

## **SEXUAL ORIENTATION AND BORDERLINE PERSONALITY DISORDER FEATURES IN A COMMUNITY SAMPLE OF ADOLESCENTS**

Tyson R. Reuter, PhD, Carla Sharp, PhD, Allison H. Kalpakci, MA, Hye J. Choi, PhD, and Jeff R. Temple, PhD

Empirical literature demonstrates that sexual minorities are at an increased risk of developing psychopathology, including borderline personality disorder (BPD). The specific link between sexual orientation and BPD has received significantly less attention in youth, and it remains unclear what drives this relation. Given that there are higher rates of psychopathology in both sexual minorities and individuals with BPD, the present study aimed to determine if sexual orientation uniquely contributes to borderline personality pathology, controlling for other psychopathology. An ethnically diverse sample of 835 adolescents completed self-report measures of borderline features, depression, anxiety, and sexual orientation. Sexual minorities scored higher on borderline features compared to heterosexual adolescents. When controlling for depression and anxiety, sexual orientation remained significantly associated with borderline features. The relation between sexual orientation and BPD cannot fully be explained by other psychopathology. Future research is necessary to understand potential mechanisms underlying this relation.

Borderline personality disorder (BPD) is a severe psychiatric condition characterized by extreme dysregulation across affective, behavioral, cognitive, and interpersonal domains of functioning. Hallmarks of the disorder include intense anger, identity disturbance, stormy interpersonal relationships, impulsive behavior, and frantic efforts to avoid real and perceived abandonment (American Psychiatric Association, 2013). Prevalence is relatively high, with estimates of one to two percent in community samples (Grant et al., 2008) and approximately one in ten psychiatric outpatients and one in five inpatients, with a greater proportion being female (American Psychiatric Association, 2013). BPD is a pervasive and lifelong disorder with high traditional Axis I comorbidity (Grant et al., 2008; Zanarini et al., 1998),

---

From University of Houston, Houston, Texas (T. R. R., C. S., A. H. K.) and University of Texas Medical Branch, Galveston, Texas (H. J. C., J. R. T.).

This work was supported by grant award K23HD059916 (PI Temple) from the Eunice Kennedy Shriver National Institute of Child Health & Human Development (NICHD) and award 2012-WG-BX-0005 (PI Temple) from the National Institute of Justice (NIJ). The content is solely the responsibility of the authors and does not necessarily represent the official views of the NIH or NIJ.

Address correspondence to Carla Sharp, Ph.D., Department of Psychology, University of Houston, Health and Biomedical Sciences Building, 4811 Calhoun Rd., Room 373, Houston, TX 77204-6022. E-mail: csharp2@uh.edu.

stability over time (Chanen et al., 2004), significant economic burden for mental health providers and society (Soeteman, Roijen, Verheul, & Busschbach, 2008), poor psychosocial outcomes (Winograd, Cohen, & Chen, 2008), functional impairment (Skodol et al., 2002), and an alarmingly high completed suicide rate, with estimates upwards to 10 percent (Gunderson & Ridolfi, 2001; Paris, 2009).

Given these serious consequences, researchers have extensively investigated the etiology, course, and treatment of BPD across a variety of settings (e.g., clinical and community), developmental periods (e.g., adult and adolescent), and demographics (e.g., gender and race). As a result of empirical research across diverse groups, our understanding of this complex disorder has improved dramatically. However, one demographic that has received significantly less attention is sexual minority populations.

The majority of research examining mental health in sexual minority populations has focused primarily on traditional Axis I disorders and suicide, with significantly fewer studies examining personality disorders. This literature demonstrates that sexual minorities (an umbrella term that captures a diverse group of individuals who may endorse same-sex attraction, engage in same-sex sexual behavior, and/or report a gay, bisexual, lesbian, or no particular sexual orientation/identity; Cohler & Hammack, 2007) are at an increased risk of mental health problems, having higher rates of depression, anxiety, substance use, and suicidality compared to heterosexuals (Cochran, Mays, & Sullivan, 2003; Gilman et al., 2001; King et al., 2008; Meyer, 2003; Sandfort, de Graaf, Bijl, & Schnabel, 2001). High rates of psychopathology in sexual minorities are also found in adolescent populations (Fergusson, Horwood, & Beautrais, 1999; Hatzenbuehler, McLaughlin, & Nolen-Hoeksema, 2008; Marshal et al., 2012; Remafedi, French, Story, Resnick, & Blum, 1998). For example, Hatzenbuehler and colleagues (2008) demonstrated that adolescents who endorsed same-sex attraction evidenced greater risk for internalizing disorders and emotional regulation deficits than their heterosexual counterparts. Using data from the Massachusetts Youth Risk Behavior Survey, Garofalo and colleagues (1999) found that gay, lesbian, and bisexual youth were three times more likely to attempt suicide than heterosexual youth.

In the few studies that have investigated BPD in sexual minority populations, findings demonstrate that BPD is overrepresented in sexual minorities (Dulit, Fyer, Miller, Sacks, & Frances, 1993; Paris, Zweig-Frank, & Guzder, 1995; Stone, 1990). For example, Zubenko, George, Soloff, and Schulz (1987) found that homosexuality was ten times more common in men and six times more common in women with BPD compared to both the general population and a depressed control group. In a ten-year longitudinal study, Reich and Zanarini (2008) found that approximately one-third of both men and women with BPD engaged in homosexual relationships.

However, methods used by previous studies largely rely on retrospective chart review to assess BPD diagnosis and establish a sexual minority group (e.g., Dulit et al., 1993; Stone, 1990). Beyond demonstrating an overrepresentation of BPD in sexual minorities, research has not further explored explanations for this association. Whether a non-heterosexual identity, attrac-

tion, or behavior is uniquely associated with BPD, or it is other interrelated correlates (e.g., other psychopathology) that drive this relation, is unclear. Given that there are higher rates of psychopathology in both sexual minorities (Cochran et al., 2003; Meyer, 2003) and individuals with BPD (Zanarini et al., 1998; Zimmerman & Mattia, 1999), it is important to disentangle this relation and determine if a non-heterosexual identity, attraction, or behavior uniquely contributes to borderline personality pathology specifically, controlling for other psychopathology. Congruent with an intersectional perspective (Cole, 2009), it is also valuable to explore whether individuals with multiple gender, racial/ethnic, and sexual identities are at even greater risk.

Further, more research is needed to examine BPD in sexual minority youth. Indeed, we are aware of only one study. Marshal and colleagues (2012) demonstrated significantly higher levels of internalizing, externalizing, and BPD symptoms in sexual minority adolescent girls (SMG) compared to heterosexual girls. However, this study's inclusion of females only limits interpretability. Further, it is unclear whether the high rates of BPD symptoms in SMG were due to BPD's shared variance with other psychopathology or if there was a significant, unique relation between sexual attraction or identity and BPD specifically. Until recently, most research investigating psychopathology in sexual minority populations has been limited to clinical populations or has focused strictly on traditional Axis I disorders, with little work examining personality pathology in typically developing youth. Increased efforts to study borderline personality traits (rather than diagnostic status) among community and at-risk samples (Eaton et al., 2011; Korfine & Hooley, 2009; Stepp, Olino, Klein, Seeley, & Lewinsohn, 2013) have allowed the examination of borderline personality traits and their relation to other constructs across the full latent trait of borderline pathology and across a range of severity levels. This approach is particularly valuable for researchers attempting to study the developmental course of BPD, as it allows for the assessment of symptoms that do not reach diagnostic levels, facilitating early identification and treatment efforts.

Guided by findings from the adult literature demonstrating sexual minorities being overrepresented in BPD samples, the present study sought to downwardly extend this work to a community sample of adolescents by examining the relation between one aspect of sexual minority status, *sexual orientation*, and borderline features. Specifically, the first aim was to investigate whether sexual minorities were overrepresented in adolescents with borderline features compared to their heterosexual counterparts. The second aim was to explore differences in borderline features within sexual minorities. The third aim was to examine the extent to which sexual orientation, controlling for depression and anxiety, was uniquely associated with borderline features. Based on research demonstrating higher rates of psychopathology in sexual minorities, and findings, albeit limited, from the adult literature showing higher rates of non-heterosexual identity, behavior, or attraction in BPD populations, we hypothesized that sexual minorities will be overrepresented in adolescents with borderline features; that borderline features will be higher in females and bisexuals compared to males and homosexuals; and

that sexual orientation will make unique contributions to borderline features over and above psychopathology (i.e., depression and anxiety).

## **METHOD**

### **PARTICIPANTS**

The sample included 835 ethnically diverse adolescents ages 15–19 ( $M_{\text{age}} = 17.05$ ,  $SD = .76$ , 56.2% female) from seven schools in the Houston area. Breakdown of ethnicity was as follows: 31.3% White, 32.3% Hispanic, 26.9% Black, 1.8 % Asian, and 7.8% who identified as “Other.”

### **MEASURES**

*Sexual Orientation.* Adolescents were asked how they identify their sexual orientation by choosing one of the following: “completely heterosexual,” “mostly heterosexual,” “bisexual,” “mostly homosexual,” “completely homosexual,” and “not sure.” Adolescents who identified their sexual orientation as “completely heterosexual” were grouped as heterosexual (coded “0”) and those who identified as “mostly heterosexual,” “bisexual,” “mostly homosexual,” “completely homosexual,” and “not sure” were grouped as sexual minorities (coded “1”).

*Depression.* The Center for Epidemiological Studies-Depression Scale (CES-D 10; Radloff, 1977) contains 10 items measuring depressive symptomology in the general population. Participants indicated the frequency they have experienced a particular depressive symptom in the past week, with responses ranging from 0 (“less than 1 day”) to 3 (“5–7 days”). The CES-D 10 total score was used dimensionally as an independent variable in regression analyses. Internal consistency for the scale has been demonstrated to be adequate, with Radloff (1991) reporting a Cronbach’s alpha of .86 in a sample of high school students. Internal consistency for the CES-D in the present study was also adequate with a Cronbach’s alpha of .88.

*Generalized Anxiety.* The Screen for Child Anxiety Related Emotional Disorders (SCARED; Birmaher et al., 1997) contains 41 items measuring symptoms of *DSM-IV* anxiety disorders, and includes five subscales: panic/somatic, generalized anxiety, separation anxiety, social phobia, and school phobia. Due to time constraints, only the generalized anxiety subscale was administered. Participants indicated how frequently they have experienced each symptom in the past three months, with responses ranging from 0 (“not true or hardly ever true”) to 2 (“very true or often true”). The generalized anxiety subscale total score was used dimensionally as an independent variable in regression analyses. Internal consistency for the scale has been demonstrated to be adequate, with Birmaher and colleagues (1997) reporting a Cronbach’s alpha ranging from .74 to .93 for subscales. Internal consistency for the SCARED GAD subscale in the present study was also adequate with a Cronbach’s alpha of .82.

*Borderline Personality Disorder Features.* The Borderline Personality Features Scale for Children (BPFS-C; Crick, Murray-Close, & Woods, 2005) contains 24 items measuring borderline features, including identity problems (“How I feel about myself changes a lot”), affective instability (“When I’m mad, I can’t control what I do”), negative qualities of peer relationships (“Lots of times, my friends and I are really mean to each other”), and self-harm (“When I get upset, I do things that aren’t good for me”). Participants indicated on a scale of 1 (“not at all”) to 5 (“always true”) how they feel about themselves or other people. The summation of the items yields a BPFS-C total score, which was used both dimensionally to indicate the presence of BPD features and categorically (cut-off score of 66; Chang, Sharp, & Ha, 2011) to indicate a positive BPD diagnosis. Internal consistency for the scale has been demonstrated to be adequate, with Crick and colleagues (2005) reporting a Cronbach’s alpha of .76 and Chang and colleagues (2011) reporting a Cronbach’s alpha of .81. Internal consistency for the BPFS-C in the present study was adequate with a Cronbach’s alpha of .86.

## PROCEDURES

The present study was approved by the appropriate institutional review board, and the data are part of a larger dataset investigating adolescent health behaviors (Temple et al., 2013). Recruitment occurred during school hours in classes with required attendance. Research staff attended each class twice prior to assessment to explain the study and answer questions. Information about the study as well as parental permission slips were sent home with the students for their parents to read, sign, and return. Seventy-one percent returned parent permission forms, and of those, 92% were permitted to participate. Assent was then obtained from students who returned the forms, and those who assented were pulled from class to complete the survey.

## DATA ANALYTIC STRATEGY

To examine whether sexual minorities were overrepresented in groups with borderline features, analyses were conducted to explore bivariate relations between borderline features (i.e., BPFS-C), depression (i.e., CES-D), anxiety (i.e., SCARED), and sexual orientation (i.e., heterosexual vs. sexual minority). This included correlational analyses for continuous variables and independent samples t-tests and chi-square analyses for categorical variables. To examine the interaction of race and sexual orientation on borderline features, a univariate analysis of variance (ANOVA) was conducted, with borderline features entered as the dependent variable and race (Black, Latino, White, and Other) and sexual orientation (heterosexual and sexual minority) entered as fixed factors. To examine differences in borderline features within sexual minorities, a one-way ANOVA was used to compare all non-heterosexual identities (i.e., “mostly heterosexual,” “bisexual,” “mostly homosexual,” “completely homosexual,” and “not sure”), and independent samples t-tests were used to compare male and female adolescents. Once significant at the bivariate level, a linear regression analysis was conducted,

with borderline features as the outcome (dependent variable) and depression, anxiety, and sexual orientation as predictors (independent variables), and six dummy-coded school variables to control hierarchical structure of data (i.e., 1 = students in first school and 0 = students in all other schools; 1 = students in second school and 0 = students in all other schools; and so on). Results of this analysis determined whether sexual orientation made a unique contribution to borderline features while controlling for potential confounds (i.e., depression and anxiety).

## RESULTS

### DESCRIPTIVE ANALYSES

Breakdown of sexual orientation was as follows:  $n = 683$  (81.8%) identified as “completely heterosexual,”  $n = 60$  (7.2%) as “mostly heterosexual,”  $n = 40$  (4.8%) as “bisexual,”  $n = 13$  (1.6%) as “mostly homosexual,”  $n = 22$  (2.6%) as “completely homosexual,” and  $n = 17$  (2.0%) as “not sure.” Similar distribution of sexual orientation has been found in other adolescent samples (Corliss, Rosario, Wypij, Fisher, & Austin, 2008).

### AIM 1: DIFFERENCES IN BORDERLINE FEATURES BETWEEN SEXUAL MINORITIES AND HETEROSEXUAL ADOLESCENTS

Correlational analyses revealed that borderline features were significantly associated with depression ( $r = .624, p < .001$ ) and anxiety ( $r = .417, p < .001$ ). Sexual minorities also scored higher on measures of depression ( $t = -4.121, p < .001$ ) but not anxiety ( $t = -1.480, p = .140$ ). Independent samples t-tests further revealed that sexual minorities scored higher than heterosexual adolescents on borderline features ( $t = -5.147, p < .001$ ). Congruent with methods from previous studies, which have generally utilized a categorical definition of BPD (e.g., diagnosis), we also conducted a chi-square analysis to compare sexual orientation (i.e., heterosexual vs. sexual minority) and BPD status (i.e., BPD vs. not-BPD) based on a cut-off score of 66 on the BPFSC (Chang et al., 2011). Results showed that sexual minorities were overrepresented in the BPD group (40.4%) compared to the non-BPD group (17.2%), and that this relation was significant ( $X^2 = 20.176, p < .001$ ). When examining the interaction of race and sexual orientation on borderline features, results revealed a main effect on sexual orientation,  $F(1, 784) = 25.161, p < .001$ , but not for race,  $F(3, 784) = .361, p = .781$ , nor an interaction of race  $\times$  sexual orientation,  $F(3, 784) = .270, p = .847$ .

### AIM 2: DIFFERENCES IN BORDERLINE FEATURES WITHIN SEXUAL MINORITIES

As significant heterogeneity exists within sexual minorities, differences in borderline features by sexual orientation and gender were explored using ANOVA and independent samples t-tests. A one-way between-subjects ANOVA showed a significant effect of sexual orientation on borderline features,  $F(4, 139) = 3.629, p = .008$ . Tukey post-hoc analyses indicated that

borderline features were significantly higher for adolescents who identified as “mostly homosexual” ( $M = 72.08$ ,  $SD = 12.29$ ) compared to adolescents who identified as “completely homosexual” ( $M = 56.71$ ,  $SD = 13.49$ ) and “not sure” ( $M = 56.71$ ,  $SD = 11.02$ ). In order to increase sample size and maximize power, analyses were also conducted by grouping those who identified as “mostly heterosexual,” “bisexual,” and “mostly homosexual” as bisexual and those who identified as “completely homosexual” as homosexual. Results revealed that bisexual adolescents scored higher on borderline features compared to homosexual adolescents ( $t = 2.073$ ,  $p = .047$ ). Independent samples t-tests were then used to explore differences in borderline features by gender. Results revealed no significant differences in borderline features between sexual minority males and sexual minority females ( $t = 1.153$ ,  $p = .252$ ).

### AIM 3: THE RELATION BETWEEN SEXUAL ORIENTATION AND BORDERLINE FEATURES CONTROLLING FOR PSYCHOPATHOLOGY

To determine whether sexual orientation was associated with borderline features while controlling for covariates (i.e., depression and anxiety), all main study variables were entered as independent predictors into a linear regression, with borderline features as the dependent variable. Results showed that all main study variables retained significance, including depression ( $b = 1.377$ ,  $SE = .082$ ,  $\beta = .532$ ,  $t = 16.747$ ,  $p < .001$ ), anxiety ( $b = .534$ ,  $SE = .098$ ,  $\beta = .174$ ,  $t = 5.472$ ,  $p < .001$ ) and sexual orientation ( $b = 3.490$ ,  $SE = 1.031$ ,  $\beta = .096$ ,  $t = 3.383$ ,  $p = .001$ ).

## DISCUSSION

Given previous research demonstrating links between BPD, psychopathology, and non-heterosexual identity, behavior, or attraction in adults, and given the lack of research investigating these associations in youth, the present study sought to examine the relation between sexual orientation and borderline features in a community sample of adolescents. Several findings merit discussion. First, echoing findings from adult studies, sexual minorities were overrepresented in the BPD group and scored higher on measures on borderline features compared to heterosexual adolescents. Second, when examining sexual minorities in isolation, no differences in borderline features were found by gender. However, differences were found by sexual orientation, such that bisexual adolescents scored higher on borderline features compared to homosexual adolescents. Third, sexual orientation made contributions to borderline features over and above depression and anxiety.

The finding that sexual minority adolescents were overrepresented in the BPD group mirrors results from the adult literature, and this is not entirely surprising given the significant overlap in presentation between adolescent and adult BPD (Sharp, Ha, Michonski, Venta, & Carbone, 2012; Sharp & Romero, 2007). The finding that differences in borderline features were found within sexual minorities, specifically between bisexual and ho-

mosexual adolescents, also fits with the adolescent and adult literature. Although the majority of research on sexual minority populations collapses bisexuals and homosexuals into one category, studies that have differentiated the two orientations generally find that bisexuals report higher rates of distress, including anxiety and depression (Jorm, Korten, Rodgers, Jacomb, & Christensen, 2002), self-injurious behaviors (Whitlock, Eckenrode, & Silverman, 2006), sexual abuse (Freedner, Freed, Yang, & Austin, 2002), and dating violence (Reuter, Sharp, & Temple, 2015). These findings could reflect the possibility that bisexuals experience *dual marginalization* (Ochs, 2006), such that they are less accepted and more isolated from both the majority (i.e., heterosexual) and minority (i.e., gay/lesbian) communities (Burrill, 2009; Eliason, 1997; Freedner et al., 2002). Perhaps this is because some gays and lesbians may view bisexuals as experiencing less of a struggle, given they can more easily conceal their sexual orientation and claim the benefits of heterosexual privilege (Israel & Mohr, 2004). It is also interesting that, within sexual minorities, no differences in borderline features by gender were found. This finding contrasts the majority of literature on BPD, which consistently finds higher rates in females, both adolescents and adults (Skodol & Bender, 2003). Finally, although the present study found no racial differences in borderline features, future research should continue to explore whether the intersection of race and sexual orientation confers risk for psychopathology, particularly traditional Axis II disorders.

The finding that sexual orientation was associated with borderline features, even when accounting for depression and anxiety, suggests that the relation between the two constructs is not fully explained by shared variance associated with psychopathology. However, it is inadvisable, and likely incorrect, to draw the conclusion that sexual minority youth exhibit higher borderline features solely because of their sexual orientation. Although it is well established that sexual minorities are at greater risk across a range of both physical and mental health outcomes (Case et al., 2004; Centers for Disease Control and Prevention, 2012; Mustanski, Garofalo, & Emerson, 2010), the underlying mechanism is not entirely clear. One possible explanation with strong empirical support is a minority stress model, which in brief states that the interaction between minority status and majority, dominant values results in conflict with the social environment, which ultimately leads to adverse health outcomes (DiPlacido, 1998; Meyer, 2003). In the case of sexual minority adolescents, this conflict is often experienced in the form of stigma, prejudice, and discrimination across familial, peer, and societal contexts (see Kosciw, Greytak, Bartkiewicz, Boesen, & Palmer, 2012, for a review). Indeed, sexual minorities are more likely than heterosexuals to experience physical and psychological violence, rejection from friends and family, internalized homophobia, and self-stigmatization (D'Augelli, Hershberger, & Pilkington, 1998; Herek, Gillis, Cogan, & Glunt, 1997; Meyer, 2003). Perhaps these distal and proximal stressors over time communicate to the adolescent that his/her self, and therefore all aspects of his/her self (i.e., emotions, thoughts, and behavior), are unacceptable, representing an unremitting form of invalidation. This model is further supported by evidence showing that, when controlling for experiences of discrimination, the

relation between sexual orientation and poor health outcomes is weakened significantly (Mays & Cochran, 2001).

Developmental models that emphasize the role of an “invalidating environment” (Linehan, 1993) in the development of BPD should also be considered. According to the models of Linehan (1993) and others (Crowell, Beauchaine, & Linehan, 2009), chronic environmental invalidation (i.e., dismissal or negation of one’s emotional and cognitive experiences) interacts with the temperament of a biologically predisposed child to increase the likelihood of the development of BPD. Over time, chronic invalidation leads to self-invalidation, as the capacity to accept and therefore manage one’s own emotional, cognitive, and behavioral experiences is disturbed. This is thought to lead to the extreme dysregulation found in the disorder. Perhaps, too, there is shared overlap in predisposition for both a non-heterosexual orientation and a childhood temperament that increases psychiatric risk. For example, amygdala connectivity, an area involved with emotion regulation, has been shown to differ for heterosexual and non-heterosexual individuals (Savic & Lindstrom, 2008). It is possible, then, that other biological and genetic factors may be implicated in both a non-heterosexual orientation and psychiatric risk. However, because Linehan’s model was not explicitly tested by the current study, a developmental and transactional argument is only speculative. Prospective longitudinal studies are needed to determine whether individuals who later endorse a sexual minority status in adolescence and adulthood experienced chronic invalidation in early childhood.

Another issue of consideration concerns the “coming out” process unique to sexual minorities, which involves the disclosure of one’s sexual orientation to others. Given that many sexual minority adolescents experience internalized homophobia and struggle with their identity during this process (Brotman, Ryan, Jalbert, & Rowe, 2002; Coleman, 1981; Meyer, 2003), it is possible that coming out, and the associated social consequences, may reflect BPD symptoms. For example, the coming out process often results in rejection by friends and family (Armesto, & Weisman, 2001). Over time, these experiences may crystallize into an expectation that others will also reject them (Meyer, 2003), which could explain the endorsement of BPD features related to “real or imagined abandonment” (American Psychiatric Association, 2013). Repeated experiences of discrimination, isolation from peers, and receiving negative social messages about homosexuality could also mirror impairments in self-functioning specific to BPD (e.g., chronic feelings of emptiness, identity disturbance). Future research could benefit from an interview-based measure of BPD, one that specifically taps into the individual criteria of the disorder to further clarify which symptoms (e.g., fear of abandonment, transitive paranoia) may drive the finding of higher rates of BPD in sexual minorities.

Finally, it is important to contextualize these findings with a consideration of normative adolescent sexual development. Many researchers have criticized viewing sexual identification as a linear process, and further point out the relative instability and inconsistency of both sexual behaviors and identities (Diamond, 2008; Friedman et al., 2004; Savin-Williams, 2005). Relatedly, cohort differences should not be overlooked. Indeed, research

conducted largely in the past decade has seen a paradigm shift in the theoretical conceptualization of adolescent sexual development, with more recent literature considering multiple domains of sexual behavior, sexual selfhood, sexual socialization, and sexual identity integration (Cohler & Hammock, 2007; Rosario, Schrimshaw, & Hunter, 2011; Tolman & McClelland, 2011). Given its complexity, sexual orientation may capture only one facet of adolescent sexual development.

The findings from the current study should be interpreted in light of several limitations. First, the reliance on self-report data may limit the generalizability of the study's findings. Additional measures that move beyond self-report to define BPD, depression, and anxiety would strengthen future research. Second, while the BPFSS-C is considered a valid instrument (Chang et al., 2011), others have emphasized that changes that occur naturally in adolescence may mimic BPD symptoms. Indeed, adolescence is a transition period between childhood and adulthood characterized by a "social reorientation" process, which includes changes in social roles, increased risk taking, emotion dysregulation, and changes in social-affective processing (Crone & Dahl, 2012; Nelson, Leibenluft, McClure, & Pine, 2005). Given the overlap with core features of BPD (e.g., impulsivity, interpersonal sensitivity, affective instability), it may be challenging to separate normative adolescent behavior from personality pathology. Moreover, the presence of borderline features does not necessarily mean that an adolescent has or will develop a diagnosable personality disorder (Bornoalova, Hicks, Iacono, & McGue, 2009). Third, it is important to be mindful of the relative instability of sexual orientation during this particular developmental stage (Savin-Williams & Ream, 2007), which is especially relevant given the cross-sectional nature of the present study. Longitudinal research in particular could benefit from more comprehensive and continual assessment of sexual orientation given normative fluctuations in sexual identity during adolescence. Fourth, it is possible that what is being measured is not BPD per se, but rather general distress, perhaps due to chronic stress from sexual minority status (Meyer, 2003). Relatedly, a minority stress model was not explicitly tested and thus is offered only as a speculative explanation for the findings. Subsequent research that assesses central constructs of this model (e.g., stigma-related stressors, social support, resilience, "outness") will likely provide a more nuanced, and much needed, minority stress model that further unpacks the relation between sexual orientation and BPD. Finally, the present study assessed sexual orientation on a continuum of heterosexual to homosexual and did not make use of common labels (e.g., "gay/lesbian"). For future studies, additional questions on sexual behavior and/or attraction should be included, as well as more common labels for sexual identity, particularly for sexual minority youth who may prefer and be more familiar with terms like gay, lesbian, queer, and so forth.

Despite these limitations, the study has several strengths. First, the use of a large, ethnically diverse, community sample that included adolescents from several schools in varying geographic locations improves the generalizability of the findings. Second, previous studies often utilized a behavioral criterion to define sexual orientation (e.g., dating a same-sex partner); however, this is

problematic because dating individuals of the same-sex may not necessarily entail having a gay or lesbian sexual orientation, and further, such a method may exclude individuals who date both sexes. Therefore, the present study explicitly assessed self-identified sexual orientation. Third, specific relations to subgroups of sexual minorities (i.e., bisexual vs. homosexual) were explored, as opposed to collapsing these categories together. Finally, variables known to relate to BPD were controlled for, which underscores the importance of the unique relation between sexual orientation and BPD, rather than psychopathology in general.

Future empirical attention should focus on further clarifying the nature of the relation between non-heterosexual identity, behavior, or attraction and borderline features. Beyond identifying sexual orientation as a correlate of BPD, it is necessary to understand potential mechanisms underlying this relation, such as chronic environmental invalidation or disruptions in identity formation. Therefore, researchers and clinicians should be cautious not to assume that sexual minority adolescents have higher rates of personality pathology solely because of their sexual orientation. Rather, the association between a non-heterosexual identity and BPD appears far more complex, and our findings suggest that assessment of stigma-related stressors and related constructs are imperative in order to make sense of this relationship. More generally, our findings emphasize the importance of implementing individual, family, and community-based interventions aimed at decreasing discrimination of and improving psychosocial outcomes for sexual minority youth.

## REFERENCES

- American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.). Washington, DC: Author.
- Armesto, J. C., & Weisman, A. G. (2001). Attribution and emotional reactions to the identity disclosure ("coming-out") of a homosexual child. *Family Process, 40*(2), 145–161. doi:10.1111/j.1545-5300.2001.4020100145.x
- Birmaher, B., Khetarpal, S., Brent, D., Cully, M., Balach, L., Kaufman, J., & Neer, S. (1997). The Screen for Child Anxiety Related Emotional Disorders (SCARED): Scale construction and psychometric characteristics. *Journal of the American Academy of Child & Adolescent Psychiatry, 36*(4), 545–553. doi:10.1097/00004583-199704000-00018
- Bornovalova, M. A., Hicks, B. M., Iacono, W. G., & McGue, M. (2009). Stability, change, and heritability of borderline personality disorder traits from adolescence to adulthood: A longitudinal twin study. *Development and Psychopathology, 21*(4), 1335–1353.
- Brotman, S., Ryan, B., Jalbert, Y., & Rowe, B. (2002). The impact of coming out on health and health care access: The experiences of gay, lesbian, bisexual and two-spirit people. *Journal of Health & Social Policy, 15*(1), 1–29.
- Burrill, K. G. (2009). Queering bisexuality 1. *Journal of Bisexuality, 9*(3–4), 491–499.
- Case, P., Bryn Austin, S., Hunter, D. J., Manson, J. E., Malspeis, S., Willett, W. C., & Spiegelman, D. (2004). Sexual orientation, health risk factors, and physical functioning in the Nurses' Health Study II. *Journal of Women's Health, 13*(9), 1033–1047.
- Centers for Disease Control and Prevention. (2012). Estimated HIV incidence in the United States 2007–2010. *HIV Surveillance Supplemental Report, 17*(4).
- Chanen, A. M., Jackson, H. J., McGorry, P. D., Allot, K. A., Clarkson, V., & Yuen, H. (2004). Two-year stability of personality disorder in older adolescent outpatients. *Journal of Personality Disorders, 18*(6), 526–541. doi:10.1521/pedi.18.6.526.54798
- Chang, B., Sharp, C., & Ha, C. (2011). The criterion validity of the Borderline Personality Features Scale for Children in an adolescent inpatient setting. *Journal of Personality Disorders, 25*(4), 492–503. doi:10.1521/pedi.2011.25.4.492

- Cochran, S., Mays, V., & Sullivan, J. (2003). Prevalence of mental disorders, psychological distress, and mental health services use among lesbian, gay, and bisexual adults in the United States. *Journal of Consulting and Clinical Psychology, 71*(1), 53–61.
- Cohler, B. J., & Hammack, P. L. (2007). The psychological world of the gay teenager: Social change, narrative, and “normality.” *Journal of Youth and Adolescence, 36*(1), 47–59.
- Cole, E. R. (2009). Intersectionality and research in psychology. *American Psychologist, 64*(3), 170–180.
- Coleman, E. (1981). Developmental stages of the coming out process. *Journal of Homosexuality, 7*(2/3), 31–43.
- Corliss, H. L., Rosario, M., Wypij, D., Fisher, L. B., & Austin, S. B. (2008). Sexual orientation disparities in longitudinal alcohol use patterns among adolescents: Findings from the Growing Up Today Study. *Archives of Pediatrics & Adolescent Medicine, 162*(11), 1071–1078.
- Crick, N., Murray-Close, D., & Woods, K. (2005). Borderline personality features in childhood: A short-term longitudinal study. *Development and Psychopathology, 17*(4), 1051–1070.
- Crone, E. A., & Dahl, R. E. (2012). Understanding adolescence as a period of social-affective engagement and goal flexibility. *Nature Reviews Neuroscience, 13*(9), 636–650. doi:10.1038/nrn3313
- Crowell, S., Beauchaine, T., & Linehan, M. (2009). A biosocial developmental model of borderline personality: Elaborating and extending Linehan’s theory. *Psychological Bulletin, 135*(3), 495–510. doi:10.1037/a0015616
- D’Augelli, A. R., Hershberger, S. L., & Pilkington, N. W. (1998). Lesbian, gay, and bisexual youth and their families: Disclosure of sexual orientation and its consequences. *American Journal of Orthopsychiatry, 68*(3), 361–371.
- D’Augelli, A. R., Pilkington, N. W., & Hershberger, S. L. (2002). Incidence and mental health impact of sexual orientation victimization of lesbian, gay, and bisexual youths in high school. *School Psychology Quarterly, 17*(2), 148–167.
- Diamond, L. M. (2008). *Sexual fluidity: Understanding women’s love and desire*. Cambridge, MA: Harvard University Press.
- DiPlacido, J. (1998). Minority stress among lesbians, gay men, and bisexuals: A consequence of heterosexism, homophobia, and stigmatization. In G. M. Herek (Ed.), *Stigma and sexual orientation: Understanding prejudice against lesbians, gay men, and bisexuals* (pp. 138–159). Thousand Oaks, CA: Sage.
- Dulit, R. A., Fyer, M. R., Miller, F. T., Sacks, M. H., & Frances, A. J. (1993). Gender differences in sexual preference and substance abuse of inpatients with borderline personality disorder. *Journal of Personality Disorders, 7*(2), 182–185. doi:10.1521/pedi.1993.7.2.182.
- Eaton, N. R., Krueger, R. F., Keyes, K. M., Skodol, A. E., Markon, K. E., Grant, B. F., & Hasin, D. S. (2011). Borderline personality disorder co-morbidity: Relationship to the internalizing-externalizing structure of common mental disorders. *Psychological Medicine, 41*(5), 1041–1050. doi:10.1017/S0033291710001662
- Eliason, M. J. (1997). The prevalence and nature of biphobia in heterosexual undergraduate students. *Archives of Sexual Behavior, 26*(3), 317–326.
- Fergusson, D. M., Horwood, L., & Beautrais, A. L. (1999). Is sexual orientation related to mental health problems and suicidality in young people? *Archives of General Psychiatry, 56*(10), 876–880. doi:10.1001/archpsyc.56.10.876
- Freedner, N., Freed, L. H., Yang, Y., & Austin, S. (2002). Dating violence among gay, lesbian, and bisexual adolescents: Results from a community survey. *Journal of Adolescent Health, 31*(6), 469–474. doi:10.1016/S1054-139X(02)00407-X
- Friedman, M. S., Silvestre, A. J., Gold, M. A., Markovic, N., Savin-Williams, R. C., Huggins, J., & Sell, R. L. (2004). Adolescents define sexual orientation and suggest ways to measure it. *Journal of Adolescence, 27*(3), 303–317.
- Garofalo, R., Wolf, R., Wissow, L., Woods, E., & Goodman, E. (1999). Sexual orientation and risk of suicide attempts among a representative sample of youth. *Archives of Pediatrics & Adolescent Medicine, 153*(5), 487–493.
- Gilman, S. E., Cochran, S. D., Mays, V. M., Hughes, M., Ostrow, D., & Kessler, R. C. (2001). Risk of psychiatric disorders among individuals reporting same-sex sexual partners in the National Comorbidity Survey. *American Journal of Public Health, 91*(6), 933–939.
- Grant, B., Chou, S., Goldstein, R., Huang, B., Stinson, F., Saha, T., ... Ruan, W. (2008). Prevalence, correlates, disability, and comorbidity of DSM-IV borderline personality disorder: Results from the Wave 2 National Epidemiologic Survey on Alcohol and Related Conditions. *Journal of Clinical Psychiatry, 69*(4), 533–545.
- Gunderson, J., & Ridolfi, M. (2001). Borderline personality disorder: Suicidality and self-mutilation. *Annals of the New York Academy of Sciences, 932*, 61–73.
- Hatzenbuehler, M. L., McLaughlin, K. A., & Nolen-Hoeksema, S. (2008). Emotion regulation and internalizing symptoms

- in a longitudinal study of sexual minority and heterosexual adolescents. *Journal of Child Psychology & Psychiatry*, 49(12), 1270–1278. doi:10.1111/j.1469-7610.2008.01924.x
- Herek, G. M., Gillis, J. R., Cogan, J. C., & Glunt, E. K. (1997). Hate crime victimization among lesbian, gay, and bisexual adults: Prevalence, psychological correlates, and methodological issues. *Journal of Interpersonal Violence*, 12(2), 195–215.
- Israel, T., & Mohr, J. J. (2004). Attitudes toward bisexual women and men: Current research, future directions. *Journal of Bisexuality*, 4(1–2), 117–134.
- Jorm, A. F., Korten, A. E., Rodgers, B., Jacomb, P. A., & Christensen, H. (2002). Sexual orientation and mental health: Results from a community survey of young and middle-aged adults. *British Journal of Psychiatry*, 180, 423–427.
- King, M., Semlyen, J., Tai, S., Killaspy, H., Osborn, D., Popelyuk, D., & Nazareth, I. (2008). A systematic review of mental disorder, suicide, and deliberate self harm in lesbian, gay and bisexual people. *BMC Psychiatry*, 8, 70. doi:10.1186/1471-244X-8-70
- Korfine, L., & Hooley, J. (2009). Detecting individuals with borderline personality disorder in the community: An ascertainment strategy and comparison with a hospital sample. *Journal of Personality Disorders*, 23(1), 62–75. doi:10.1521/pedi.2009.23.1.62
- Kosciw, J. G., Greytak, E. A., Bartkiewicz, M. J., Boesen, M. J., & Palmer, N. A. (2012). *The 2011 National School Climate Survey: The experiences of lesbian, gay, bisexual and transgender youth in our nation's schools*. New York, NY: Gay, Lesbian and Straight Education Network (GLSEN).
- Linehan, M. M. (1993). *Cognitive-behavioral treatment of borderline personality disorder*. New York, NY: Guilford.
- Marshal, M. P., Sucato, G., Stepp, S. D., Hipwell, A., Smith, H. A., Friedman, M. S., ... Markovic, N. (2012). Substance use and mental health disparities among sexual minority girls: Results from the Pittsburgh Girls Study. *Journal of Pediatric & Adolescent Gynecology*, 25(1), 15–18. doi:10.1016/j.jpag.2011.06.011
- Mays, V. M., & Cochran, S. D. (2001). Mental health correlates of perceived discrimination among lesbian, gay, and bisexual adults in the United States. *American Journal of Public Health*, 91(11), 1869–1876.
- Meyer, I. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychological Bulletin*, 129(5), 674–697.
- Mustanski, B. S., Garofalo, R., & Emerson, E. M. (2010). Mental health disorders, psychological distress, and suicidality in a diverse sample of lesbian, gay, bisexual, and transgender youths. *American Journal of Public Health*, 100(12), 2426–2432.
- Nelson, E. E., Leibenluft, E., McClure, E., & Pine, D. S. (2005). The social re-orientation of adolescence: A neuroscience perspective on the process and its relation to psychopathology. *Psychological Medicine*, 35(2), 163–174. doi:10.1017/S0033291704003915
- Ochs, R. (1996). Biphobia: It goes more than two ways. In B. A. Firestein (Ed.), *Bisexuality: The psychology and politics of an invisible minority* (pp. 217–239). Thousand Oaks, CA: Sage.
- Paris, J. (2009). The treatment of borderline personality disorder: Implications of research on diagnosis, etiology, and outcome. *Annual Review of Clinical Psychology*, 5, 277–290. doi:10.1146/annurev.clinpsy.032408.153457
- Paris, J., Zwieng-Frank, H., & Guzder, J. (1995). Psychological factors associated with homosexuality in males with borderline personality disorder. *Journal of Personality Disorders*, 9(1), 56–61.
- Radloff, L. S. (1977). The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, 1(3), 385–401. doi:10.1177/014662167700100306
- Radloff, L. S. (1991). The use of the Center for Epidemiologic Studies Depression Scale in adolescents and young adults. *Journal of Youth and Adolescence*, 20(2), 149–166. doi:10.1007/BF01537606
- Reich, D. B., & Zanarini, M. C. (2008). Sexual orientation and relationship choice in borderline personality disorder over ten years of prospective follow-up. *Journal of Personality Disorders*, 22(6), 564–572.
- Remafedi, G., French, S., Story, M., Resnick, M. D., & Blum, R. (1998). The relationship between suicide risk and sexual orientation: Results of a population-based study. *American Journal of Public Health*, 88(1), 57–60.
- Reuter, T. R., Sharp, C., & Temple, J. R. (2015). An exploratory study of teen dating violence in sexual minority youth. *Partner Abuse*, 6(1), 8–28.
- Rosario, M., Schrimshaw, E. W., & Hunter, J. (2011). Different patterns of sexual identity development over time: Implications for the psychological adjustment of lesbian, gay, and bisexual youths. *Journal of Sex Research*, 48(1), 3–15.
- Sandfort, T., de Graaf, R., Bijl, R., & Schnabel, P. (2001). Same-sex sexual behavior and psychiatric disorders: Findings from the Netherlands Mental Health Survey and

- Incidence Study (NEMESIS). *Archives of General Psychiatry*, 58(1), 85–91.
- Savic, I., & Lindstrom, P. (2008). PET and MRI show differences in cerebral asymmetry and functional connectivity between homo- and heterosexual subjects. *Proceedings of the National Academy of Sciences*, 105(27), 9403–9408.
- Savin-Williams, R. C. (2005). *The new gay teenager*. Cambridge, MA: Harvard University Press.
- Savin-Williams, R. C., & Ream, G. L. (2007). Prevalence and stability of sexual orientation components during adolescence and young adulthood. *Archives of Sexual Behavior*, 36(3), 385–394.
- Sharp, C., Ha, C., Michonski, J., Venta, A., & Carbone, C. (2012). Borderline personality disorder in adolescents: Evidence in support of the Childhood Interview for DSM-IV Borderline Personality Disorder in a sample of adolescent inpatients. *Comprehensive Psychiatry*, 53(6), 765–774. doi:10.1016/j.comppsy.2011.12.003
- Sharp, C., & Romero, C. (2007). Borderline personality disorder: A comparison between children and adults. *Bulletin of the Menninger Clinic*, 71(2), 85–114.
- Skodol, A., & Bender, D. (2003). Why are women diagnosed borderline more than men? *Psychiatric Quarterly*, 74(4), 349–360.
- Skodol, A. E., Siever, L. J., Livesley, W. J., Gunderson, J. G., Pfohl, B., & Widiger, T. A. (2002). The borderline diagnosis II: Biology, genetics, and clinical course. *Biological Psychiatry*, 51(12), 951–963.
- Soeteman, D. I., Roijen, L. H. V., Verheul, R., & Busschbach, J. J. (2008). The economic burden of personality disorders in mental health care. *Journal of Clinical Psychiatry*, 69(2), 259–265.
- Stepp, S., Olino, T., Klein, D., Seeley, J., & Lewinsohn, P. (2013). Unique influences of adolescent antecedents on adult borderline personality disorder features. *Personality Disorders*, 4(3), 223–229. doi:10.1037/per0000015
- Stone, M. H. (1990). *The fate of borderline patients: Successful outcome and psychiatric practice*. New York, NY: Guilford.
- Temple, J. R., Shorey, R. C., Fite, P. J., Stuart, G. L., & Le, V. D. (2013). Substance use as a longitudinal predictor of the perpetration of teen dating violence. *Journal of Youth and Adolescence*, 42, 596–606.
- Tolman, D. L., & McClelland, S. I. (2011). Normative sexuality development in adolescence: A decade in review, 2000–2009. *Journal of Research on Adolescence*, 21(1), 242–255.
- Whitlock, J., Eckenrode, J., & Silverman, D. (2006). Self-injurious behaviors in a college population. *Pediatrics*, 117(6), 1939–1948.
- Winograd, G., Cohen, P., & Chen, H. (2008). Adolescent borderline symptoms in the community: Prognosis for functioning over 20 years. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, 49(9), 933–941. doi:10.1111/j.1469-7610.2008.01930.x
- Zanarini, M. C., Frankenburg, F. R., Dubo, E. D., SICKEL, A. E., Trikha, A., Levin, A., & Reynolds, V. (1998). Axis I comorbidity of borderline personality disorder. *American Journal of Psychiatry*, 155(12), 1733–1739.
- Zimmerman, M., & Mattia, J. (1999). Axis I diagnostic comorbidity and borderline personality disorder. *Comprehensive Psychiatry*, 40(4), 245–252.
- Zubenko, G., George, A., Soloff, P., & Schulz, P. (1987). Sexual practices among patients with borderline personality disorder. *American Journal of Psychiatry*, 144(6), 748–752.