).

Table 2 shows the percentage of male and female borderline subjects

TABLE 2. Prevalence of Homosexual/Bisexual Orientation and Same-Sex Relationships Among Borderline Males and Females

	(%/N)						
	Males (*N* = 57)	**Females (*N* = 233)**	**Risk Ratio**	**Robust SE**	**Z Score**	**P-level**	**95% Confidence Interval**
Homosexual/ Bisexual Orientation	29.8 (17)	26.6 (62)	0.89	0.21	–0.49	0.621	0.57, 1.40
Same-Sex Relationship	35.1 (20)	36.9 (86)	1.05	0.21	0.25	0.800	0.71, 1.56
Homosexual/ Bisexual Orientation and/or Same-Sex Relationship	35.1 (20)	38.2 (89)	1.08	0.22	0.43	0.669	0.74, 1.61
	Males (*N* = 52)	Females (*N* = 223)					
Sexual Orientation Changed	15.4 (8)	18.4 (41)	1.20	0.42	0.50	0.616	0.60, 2.40
Sexual Relationship Changed	23.1 (12)	25.1 (56)	1.09	0.30	0.30	0.762	0.63, 1.88

who reported a homosexual/bisexual orientation, a same-sex relationship, or the aggregate of the two at some point during the study. It also shows the percentage of borderline subjects who reported a change in their sexual orientation or a change in the gender of an intimate partner. Somewhat surprisingly, no significant gender differences were found.

Table 3 presents baseline multivariate predictors of our aggregate variable assessing homosexual/bisexual orientation and/or same-sex relationships in subjects with BPD. It shows a significant association between this outcome variable and a reported family history of homosexual/bisexual orientation. Furthermore, it shows a trend toward a significant association between this outcome variable and a reported history of childhood sexual abuse. Specifically, those borderline subjects with a reported family history of homosexual/bisexual orientation were 72% more likely to report homosexual/bisexual orientation and/or same sex relationships (RR = 1.72), while those borderline subjects with a reported childhood history of sexual abuse were 35% more likely (RR = 1.35).

DISCUSSION

In this study, patients with BPD were over 75% more likely to report homosexual/bisexual orientation than comparison subjects with other personality disorders. This is consistent with results from previous studies in finding higher rates of reported homosexual/bisexual orientation among male borderline subjects than those reported by nonborderline comparison subjects and by the general population (Laumann, Gangnon, Michael, & Michaels, 1994; Mosher, Chandra, & Jones, 2005). Moreover, it is consistent with two of three previous studies in finding higher rates of homosexual/bisexual orientation among female borderline subjects than in the general population (Laumann et al., 1994; Mosher et al., 2005). This finding is clinically important in that it suggests clinicians should be sensitive to the probability that nonheterosexual orientation is more common in patients with borderline personality disorder than in patients with other personality disorders.

To our knowledge, this is the first study to focus on the prevalence of same-sex relationships in addition to the prevalence of homosexual/bisexual orientation in patients with BPD. The study found that patients with BPD were approximately twice as likely to report having a sexual relationship with a same-sex partner as comparison subjects with other personal-

TABLE 3. Multivariate Predictors of Homosexual/Bisexual Orientation and Same-Sex Relationships Among Borderline Patients

	Risk Ratio	Robust Standard Error	Z Score	P-level	95% Confidence Interval	
Childhood Sexual Abuse	1.35	0.24	1.74	0.082	0.96	1.90
Homosexual/Bisexual Family History	1.72	0.26	3.67	<0.001	1.29	2.30

ity disorders. In addition, it found that the percentage of both male and female borderline patients reporting same-sex intimate relationships (with partners) was higher than the percentage reporting homosexual or bisexual orientation. Twenty-seven subjects with BPD in our study (9% of BPD subjects overall) reported having intimate relationships with a same-sex partner without identifying themselves as homosexual or bisexual. This suggests that patients with BPD may choose intimate partners of the same sex, even if they do not report a homosexual or bisexual orientation. For borderline patients, the choice of an intimate partner may be more partner-specific than gender-specific. Alternatively, borderline patients with same-sex partners may be more reluctant to label themselves bisexual or homosexual. In either case, choosing a partner of the same gender still carries with it a social stigma in many settings, a stigma that may reinforce a sense of alienation.

A second way in which this study differed from previous studies is that it assessed change in sexual orientation and gender of intimate partners over time. Although borderline subjects were not significantly more likely to report a change in sexual orientation than comparison subjects, they were significantly more likely to report a change in the gender of intimate partners. This suggests that for borderline patients, changes in sexual orientation and gender of intimate partners are not a unitary process. For subjects with BPD, choice of gender of intimate partners appears to be more fluid than for comparison subjects. This is consistent with the notion that patients with BPD may choose intimate partners more on the basis of individual factors aside from gender.

In this study, male and female patients with BPD were equally likely to report homosexual/bisexual orientation and having a sexual relationship with a partner of the same gender. These results differ from those reported previously. Whereas earlier studies had reported rates of homosexuality/bisexuality only in the range of 1.4–16% for female subjects, this study found that 26.6% of female borderline patients reported their sexual orientation to be nonheterosexual at some point in time. Whereas two of three previous studies had reported rates of homosexuality among male borderline subjects of 48% or more, this study found only 29.8% of male borderline subjects reported a homosexual/bisexual orientation even though subjects were followed for 10 years. One reason for these differences may be that previous studies assessed sexual orientation differently. Zubenko used Kinsey's definition of homosexuality and assessed sexual orientation from multiple sources: using clinical interviews, chart reviews, and the DIB. Paris, in contrast, assessed homosexuality using one item from the DIB. Dulit and Stone assessed sexual orientation using chart review and do not specify what criteria they used for homosexual or bisexual orientation.

In this study, a reported family history of homosexual/bisexual orientation predicted homosexual/bisexual orientation and/or same-sex relationships in borderline subjects. This is consistent with research in the gen-

eral population indicating that sexual orientation is related to familial factors, which are at least partly genetic (Kendler, Thornton, Gilman, & Kessler, 2000; Bailey, Dunne, & Martin, 2000). As with our results, research in the general population has not been able to specify the nature of these factors. It is noteworthy, however, that genetic research in community samples has dealt only with sexual orientation; it has not dealt with same-sex intimate relationships as an independent variable.

In this study, there was a trend toward a reported history of childhood sexual abuse predicting homosexual/bisexual orientation and/or same-sex relationships. This is consistent with clinical experience that some female borderline patients may identify themselves as homosexual or may choose female sexual partners because of histories of childhood abuse by men. In these cases, choice of sexual partner may have less to do with sexual attraction than with establishing an intimate relationship that provides a sense of safety. The relationship between childhood sexual abuse and homosexual/bisexual orientation or same-sex relationships in male borderline subjects remains less clear.

This study has three limitations. First, data for the study were based exclusively on self-report. Second, all subjects in the study were initially inpatients. Third, we do not know if and when these subjects told those most important to them about their sexual orientation or same sex relationship and whether doing so helped them find the acceptance they so often crave.

Results of the study suggest that further research is necessary to clarify the relationship between BPD and sexual orientation, as well as choice of sexual partner. Perhaps most importantly, further research would help to elucidate whether having same-sex intimate relationships helps such patients to be less symptomatic and achieve better levels of functioning.

Taken together, the results of this study suggest that homosexual/bisexual orientation and same-sex intimate relationships are common among both male and female borderline patients.

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