

Sexual Orientation Prototypicality and Well-Being Among Heterosexual and Sexual Minority Adults

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Abstract The current study examined the associations between sexual orientation prototypicality—or the extent to which an individual’s attractions or sexual behaviors are similar to others in the same sexual orientation category—and several indicators of well-being (depressive symptoms, loneliness, and self-esteem). Data were analyzed from a sample of 586 self-identified heterosexual and sexual minority (lesbian/gay and bisexual) men and women who completed an online survey. We used *k*-means cluster analysis to assign individuals to sexual orientation clusters (resulting in heterosexual and sexual minority clusters) based on dimensions of same-sex and other-sex attractions (emotional, romantic, and sexual) and sexual behavior. Sexual orientation prototypicality was operationalized as the Euclidean distance between an individual’s position in the cluster and their cluster centroid. Lower sexual orientation prototypicality (i.e., greater Euclidean distance from one’s cluster centroid) was significantly associated with higher depressive symptoms, higher loneliness, and lower self-esteem for men and women; results did not significantly differ for self-identified heterosexuals versus sexual minorities. Although self-identified sexual orientation and sexual orientation prototypicality were both associated with well-being for women, only sexual orientation prototypicality was associated with well-being for men. Findings suggest that sexual orientation prototypicality may be a better indicator of well-being than sexual orientation for men. Further, sexual orientation

prototypicality appears to play a significant role in well-being for women.

Keywords Sexual orientation · Gay · Lesbian · Bisexual · Prototypicality

Introduction

Despite increasing attention to sexual orientation in psychological science, researchers continue to struggle with how best to operationalize the construct. Early research on sexual orientation viewed self-identification and sexual behavior as the defining features (e.g., Garnets, 2002; Rothblum, 2000; Sell, 1997), but scholars have recently proposed that sexual orientation is a broad, multifaceted construct that also includes different types of attractions, including emotional, romantic, and sexual attractions (e.g., Diamond, 2003a, 2004; Garnets, 2002; Narring, Huwiler, & Michaud, 2003; Yoneda, Feinstein, & Davila, 2014). Although these dimensions of sexual orientation tend to be congruent within individuals, discrepancies have been reported (e.g., Deaux, 1996; Diamond, 2003b, 2004; Mashek, Stuewig, Furukawa, & Tangney, 2006; Roccas & Brewer, 2002). Little is known about what these discrepancies between dimensions of sexual orientation mean, and how they may relate to psychologically meaningful phenomena, such as subjective well-being.

Research on sexual orientation has consistently demonstrated that non-heterosexuality is associated with increased mental health problems. This has been demonstrated using several operationalizations of sexual orientation, including self-identification (e.g., Bostwick, Boyd, Hughes, & McCabe, 2010; Cochran & Mays, 2009), sexual behavior (e.g., Bostwick et al., 2010; Gilman et al., 2001), and attractions (e.g., Bos, Sandfort, de Bruyn, & Hakvoort, 2008; Bostwick et al., 2010;

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Johns, Zimmerman, & Bauermeister, 2013), suggesting that the association between non-heterosexuality and poorer well-being is robust. Data also suggest that, regardless of identity, individuals who report some degree of same-sex attraction or who engage in same-sex sexual behavior are at increased risk for negative outcomes, such as depression, anxiety, substance dependence, and eating disordered behavior (e.g., Austin, Ziyadch, Camargo, Colditz, & Field, 2004; Bostwick et al., 2010; Gilman et al., 2001; McCabe, Hughes, Bostwick, West, & Boyd, 2009; Sandfort, de Graaf, Bijl, & Schnabel, 2001; for exceptions, see Morales Knight & Hope, 2012; Zhao, Montoro, Igartua, & Thombs, 2010). In sum, previous research has demonstrated that *between-group* variation in sexual orientation is related to well-being (i.e., people who are non-heterosexual have poorer well-being). This approach frames the research question as heterosexual versus sexual minority. But, there is notable *within-group* variation in attractions, sexual behavior, and well-being, and it is possible that this variation in attractions and sexual behavior can help to explain this variation in well-being. Thus, one can frame the question not as heterosexual versus sexual minority, but as prototypical versus non-prototypical same-sex and other-sex attractions and sexual behavior.

There are numerous theoretical reasons to hypothesize that those who experience non-prototypical attractions or engage in non-prototypical sexual behavior for their sexual orientation group would experience poorer well-being. First, they may experience cognitive and affective conflict as a result of being different from others in their group, which could contribute to depression, loneliness, and low self-worth. Second, in line with the minority stress model (Meyer, 2003), those who report non-prototypical attractions or sexual behaviors may be perceived by others to be sexual minorities (regardless of their self-identified sexual orientation), which could lead to stress related to their perceived sexual orientation. Further, gay-identified individuals who experience other-sex attractions or who engage in sexual behavior with the other sex may be perceived as being bisexual and bisexuals are at risk for discrimination from heterosexuals and lesbians/gay men (Balsam & Mohr, 2007). Third, those who report non-prototypical attractions or sexual behavior may experience distress related to there not being an identity label to accurately reflect their attractions and sexual behaviors. Finally, some individuals who report non-prototypical attractions or sexual behavior may be experiencing confusion about their sexual orientation. While we do not claim that individuals who report non-prototypical attractions or sexual behavior are necessarily confused, some of these individuals may be in a transitional stage as they try to make sense of their attractions and sexual behaviors.

The current study used a novel approach to operationalizing the extent to which an individual's attractions and sexual behaviors differ from others within the same sexual orientation

category—hereafter referred to as *sexual orientation prototypicality*—and how such differences relate to several indicators of well-being (depressive symptoms, loneliness, and self-esteem). We used *k*-means cluster analysis to assign individuals to clusters based on their same-sex and other-sex attractions (emotional, romantic, and sexual) and sexual behaviors, which has the advantage of considering multiple dimensions of sexual orientation simultaneously rather than separating related dimensions of sexual orientation in analyses. To our knowledge, two previous studies have used cluster analysis to empirically assign individuals to sexual orientation clusters (Taywaditep & Stokes, 1998; Weinrich & Klein, 2002), but neither of those studies examined the associations between similarity/dissimilarity of attractions or sexual behaviors and well-being. Additionally, although studies have examined same-sex attractions among heterosexually-identified individuals, research has yet to examine other-sex attractions among gay-identified individuals. As noted, it is possible that gay-identified individuals who experience other-sex attractions and/or sexual behavior are also at risk for poorer well-being, given that bisexual individuals are at risk of experiencing discrimination from heterosexuals and lesbians/gay men (Balsam & Mohr, 2007). Thus, it could be that non-prototypical attractions or sexual behavior for one's sexual orientation group may be a better indicator of well-being than sexual orientation itself. Elucidating the extent to which non-prototypical attractions and sexual behaviors act as risk factors for poorer well-being has the potential to improve prevention and intervention efforts by targeting those who need them most. We hypothesized that lower sexual orientation prototypicality would be associated with higher depressive symptoms and loneliness and lower self-esteem for men and women regardless of self-identified sexual orientation.

Method

Participants and Procedure

Participants were 586 individuals who completed a series of online questionnaires as part of a larger project on sexual orientation, different types of attractions, and well-being. The goals of the larger project were to examine gender and sexual orientation differences in emotional, romantic, and sexual attractions, to examine how different types of attractions relate to well-being, and to examine moderators of the associations between attractions and well-being. The sample included 110 heterosexual men, 135 heterosexual women, 125 gay men, 163 lesbians, 13 bisexual men, and 40 bisexual women (all of whom self-identified as their respective sexual orientations). Participants were recruited via advertisements on websites (e.g., Craigslist, Facebook) and LGB-related listservs (e.g., GLB-concerns). Recruitment advertisements specified that

Table 1 Correlations among same-sex and other-sex attractions (emotional, romantic, and sexual) and sexual behavior

Variable	1	2	3	4	5	6	7	8
1. Same-sex emotional attraction	–	–.55***	.67***	–.58***	.62***	–.54***	.55***	–.32***
2. Other-sex emotional attraction	–.56***	–	–.71***	.85***	–.65***	.77***	–.63***	.50***
3. Same-sex romantic attraction	.84***	–.58***	–	–.84***	.91***	–.78***	.77***	–.54***
4. Other-sex romantic attraction	–.70***	.67***	–.86***	–	–.80***	.89***	–.75***	.59***
5. Same-sex sexual attraction	.78***	–.55***	.92***	–.84***	–	–.73***	.77***	–.48***
6. Other-sex sexual attraction	–.74***	.61***	–.91***	.91***	–.90***	–	–.69***	.59***
7. Same-sex sexual behavior	.73***	–.53***	.87***	–.80***	.92***	–.87***	–	–.54***
8. Other-sex sexual behavior	–.56***	.46***	–.73***	.72***	–.72***	.75***	–.69***	–

Correlations for men are presented below the diagonal and correlations for women are presented above the diagonal

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

researchers at Stony Brook University were seeking individuals who were at least 18 years old to participate in a survey study on dimensions of attraction. The mean age of the sample included in the current analyses was 31.41 years ($SD = 11.02$; range = 18–68) and the racial composition of the sample included 72 % White, 5 % African American/Black, 8 % Latina/o, 5 % Asian/Pacific Islander, and 10 % other. Each participant spent 30–45 min completing questionnaires in exchange for feedback about how their responses compared to the average response. This research was approved by the Stony Brook University Committee on Research Involving Human Subjects.

Measures

Attractions

Same-sex and other-sex emotional, romantic, and sexual attractions were assessed with the Attractions Questionnaire (AQ) (Yoneda et al., 2014). The AQ is a 6-item self-report measure that includes three questions assessing attractions to men and three questions assessing attractions to women. Items are rated on a 1–7 scale (1 = not at all, 7 = very strongly). Participants were instructed to answer all six questions regardless of their sex or sexual orientation. Emotional attraction was assessed with the item: “Rate the degree to which you currently feel emotionally attracted (e.g., a sense of mutual understanding, support, intimacy, and closeness) to (men/women).” Romantic attraction was assessed with the item: “Rate the degree to which you currently feel romantically attracted (e.g., a sense of longing or desire to be with) to (men/women).” Sexual attraction was assessed with the item: “Rate the degree to which you currently feel sexually attracted (e.g., feeling physiologically aroused, having sexual fantasies) to (men/women).” Each item was converted to represent same-sex or other-sex attractions based on each participant’s sex. Same-sex emotional, romantic, and sexual attractions were all significantly positively associated with each other. Similarly, other-sex emotional, romantic, and sexual

attractions were all significantly positively associated with each other. Further, same-sex emotional, romantic, and sexual attractions were all significantly negatively associated with other-sex emotional, romantic, and sexual attractions (see Table 1). Yoneda et al. (2014) demonstrated preliminary support for the validity of the measure.

Sexual Behavior

Participants were presented with six statements about their lifetime sexual behavior and asked to indicate whether each statement was true or false. Three statements referred to sexual behavior with men, including: (1) I have had sex (oral/anal/vaginal) with a male at least once in my life; (2) The majority of my sexual partners have been male; and (3) Although I have not had sex with a male before, I have had intimate physical contact with a male at least once in my life. The remaining three statements referred to sexual behavior with women including: (4) I have had sex (oral/anal/vaginal) with a female at least once in my life; (5) The majority of my sexual partners have been female; and (6) Although I have not had sex with a female before, I have had intimate physical contact with a female at least once in my life. Responses were used to create two 4-point scales based on each participant’s sex—one for same-sex sexual behavior and one for other-sex sexual behavior. Higher scores represent a greater degree of lifetime sexual behavior with the respective sex (0 = no sexual behavior, 1 = intimate physical contact, but not sex, 2 = sexual contact at least once, and 3 = majority of sexual partners were respective sex). As shown in Table 1, same-sex sexual behavior was negatively associated with other-sex sexual behavior. Additionally, same-sex sexual behavior was positively associated with the three types of same-sex attractions and negatively associated with the three types of other-sex attractions. Similarly, other-sex sexual behavior was positively associated with the three types of other-sex attractions and negatively associated with the three types of same-sex attractions.

Depressive Symptoms

The Beck Depression Inventory-IA¹ (BDI-IA) (Beck & Steer, 1993) was used to assess depressive symptoms. The BDI-IA is a 21-item self-report measure that assesses the affective, cognitive, and somatic aspects of depression for the past 2 weeks. Items were rated on a 0–3 scale and responses were summed to compute total scores. Total scores can range from 0 to 63 with higher scores reflecting greater severity of depressive symptoms. The BDI-IA has demonstrated strong psychometric properties (Beck, Steer, Ball, & Ranieri, 1996). In the present sample, $\alpha = .91$.

Loneliness

The 10-item Revised UCLA Loneliness Scale-Version 3-Short Form (Russell, 1996) was used to assess loneliness. Items were rated on a 1–4 scale (1 = never, 4 = always) and responses were summed to compute total scores. Total scores can range from 10 to 40, with higher scores reflecting greater loneliness. Example items include: “How often do you feel left out?” and “How often do you feel that there are people who really understand you?” (reverse-scored). It has demonstrated high internal consistency and good validity (Russell, 1996). In the present sample, $\alpha = .90$.

Self-Esteem

The 10-item Rosenberg Self-Esteem Scale (RSES) (Rosenberg, 1965) was used to assess self-esteem. Items were rated on a 1–4 scale (1 = strongly disagree, 4 = strongly agree), half the items were reverse-scored, and responses were summed to compute total scores. Total scores can range from 10 to 40 with higher scores reflecting higher self-esteem. Example items include: “On the whole, I am satisfied with myself.” Good internal consistency, test–retest reliability, and convergent/divergent validity have been reported (Rosenberg, 1965). In the present sample, $\alpha = .90$.

Statistical Analyses

We used *k*-means cluster analysis in IBM SPSS 20 to assign each individual to a sexual orientation cluster (for details on *k*-means cluster analysis, see Aldenderfer and Blashfield 1984; MacQueen, 1967). *k*-means cluster analysis is a multivariate statistical technique that seeks to identify latent clusters (groups) of individuals based on variables included in the

analysis. Once a latent cluster structure is identified, every individual is assigned to their most probable cluster, based on comparison of their distance, in multivariate space, from the centroid (mid-point) of the resulting clusters. Various solutions, each with a different number of clusters, are possible and resulting possible structures are compared on interpretability and membership characteristics to determine the optimal solution.

Clusters were geometrically defined by dimensions of same-sex and other-sex emotional, romantic, and sexual attractions, as well as same-sex and other-sex sexual behavior. We began by testing two- and three-cluster solutions, which we hypothesized a priori to represent the traditional two-group (heterosexual and sexual minority) and three-group (lesbian/gay, bisexual, and heterosexual) conceptualizations of sexual orientation. We identified the two-cluster solution as optimal, given the emergent groups were clearly interpretable primarily as heterosexual and sexual minority groups of individuals. The three-cluster solution was not clearly interpretable (e.g., the mean scores on the attraction and sexual behavior variables were not consistent with a bisexual orientation) and thus did not result in the expected three-group structure.² Sexual orientation prototypicality was operationalized as the Euclidean distance between an individual’s position in the cluster and their cluster centroid. Higher values represent being less prototypical of one’s sexual orientation cluster. All analyses were conducted separately for men and women.

Results

The two identified clusters (hereafter referred to as the *heterosexual* and *sexual minority* clusters) significantly differed on all attraction and behavior variables (see Table 2). Specifically, compared to men and women in the heterosexual clusters, men and women in the sexual minority clusters reported significantly higher same-sex emotional attractions, romantic attractions, sexual attractions, and sexual behavior, as well as significantly lower other-sex emotional attractions, romantic attractions, sexual attractions, and sexual behavior. Additionally, men and women in the heterosexual and sexual minority clusters reported significantly different self-identified sexual orientations (see Table 2). The majority of men and women in the sexual minority clusters self-identified as gay/lesbian (93.1 and 85.9 %, respectively) whereas the majority of men and women in the heterosexual clusters self-identified as heterosexual (93.5 and 89.1 %, respectively). Thus, for both men and women, the two identified clusters were generally consistent

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² Although not reported here for brevity, results based on the three-cluster solution were congruent with those of the two-cluster solution presented herein, and they are available upon request from the first author.

Table 2 Emotional, romantic, and sexual attractions, sexual behavior, and self-identified sexual orientation as a function of cluster membership

Variable	Men		Women	
	Sexual minority cluster M (SD)	Heterosexual cluster M (SD)	Sexual minority cluster M (SD)	Heterosexual cluster M (SD)
Same-sex emotional attraction	5.05 ^a (1.14)	1.39 ^b (1.64)	5.71 ^c (0.65)	3.65 ^d (1.83)
Other-sex emotional attraction	2.64 ^a (1.87)	4.94 ^b (1.46)	1.38 ^c (1.43)	4.61 ^d (1.18)
Same-sex romantic attraction	5.50 ^a (0.94)	0.36 ^b (0.76)	5.60 ^c (0.92)	0.95 ^d (1.27)
Other-sex romantic attraction	0.83 ^a (1.33)	5.32 ^b (1.21)	0.67 ^c (1.18)	5.33 ^d (0.91)
Same-sex sexual attraction	5.78 ^a (0.63)	0.62 ^b (1.41)	5.59 ^c (0.83)	1.37 ^d (1.65)
Other-sex sexual attraction	0.55 ^a (1.04)	5.54 ^b (1.00)	1.12 ^c (1.57)	5.30 ^d (0.98)
Same-sex sexual behavior	2.95 ^a (0.33)	0.48 ^b (0.86)	2.46 ^c (0.82)	0.52 ^d (0.76)
Other-sex sexual behavior	1.18 ^a (0.92)	2.85 ^b (0.59)	1.92 ^c (0.89)	2.93 ^d (0.40)
Gay/lesbian identity (%)	93.1 ^a	0.9 ^b	85.9 ^c	0.7 ^d
Bisexual identity (%)	5.3	5.6	13.0	10.2
Heterosexual identity (%)	1.5 ^a	93.5 ^b	1.1 ^c	89.1 ^d

For all attraction variables, values could range from 1 to 7; for all behavior variables, values could range from 0 to 3. Different superscripts represent significant differences at $p < .001$ (a and b are significantly different for men; c and d are significantly different for women)

with self-identification and were characterized by the expected levels of same-sex and other-sex attractions and sexual behavior.

Next, we examined the associations between sexual orientation prototypicality—operationalized as the Euclidean distance between an individual's position in the cluster and their cluster centroid—and the well-being indicators (depressive symptoms, loneliness, and self-esteem). Results are shown in Table 3. For men and women, lower sexual orientation prototypicality was significantly associated with higher depressive symptoms, higher loneliness, and lower self-esteem. Then, we examined whether the associations between sexual orientation prototypicality and well-being remained significant when self-

Table 3 Correlations between sexual orientation prototypicality and depressive symptoms, loneliness, and self-esteem

Variable	1	2	3	4
1. Sexual orientation prototypicality	–	.14*	.11*	–.11*
2. Depressive symptoms	.14*	–	.48***	–
3. Loneliness	.20**	.59***	–	–
4. Self-esteem	–	.14*	–	–

Correlations for men are presented below the diagonal and correlations for women are presented above the diagonal

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

identified sexual orientation was included in the models. We conducted a series of linear regression analyses with self-identified sexual orientation (heterosexual = 0, sexual minority = 1) and sexual orientation prototypicality entered as the predictor variables and each well-being indicator entered as an outcome variable.

For men, lower sexual orientation prototypicality (i.e., high values on this scale) was significantly associated with higher depressive symptoms ($\beta = .13$, $p = .04$) whereas self-identified sexual orientation was not significantly associated with depressive symptoms ($\beta = -.03$). Similarly, lower sexual orientation prototypicality was significantly associated with higher loneliness ($\beta = .18$, $p = .004$) whereas self-identified sexual orientation was not significantly associated with loneliness ($\beta = .01$). The association between lower sexual orientation prototypicality and lower self-esteem approached significance ($\beta = -.12$, $p = .06$) whereas the association between self-identified sexual orientation and self-esteem did not ($\beta = -.03$).

For women, lower sexual orientation prototypicality and a sexual minority identity were both significantly associated with higher depressive symptoms (for sexual orientation prototypicality, $\beta = .13$, $p = .01$; for sexual minority identity, $\beta = .15$, $p = .01$). Similarly, lower sexual orientation prototypicality and a sexual minority identity were both significantly associated with higher loneliness (for sexual orientation prototypicality, $\beta = .11$, $p = .03$; for sexual minority identity, $\beta = .27$, $p < .001$). Neither sexual orientation prototypicality nor sexual minority identity were significantly associated with self-esteem (for sexual orientation prototypicality, $\beta = -.09$, $p = .11$; for sexual minority identity, $\beta = -.09$, $p = .10$).

Finally, to examine whether the associations between sexual orientation prototypicality and well-being differed for self-identified heterosexuals versus sexual minorities, we conducted a series of hierarchical regression analyses. In each analysis,

the main effects of the predictor variables (self-identified sexual orientation and sexual orientation prototypicality) were entered first and their interaction was entered second. Sexual orientation prototypicality was mean-centered prior to computing interaction terms in order to reduce multicollinearity (Aiken & West, 1991). Notably, none of the interaction terms in any of the analyses were significant ($p \geq .23$), suggesting that the associations between sexual orientation prototypicality and well-being do not differ as a function of self-identified sexual orientation.

Discussion

The current study extended the literature on sexual orientation and well-being using a novel approach to operationalizing the extent to which an individual's attractions and sexual behaviors differ from others within the same sexual orientation category and how such differences relate to well-being. In other words, this study took a *within-groups* focus, allowing for the comparison of how (non-)prototypical sexual orientation experiences—regardless of one's particular sexual orientation—might relate to well-being. Our findings indicated that lower sexual orientation prototypicality was significantly associated with higher depressive symptoms, higher loneliness, and lower self-esteem for men and women. Findings differed for men and women when we included both sexual orientation prototypicality and self-identified sexual orientation in the same analyses. For men, there were significant associations between sexual orientation prototypicality (but not self-identified sexual orientation) and well-being. In contrast, for women, self-identified sexual orientation and sexual orientation prototypicality were both significantly associated with depressive symptoms and loneliness (but not self-esteem). These findings suggest that sexual orientation prototypicality may be a better indicator of well-being than self-identified sexual orientation for men whereas both constructs appear to play a role in well-being for women. Given that this was the first study to examine the relationship between sexual orientation prototypicality and well-being, it will be important for future research to continue to investigate potential gender differences in these associations and the mechanisms underlying them.

Additionally, the associations between sexual orientation prototypicality and well-being did not differ for self-identified heterosexuals versus sexual minorities. This suggests that men and women who report non-prototypical attractions and sexual behaviors for their sexual orientation group are at risk for poorer well-being *regardless* of which sexual orientation group they are in. These findings are consistent with previous research that has demonstrated that same-sex attractions or sexual behaviors are associated with negative outcomes, regardless of self-identified sexual orientation (e.g., Austin et al., 2004; Bos et al., 2008; Bostwick et al., 2010; Busseri, Willoughby,

Chalmers, & Bogaert, 2006; Gilman et al., 2001; Johns et al., 2013; McCabe et al., 2009; Sandfort et al., 2001; Teasdale & Bradley-Engen, 2010). Notably, these findings also suggest that other-sex attractions and sexual behaviors among sexual minority men and women are also associated with poorer well-being.

In the Introduction, we provided a number of theoretical speculations for why sexual orientation prototypicality may be related to well-being. As noted, those who are less prototypical for their sexual orientation group may experience dissonance from being different than others in their group. If this perceived difference is interpreted as a negative characteristic, then it is possible that it could contribute to poorer well-being. It is also possible that those who are less prototypical for their sexual orientation group are perceived by others to be sexual minorities (regardless of their self-identified sexual orientation), which could then lead to them experiencing stress related to their perceived sexual orientation (Meyer, 2003). For gay-identified individuals, experiencing other-sex attractions or engaging in sexual behavior with the other sex may be perceived as not *truly* being gay. Being perceived as not truly gay could lead to discrimination, given that bisexuals can experience discrimination from heterosexuals and sexual minorities (Balsam & Mohr, 2007) and may reduce social support that individuals find within their own sexual orientation communities. Relatedly, it will be important for future research to recruit larger samples of self-identified bisexual individuals, which may allow for meaningful interpretation of a three-cluster solution (heterosexual, lesbian/gay, and bisexual).

It is also possible that those who are less prototypical for their sexual orientation group may experience distress related to there not being an identity label to accurately reflect their attractions and sexual behaviors. This possibility is consistent with the results of a recent survey of 1,631 men and women on sexual orientation identity labels (Vrangalova & Savin-Williams, 2012). Vrangalova and Savin-Williams found that, among people who did not identify as exclusively heterosexual, the most commonly endorsed sexual orientation identity label was *mostly heterosexual* (rather than *mostly gay/lesbian*, *gay/lesbian*, or *bisexual*). Given that *mostly heterosexual* is not a commonly used sexual orientation identity label in lay discourse, individuals who would choose this label when given the option may experience distress related to their attractions and sexual behaviors not being accurately represented by commonly used identity labels. Finally, it is also possible that some individuals who report non-prototypical attractions or sexual behavior for their sexual orientation group may be in a transitional stage as they try to make sense of their sexuality. Again, we do not claim that individuals who report non-prototypical attractions or sexual behavior are necessarily confused about their sexual orientation. It will be important for future research to attempt to clarify the mechanisms underlying the association between sexual orientation prototypicality and well-being.

These findings have several potential implications for mental health prevention and intervention efforts. Mental health professionals are encouraged to assess various dimensions of sexual orientation, including self-identification, the extent to which clients are attracted to men and women, and the extent to which clients engage in sexual behavior with men and women. While previous research informed clinicians that non-heterosexual identities, attractions, and behaviors were risk factors for poorer well-being, the current findings also suggest that incongruent dimensions of sexual orientation within individuals may also be important risk factors. If incongruences are present, clinicians are cautioned not to automatically interpret this as confusion or pathological. Instead, it may be useful to explore the client's understanding of the incongruence and to what extent, if any, it is perceived as troubling. Given the paucity of research on people's understanding of incongruent dimensions of sexual orientation within themselves, it is unclear whether or not this tends to be perceived as distressing. Additionally, efforts to reduce the stigma associated with non-heterosexuality have the potential to improve well-being among people who report non-prototypical attractions or sexual behaviors, regardless of their self-identified sexual orientation. Researchers are also encouraged to provide participants with more nuanced sexual orientation identity labels (e.g., mostly heterosexual) and to assess various dimensions of sexual orientation in order to most accurately represent people's experiences of their sexualities.

Findings should be considered in light of several limitations. First, the study utilized self-report measures and a cross-sectional design, precluding our ability to test the temporal direction of associations. Second, the sample had limited racial/ethnic diversity, so it will be important for future research to replicate these findings in more diverse samples. Third, given that our measure of sexual behavior assessed lifetime experiences, other studies may want to differentiate between past and current sexual behavior to provide a more nuanced understanding of the associations between non-prototypical sexual behavior and well-being. Finally, given our use of cluster analysis, our measure of sexual orientation prototypicality was based on our sample and our measures of attractions and sexual behavior. It will be important for the current findings to be replicated in different samples. It is also possible that different indicators of sexual orientation are differentially related to well-being. The clustering approach that we used simultaneously considered emotional, romantic, and sexual attractions as well as sexual behaviors in an effort to provide a multifaceted operationalization of sexual orientation prototypicality. That said, there is some evidence that certain indicators of sexual orientation (e.g., emotional attractions) may not be pure measures of sexual orientation. For instance, although factor analyses of the Klein Sexual Orientation Grid have demonstrated that all 21 items load onto a single factor, they have also demonstrated that emotional preferences load onto more than one factor (Weinrich et al., 1993). Thus, it will be important for

future research to attempt to elucidate the best way to operationalize sexual orientation prototypicality, given the multifaceted nature of sexual orientation. Despite limitations, the current study extends previous research on sexual orientation-related mental health disparities by demonstrating that non-prototypical attractions and sexual behavior are associated with poorer well-being for men and women, regardless of self-identified sexual orientation. It will be important for future research to examine the mechanisms that account for the associations between sexual orientation non-prototypicality and well-being in order to test the possible explanations offered above.

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