BRIEF REPORT

Rejection Sensitivity as a Transdiagnostic Risk Factor for Internalizing Psychopathology Among Gay and Bisexual Men

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Gay and bisexual men are at increased risk for mood and anxiety (internalizing) disorders relative to heterosexual men. Rejection sensitivity (RS), or the anxious expectation of rejection, is associated with depression and social anxiety symptoms among lesbians and gay men as well as generalized anxiety symptoms among sexual minority women. However, it remains unclear if it is associated with other internalizing symptoms, such as panic and posttraumatic stress symptoms. Further, research on the comorbidity of mental disorders suggests that a latent transdiagnostic internalizing factor (INT) accounts for the co-occurrences between mood and anxiety disorders. Although previous research has found that the associations between discrimination and mental disorders can be explained by INT, research has yet to examine if this extends to the associations between RS and internalizing symptoms. Using a sample of young gay and bisexual men (N = 101), we examined the associations between RS and internalizing symptoms (depression, social anxiety, generalized anxiety, panic, and posttraumatic stress). Additionally, we examined the extent to which these associations were mediated by INT. Results indicated that RS was significantly associated with social anxiety, generalized anxiety, and posttraumatic stress symptoms, and that INT fully mediated these associations. As such, findings support RS as a transdiagnostic risk factor for internalizing symptoms among gay and bisexual men.

Keywords: anxiety, depression, rejection sensitivity, gay, bisexual, transdiagnostic

Gay and bisexual men are at increased risk for mood and anxiety disorders relative to heterosexual men (Cohen, Blasey, Taylor, Weiss, & Newman, 2016; Meyer, 2003). Minority stress theory posits that this increased risk is the result of unique stressors associated with belonging to a socially stigmatized group, including discrimination, internalization of negative societal attitudes toward nonheterosexuality, and expectations of rejection (Meyer, 2003). Although expectations of rejection are included in minority stress theory as a risk factor for mental health problems, the related construct of rejection sensitivity (RS) has received limited attention in the literature on gay and bisexual men’s mental health. RS refers to the anxious expectation of rejection in interpersonal interactions; it is theorized to stem from past experiences of such rejection (Downey & Feldman, 1996). Mendoza-Denton and colleagues extended this by suggesting that members of a socially stigmatized group (e.g., racial minorities) learn to expect and perceive rejection from members of higher status social groups (Mendoza-Denton, Downey, Purdie, Davis, & Pietrzak, 2002). A critical difference between expectations of rejection and RS is that RS represents the interaction between affective (anxiety) and cognitive (expectation) reactions to potential rejection, whereas expectations of rejection only represent the cognitive component.
Importantly, individuals who endorse high anxiety about potential rejection and high expectations of rejection report worse mental health than those who endorse either component on its own (Downey & Feldman, 1996; Mendoza-Denton et al., 2002).

Several studies have examined the consequences of RS among sexual minority men. These studies have demonstrated that RS is associated with negative psychosocial and health outcomes, including accelerated HIV progression (Cole, Kemeny, & Taylor, 1997), smoking (Pachankis, Hatzenbuehler, & Starks, 2014), sexual compulsivity (Pachankis, Rendina, et al., 2015), parental rejection, internalized homophobia, and unassertive interpersonal behavior (Pachankis, Goldfried, & Ramrattan, 2008). Whereas accumulating research suggests that RS has negative consequences for sexual minority men, the mental health consequences of RS have received less attention. In exceptions, one study demonstrated that RS was associated with depression and social anxiety symptoms among lesbians and gay men (Feinstein, Goldfried, & Duvila, 2012) and another study found that RS was associated with depression and generalized anxiety symptoms among sexual minority women (Dyar, Feinstein, Eaton, & London, 2016). As such, there is accumulating evidence that RS is associated with negative mental health outcomes among sexual minorities, but it remains unclear if RS is associated with other mood and anxiety disorder symptoms among sexual minority men, such as generalized anxiety, panic, and posttraumatic stress symptoms.

Although research has begun to examine the associations between RS and specific mood and anxiety disorder symptoms, research on the comorbidity of mental disorders suggests that co-occurrence of mood and anxiety disorders can be explained by a latent transdiagnostic internalizing factor (INT; for a review, see Eaton, Rodriguez-Seijas, Carragher, & Krueger, 2015). In other words, the fact that mood and anxiety disorder symptoms tend to co-occur at levels exceeding that expected by chance suggests that they might be related through factors, such as INT. This suggests that the negative consequences of discrimination were the result of associations between discrimination and transdiagnostic factors rather than associations between discrimination and any specific disorders (Rodriguez-Seijas et al., 2015).

Given that RS has been implicated as a risk factor for some mood and anxiety disorder symptoms among sexual minorities (Dyar et al., 2016; Feinstein et al., 2012) it is possible that these associations are driven by the latent transdiagnostic INT. If INT does in fact mediate the associations between RS and specific types of mood and anxiety disorder symptoms, then it would suggest that targeting RS in clinical interventions could have diffuse effects on multiple types of mental health problems. As such, the goals of the current study were twofold: (a) to examine the associations between RS and specific types of mood and anxiety disorder symptoms (depression, social anxiety, generalized anxiety, panic, and posttraumatic stress) among young gay and bisexual men and (b) to examine the extent to which INT mediated these associations. We hypothesized that RS would be significantly associated with all types of internalizing symptoms and that INT would significantly mediate these associations.

Method

Participants and Procedure

Gay and bisexual male university students (N = 101) were recruited at two universities in the United States. The mean age of the sample was 21.41 years (SD = 3.62), 75.2% identified as gay, 12.9% identified as mostly gay, and 11.9% identified as bisexual. Racial/ethnic distribution was as follows: 61.4% White, 21.8% Asian, 6.9% Latino, 2.0% Black, 5.0% multiracial, and 3.0% other. Participants completed a series of online questionnaires in exchange for a $10 Amazon gift card.

Measures

Beck Depression Inventory–II (Beck, Steer, & Brown, 1996). This 21-item questionnaire assesses symptoms of depression, including hopelessness, irritability, fatigue, thoughts of death, and feelings of guilt and sadness. High test–retest reliability (Beck, Steer, & Brown, 1996) and internal consistency (Beck, Steer, Ball, & Ranieri, 1996) have been demonstrated. Each item is answered on a 0–3 scale. Total scores could range from 0 to 63 with higher scores indicating greater depressive symptoms. Scores of 0 to 13 indicate minimal depression, 14 to 19 indicate mild depression, 20 to 28 indicate moderate depression, and 29 to 63 indicate severe depression (Beck, Steer, & Brown, 1996). Cronbach’s alpha in the current sample was .94.

Generalized Anxiety Disorder Questionnaire (Newman et al., 2002). This is a nine-item self-report inventory designed to measure symptomatology of Generalized Anxiety Disorder Questionnaire based on the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM; American Psychiatric Association, 1994). Questions assess the occurrence of excessive and uncontrollable worry for more days than not over at least 6 months, the occurrence of six associated symptoms (restlessness, insomnia, difficulty concentrating, irritability, fatigue, and muscle tension), as well as related impairment and distress. This measure yields a total dimensional score ranging from 0 to 12 with higher scores indicating greater generalized anxiety symptoms. Strong interrater agreement with a structured clinical interview has been demonstrated (Newman et al., 2002). Cronbach’s alpha in the current sample was .90.

Panic Disorder Self-Report (Newman, Holmes, Zueilig, Kachin, & Behar, 2006). This is a 24-item self-report measure of panic disorder based on the fourth edition of the DSM (American Psychiatric Association, 1994). Items assess for the presence of panic attacks as well as fear of recurrent attacks and physiological symptoms. Convergent and divergent validity, as well as good retest reliability, have been demonstrated (Newman et al., 2006). This measure yields a total dimensional score ranging from...
Cronbach’s alpha in the current sample was .79.

Posttraumatic Stress Disorder Checklist for DSM-5 (Weathers et al., 2013). This is a 20-item self-report assessment of symptoms of PTSD based on the fifth edition of the DSM (American Psychiatric Association, 2013). Participants were instructed to fill out the Posttraumatic Stress Disorder Checklist for DSM-5 in relation to their most stressful life experience. Although the diagnostic criteria for PTSD require exposure to actual or threatened death, serious injury, or sexual violation (referred to as Criterion A), recent research has questioned the relevance of Criterion A in the assessment of PTSD among sexual minorities. Alessi, Meyer, and Martin (2013) found that nonlife-threatening traumatic events can still produce symptoms of PTSD and concluded that adherence to the DSM definition results in many PTSD-like disorders being missed. Similarly, a growing body of research suggests that exposure to nonviolent racism, which does not meet the Criterion A definition of a traumatic event, may still be experienced as traumatic because it involves threat to one’s well-being and produces symptoms analogous to PTSD (Bryant-Davis & Ocampo, 2005; Waller, 2003). Therefore, we evaluated symptoms of PTSD in relation to participants’ most stressful life experience rather than specifically assessing Criterion A. Each item is answered on a 0–4 scale (0 = not at all, 4 = extremely). Total scores could range from 0 to 80 with higher scores indicating greater posttraumatic stress symptoms. Cronbach’s alpha in the current sample was .94.

Gay-Related Rejection Sensitivity Scale (Pachankis et al., 2008). This questionnaire measures the anxiety and expectation surrounding rejection based on sexual minority status across 14 potentially rejecting vignettes (e.g., attending a heterosexual party with a same-gender partner and no one talks to you; attempting to check into a hotel in a rural town with a same-gender partner and being told there are no rooms left). For each scenario, participants reported the level of expectation of rejection based on sexual minority status (1 = very unlikely, 6 = very likely) and the level of anxiety about rejection on the basis of sexual minority status (1 = very unconcerned, 6 = very concerned). Therefore, each item generated two responses, which were multiplied and then combined into a mean score of all 14 items. Total scores could range from 1 to 36 with higher scores indicating greater post-traumatic stress symptoms. Cronbach’s alpha in the current sample was .90.

Social Phobia Diagnostic Questionnaire (Newman, Kachin, Zuellig, Constantino, & Cashman-McGrath, 2003). This is a 29-item measure that assesses symptoms of social anxiety disorder (also referred to as social phobia) based on the fourth edition of the DSM (American Psychiatric Association, 1994). Items assess the levels of fear in social, evaluative, and performance situations as well as the associated impairment and distress. The measure yields a total dimensional score and total scores could range from 0 to 27 with higher scores indicating greater social anxiety symptoms. Excellent test–retest reliability as well as strong convergent and discriminant validity have been demonstrated (Newman et al., 2003). Further, the Social Phobia Diagnostic Questionnaire lacks heterocentric language found in other commonly used measures of social anxiety, making it particularly appropriate for use with sexual minorities (Weiss, Hope, & Capuzzoli, 2013). Cronbach’s alpha in the current sample was .95.

Analytic Strategy

Power analyses were conducted using G*Power 3.1 (for bivariate correlations) and using Daniel Soper’s A-priori sample size calculator for structural equation models. For all analyses, power was set at .80 and alpha was set at .05. For a two-tailed bivariate correlation, a sample of 82 would be needed to obtain a medium effect ($r = .3$). Similarly, for a structural equation model with one latent variable and five observed variables, a sample of 100 would be needed to obtain a medium effect. Thus, the actual sample ($N = 101$) was sufficiently powered to test our bivariate associations and our structural equation model.

Analyses were conducted in Mplus (Version 7.11; Muthén & Muthén, 2013). Specific symptoms were utilized as continuous indicators of a latent INT factor: parameterized to have a mean of zero and variance of one. Model fit was tested using the comparative fit index (CFI), the Tucker–Lewis index (TLI), and the root-mean-square error of approximation (RMSEA), with indicators of good fit being a CFI > .95 and a RMSEA < .06 (Hu & Bentler, 1999). Once acceptable fit of the measurement model was achieved, structural equation modeling was used to test indirect effects. Associations among RS, INT, and specific symptoms were compared using regression analyses. Indirect effects refer to associations from RS to specific symptoms through INT, whereas direct effects refer to remaining associations between RS and specific symptoms holding constant its association with INT. Analyses were conducted using a maximum likelihood estimator with robust standard errors.

Results

Means, standard deviations, and bivariate correlations among all variables are presented in Table 1. There were significant positive

Table 1
Means, Standard Deviations, and Correlations Among Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Rejection sensitivity</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Depression</td>
<td>.18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Generalized anxiety</td>
<td>.28*</td>
<td>.56**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Panic</td>
<td>.18</td>
<td>.42**</td>
<td>.43**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Social phobia</td>
<td>.40**</td>
<td>.52**</td>
<td>.61**</td>
<td>.39**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Posttraumatic stress</td>
<td>.40**</td>
<td>.71**</td>
<td>.56**</td>
<td>.52**</td>
<td>.57**</td>
<td></td>
</tr>
<tr>
<td>$M$</td>
<td>11.51</td>
<td>14.08</td>
<td>5.70</td>
<td>3.37</td>
<td>11.69</td>
<td>19.07</td>
</tr>
<tr>
<td>$SD$</td>
<td>5.48</td>
<td>11.25</td>
<td>3.68</td>
<td>6.10</td>
<td>6.47</td>
<td>16.06</td>
</tr>
<tr>
<td>Range</td>
<td>0–30</td>
<td>0–52</td>
<td>0–12.5</td>
<td>0–21.5</td>
<td>0–26.5</td>
<td>0–61</td>
</tr>
</tbody>
</table>

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

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associations between RS and generalized anxiety, social anxiety, and posttraumatic stress. In contrast, RS was not associated with depression or panic. Given that previous research has established that INT accounts for the comorbidity of mood and anxiety disorders (Eaton et al., 2010; Krueger, 1999; Krueger, Caspi, Moffitt, & Silva, 1998), confirmatory factor analysis (CFA) was used to parameterize a single-factor INT model using indicators of each symptom type. Results of the CFA indicated that the model demonstrated excellent fit to the data (CFI = 0.99, TLI = 0.99, RMSEA = 0.04). Given that RS was significantly associated with generalized anxiety, social anxiety, and posttraumatic stress, we tested the potential indirect effects of RS on each symptom type via INT in separate models. Associations between RS and each symptom type became nonsignificant when INT was held constant (see Table 2), indicating that INT fully mediated the associations between RS and each symptom type. The majority of the associations between RS and each symptom type were explained by the association between RS and INT (61.2%, 75.1%, and 100% for social anxiety, posttraumatic stress, and generalized anxiety, respectively).1

Discussion

Despite recent attention to the construct of RS in the literature on sexual minority mental health, the specificity of the associations between RS and internalizing symptoms remains unclear. Previous research demonstrated that it is associated with depression and social anxiety symptoms among lesbians and gay men (Feinstein et al., 2012) as well as depression and generalized anxiety symptoms among sexual minority women (Dyar et al., 2016). The current findings extend this research by demonstrating that RS was associated with social anxiety, generalized anxiety, and posttraumatic stress symptoms among gay and bisexual men. As such, RS appears to be a risk factor for multiple types of internalizing psychopathology, underscoring its role in gay and bisexual men’s mental health.

Findings also indicated that the latent transdiagnostic INT accounted for the covariance among internalizing symptoms, and that RS was associated with INT. This is consistent with Eaton (2014), who demonstrated that INT was related to other types of minority stress (discrimination and victimization) among sexual minorities. Our findings that INT mediated the associations between RS and internalizing symptoms are also consistent with Rodriguez-Seijas and colleagues (2015), who demonstrated that transdiagnostic factors mediated associations between discrimination and mental disorders among racial minorities. As such, the effects of minority stress on multiple mental health outcomes may reflect their impact on transdiagnostic factors. The current findings are the first to demonstrate that the association between RS and internalizing psychopathology operates at the transdiagnostic level.

In contrast to previous research (Dyar et al., 2016; Feinstein et al., 2012), RS was not associated with depression symptoms. Similarly, RS was not associated with panic symptoms. The lack of a significant association between RS and depression symptoms may be due to the present sample being younger than samples in previous studies that have demonstrated significant associations between RS and depression symptoms among sexual minorities. Younger sexual minorities report lower rates of mood disorders compared to older sexual minorities (Meyer, Dietrich, & Schwartz, 2008) and the median age of onset for mood disorders is 30 years old (Kessler et al., 2005). As such, the association between RS and depression symptoms may vary as a function of age. Further, although there was wide variability in depression and panic symptom severity in our sample, the majority of participants reported relatively low levels of these symptoms. As such, low levels of these symptoms may have limited our ability to detect significant associations. Despite these nonsignificant associations, inclusion of depression and panic symptoms in our parameterization of INT is still warranted, because INT reflects the covariance of internalizing symptoms irrespective of its associations with RS.

This research offers important implications for the treatment of internalizing symptoms among gay and bisexual men. Recently, Pachankis, Hatzenbuehler, Rendina, Safren, and Parsons (2015) developed a transdiagnostic treatment that targets the unique concerns facing gay and bisexual men, such as anxious expectations of rejection, and their consequences. A randomized controlled trial of the intervention demonstrated a significant reduction in depressive symptoms and a trend toward a reduction in anxiety symptoms in the treatment group relative to a waitlist (Pachankis, Hatzenbuehler, et al., 2015). Our findings lend further support to the potential value of treating gay and bisexual men’s mental health problems with transdiagnostic approaches, given that the latent INT accounted for the covariance among internalizing symptoms. Further, they suggest that reductions in minority stress, such as anxious expectations of rejection, may contribute to diffuse reductions in multiple mental health problems. It will be important for future intervention research to test this hypothesis by examining whether change in RS acts as a mechanism underlying treatment effects.

The current findings should be considered in light of several limitations, including a relatively small sample with limited diversity and cross-sectional, self-report data. It will be important for 1 Demographic variables (age and race/ethnicity) were not significantly associated with any of the variables in our model. The pattern of results was the same regardless of whether or not these demographic variables were included as covariates.

Table 2

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Effect of rejection sensitivity without INT</th>
<th>Direct and indirect effects (via INT) of rejection sensitivity on symptom types</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total effect of rejection sensitivity on symptom type</td>
<td>Direct effect</td>
</tr>
<tr>
<td>Generalized anxiety</td>
<td>.22**</td>
<td>.08</td>
</tr>
<tr>
<td>Social anxiety</td>
<td>.42**</td>
<td>.16</td>
</tr>
<tr>
<td>Posttraumatic stress</td>
<td>.93**</td>
<td>.23</td>
</tr>
</tbody>
</table>

Note. INT = latent internalizing symptom factor. The percentage for generalized anxiety exceeded 100% due to the negative direct effect of RS, but we refer to this value as 100% for clarity.

*p < .01. **p < .001.
future research to continue to examine the mental health consequences of RS among sexual minorities using larger, more diverse samples, longitudinal designs, and interview-based diagnostic data. Additionally, given that our assessment of posttraumatic stress symptom patterns was based on participants’ most stressful life experience, it will be important for future research to examine the association between RS and posttraumatic stress symptom specifically related to traumatic experiences. The fact that significant mediation with a latent factor was demonstrated in a small sample underscores the robustness of findings, but it is possible that the sample size contributed to nonsignificant associations between RS and depression and panic symptoms. In sum, findings implicate RS as a transdiagnostic risk factor for internalizing psychopathology among gay and bisexual men, suggesting that it may be a valuable treatment target.

References


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