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The rejection sensitivity model as a framework for understanding sexual minority mental health

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Abstract

Sexual minorities are disproportionately affected by mental health problems (e.g., depression, anxiety, substance use disorders, suicidality). Minority stress theory and the psychological mediation framework have become the predominant conceptual models used to explain these disparities, and they have led to substantial advances in research on stigma-related stress and mental health. However, the field's reliance on these models has limited the extent to which other theories have been considered as potential frameworks for further advancing our understanding of sexual minority mental health. In this article, I discuss how the rejection sensitivity (RS) model can be used to complement and extend minority stress theory and the psychological mediation framework by: (1) emphasizing the role of perception in stigma-related experiences; (2) acknowledging the unique consequences of different anticipatory emotions; (3) describing additional mechanisms linking proximal minority stressors to mental health; and (4) further specifying the temporal order of these processes. I conclude by discussing the importance of attending to developmental processes in research on sexual orientation-related RS and describing important directions for future research.

Keywords

rejection sensitivity; minority stress; sexual minority; gay; lesbian; bisexual

INTRODUCTION

Sexual minorities are disproportionately affected by mental health problems such as depression, anxiety, substance use disorders, and suicidality (Bostwick, Boyd, Hughes, & McCabe, 2010; Kerridge et al., 2017; King et al., 2008; McCabe, Hughes, Bostwick, West, & Boyd, 2009; Meyer, 2003). The predominant conceptual models used to understand these disparities are minority stress theory (Meyer, 2003) and the psychological mediation framework (Hatzenbuehler, 2009). Minority stress theory proposes that sexual minorities experience unique stressors related to their stigmatized social status, and these stressors account for their increased prevalence of mental health problems (Meyer, 2003). Building on minority stress theory, the psychological mediation framework describes the mechanisms through which these unique stressors influence mental health (Hatzenbuehler, 2009). Minority stress theory and the psychological mediation framework have led to substantial

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advances in research on stigma-related stress and mental health, but the field's reliance on these models has limited the extent to which other theories have been considered as frameworks for further advance our understanding of sexual minority mental health.

In this article, I discuss the value of the rejection sensitivity (RS) model (Downey & Feldman, 1996) as a framework for understanding sexual minority mental health. First, I begin with a brief overview of minority stress theory and the psychological mediation framework to provide context for considering how the RS model can complement and extend these theories. Second, I describe the RS model and how it can further advance our understanding of the factors that influence sexual minority mental health by: (1) emphasizing the role of perception in stigma-related experiences; (2) acknowledging the unique consequences of different anticipatory emotions (e.g., anxiety, anger); (3) describing additional mechanisms linking proximal minority stressors to mental health; and (4) further specifying the temporal order of these processes. Finally, I discuss the importance of attending to developmental processes in research on sexual orientation-related RS and I describe important directions for future research.

Predominant conceptual models guiding research on sexual minority mental health

In the past 15 years, there has been remarkable growth in research on sexual minority mental health, much of which has been guided by two conceptual models—minority stress theory (Meyer, 2003) and the psychological mediation framework (Hatzenbuehler, 2009). Minority stress theory was developed to explain why the prevalence of mental health problems was higher among sexual minorities compared to heterosexuals, and it proposed that this was due to the additional burden of stress that sexual minorities experience because of their stigmatized social status. Several types of minority stress were described along a distal-proximal continuum; distal minority stressors were defined as objective events (e.g., discrimination, violence), whereas proximal minority stressors were defined as subjective processes that rely on perceptions and appraisals (e.g., internalization of stigma, expectations of rejection, concealment of one's sexual orientation). Research has since demonstrated that each of these minority stressors is associated with negative mental health outcomes (Bostwick, Boyd, Hughes, West, & McCabe, 2014; Hatzenbuehler, Nolen-Hoeksema, & Erickson, 2008; Herek, Gillis, & Cogan, 1999; Mays & Cochran, 2001; Newcomb & Mustanski, 2010; Riggle, Rostosky, Black, & Rosenkrantz, 2017).

Building on minority stress theory, the psychological mediation framework was developed to explain how minority stressors influence mental health (Hatzenbuehler, 2009). It proposed that distal minority stressors activate general psychological processes that confer risk for psychopathology, including cognitive processes (e.g., hopelessness, pessimism, negative self-schemas), affective processes (e.g., maladaptive coping and emotion regulation), and social processes (e.g., isolation). The psychological mediation framework primarily focused on general psychological processes, but it acknowledged that group-specific processes (e.g., internalized stigma, expectations of rejection, sexual orientation concealment) may also explain the associations between distal minority stressors and psychopathology. Research has also supported the psychological mediation framework, demonstrating that the associations between stigma-related stressors and mental health problems are mediated

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by general psychological processes (Hatzenbuehler, Nolen-Hoeksema, & Dovidio, 2009; Mustanski & Liu, 2013) and group-specific processes (Feinstein, Goldfried, & Davila, 2012).

Although minority stress theory and the psychological mediation framework have led to substantial advances in research on stigma-related stress and mental health, the field's reliance on these models has limited the extent to which other theories have been considered as frameworks for understanding the processes contributing to negative mental health outcomes among sexual minorities. One model that can be used to complement and extend these models to further advance our understanding of sexual minority mental health is the RS model (Downey & Feldman, 1996). In the next section, I describe the RS model, its variations, and their empirical support.

The rejection sensitivity model

The RS model (Downey & Feldman, 1996) was developed to explain how rejection from significant others can influence thoughts, feelings, and behaviors in subsequent close relationships (see Fig. 1). Downey and Feldman (1996) conceptualized RS as a cognitive-affective processing disposition to anxiously expect, readily perceive, and intensely react to rejection. They proposed that early experiences of rejection can lead to expectations of future rejection and to placing high importance on avoiding rejection. In turn, they proposed that this can lead to hypervigilance for signs of rejection, readily perceiving rejection in the presence of minimal or ambiguous cues, and intensely reacting to perceived rejection. RS has also been described as a defensive motivational state that functions to protect individuals from rejection by preparing them to detect and respond to social threat (Downey, Mougios, Ayduk, London, & Shoda, 2004; Romero-Canyas, Downey, Berenson, Ayduk, & Kang, 2010). Although RS may develop as a form of self-protection, it can become maladaptive if it is activated indiscriminately, in response to minimal threat, in situations in which strategic behavior would be more functional, or when efforts to prevent rejection undermine other goals (Romero-Canyas et al., 2010). In fact, RS can create a self-fulfilling prophecy in which individuals behave out of fear, in turn eliciting rejection from others (Downey, Freitas, Michaelis, & Khouri, 1998).

Since its development, the RS model has received substantial empirical support. For example, research has demonstrated that rejection from parents and peers is associated with greater RS (Downey, Khouri, & Feldman, 1997; Feldman & Downey, 1994), that RS is associated with a lower threshold for detecting social threat (Olsson, Carmona, Downey, Bolger, & Ochsner, 2013) and more readily perceiving intentional rejection in others' ambiguous behavior (Downey & Feldman, 1996), and that RS is associated with heightened reactivity to rejection-related cues (Burklund, Eisenberger, & Lieberman, 2007; Downey et al., 2004). Research has also demonstrated that RS is associated with negative mental health outcomes (e.g., depression, anxiety, loneliness) in cross-sectional and longitudinal studies (Gao, Assink, Cipriani, & Lin, 2017), suggesting that it may play a role in the etiology and maintenance of mental health problems. Further, research has provided support for several mechanisms linking RS to mental health, such as information processing biases (e.g., generating and selecting more negative interpretations for ambiguous situations; Normansell

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& Wisco, 2017), deficits in social problem-solving (e.g., viewing social problems as threats to one's wellbeing and taking an avoidant approach to dealing with problems; Kraines & Wells, 2017), and stress generation (e.g., generating stress that is dependent on one's own behaviors or characteristics; Liu, Kraines, Massing-Schaffer, & Alloy, 2014). There is also evidence that experiences of rejection are associated with depression for individuals who are high in RS, but not for those who are low in RS, suggesting that the consequences of rejection are greater for individuals who are more sensitive to rejection (Ayduk, Downey, & Kim, 2001). These findings highlight the various ways in which RS can influence mental health through diverse cognitive, affective, and behavioral processes.

Although the RS model initially focused on anxious expectations of rejection, it was later revised to acknowledge that expectations of rejection can also be accompanied by other anticipatory emotions such as anger (Downey, Bonica, & Rincon, 1999; London, Downey, Bonica, & Paltin, 2007). In the revised RS model, it was proposed that anxious and angry expectations of rejection would have different behavioral consequences (social withdrawal and aggression, respectively; Downey et al., 1999; London et al., 2007), and subsequent research has supported this hypothesis (London et al., 2007; Zimmer-Gembeck & Nesdale, 2013). However, most research on RS continues to focus on anxious expectations of rejection.

Extending the rejection sensitivity model to the experiences of stigmatized groups

The original conceptualization of RS focused on the influence of rejection on subsequent close relationships, but it has also been extended to account for the consequences of rejection based on membership in a stigmatized group (referred to as status-based RS; Chan & Mendoza-Denton, 2008; London, Downey, Romero-Canyas, Rattan, & Tyson, 2012; Mendoza-Denton, Downey, Purdie, Davis, & Pietrzak, 2002). The construct of status-based RS acknowledges that "…direct or vicarious experiences of mistreatment, prejudice, discrimination, and exclusion based on membership in a devalued social group can communicate rejection….Such rejection, especially when experienced as painful and distressing, can generate anxious expectations that future status-based rejection will occur…" (Mendoza-Denton et al., 2002, p. 897). For example, Mendoza-Denton et al. (2002) found that African American students who were higher in race-based RS reported more frequent experiences of race-based negative events and stronger feelings of alienation and rejection following them. Additionally, London et al. (2012) found that women who were higher in gender-based RS detected gender-based rejection more often and engaged in behaviors to prevent rejection (e.g., self-silencing) more often, which led them to feel more alienated and less motivated. These findings demonstrate that members of stigmatized groups have unique rejection-related concerns and that the consequences of their anxious expectations of rejection extend to their interpersonal functioning and wellbeing.

Rejection sensitivity and its consequences for sexual minorities

Both minority stress theory (Meyer, 2003) and the psychological mediation framework (Hatzenbuehler, 2009) describe expectations of rejection as a proximal minority stressor, and numerous studies have tested its role in sexual minority mental health (e.g., Hatzenbuehler, Nolen-Hoeksema, & Erickson, 2008; Liao, Kashubeck-West, Weng, & Deitz, 2015; Mohr

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& Sarno, 2016; Puckett, Maroney, Levitt, & Horne, 2016; Puckett, Surace, Levitt, & Horne, 2016; Velez & Moradi, 2016; Velez, Watson, Cox, & Flores, 2017). However, RS is distinct from expectations of rejection in that it reflects both a cognitive process (i.e., the perceived likelihood of rejection) and an affective process (i.e., concern or anxiety about rejection). This is a critical distinction given recent evidence that expectations of rejection are only weakly correlated with their accompanying affect (Zimmer-Gembeck, Nesdale, Webb, Khatibi, & Downey, 2016). Ayduk and Gyurak (2008) illustrated the importance of attending to both cognition and affect by describing "…that individuals who are high in RS do not merely expect rejection (as, e.g., telephone solicitors do) but also feel threatened by the possibility of rejection (which telephone solicitors do not)" (p. 2021). Based on the RS model, it is the combination of expecting rejection and being highly concerned about it that triggers the RS dynamic and leads to negative consequences. Of note, minority stress theory acknowledged that expectations of rejection can be accompanied by vigilance, and the psychological mediation framework briefly acknowledged that RS may be a proximal minority stressor, but neither described the RS dynamic in detail.

Pachankis, Goldfried, and Ramrattan (2008) were the first to extend the construct of status-based RS to sexual minorities (specifically, gay men). They developed a measure of gay-related RS (the Gay-Related Rejection Sensitivity Scale [GRRSS]) and demonstrated that it was associated with parental rejection, internalized stigma, and unassertive interpersonal behavior. They also demonstrated that gay-related RS mediated the association between parental rejection and internalized stigma, suggesting that it may function as a mechanism through which early experiences of rejection influence attitudes toward one's own sexual orientation. Since then, their measure of gay-related RS has been adapted to measure sexual orientation-related RS among gay men and lesbian women (Feinstein et al., 2012) and a novel measure of RS has been developed to capture the unique rejection-related concerns of sexual minority women (Dyar, Feinstein, Eaton, & London, 2016).

Research on sexual orientation-related RS has also demonstrated that it is associated with negative mental health outcomes including depression, social anxiety, generalized anxiety, and posttraumatic stress (Cohen, Feinstein, Rodriguez-Seijas, Taylor, & Newman, 2016; Dyar et al., 2016; Dyar, Feinstein, Eaton, & London, 2018; Feinstein, Davila, & Dyar, 2017; Feinstein et al., 2012), and that it mediates the associations between discrimination and mental health problems (Dyar et al., 2018; Feinstein et al., 2012). In samples of sexual minority men, the consequences of sexual orientation-related RS also extend to substance use (Pachankis, Hatzenbuehler, & Starks, 2014) and sexual outcomes (e.g., condomless sex, sexual compulsivity; Pachankis et al., 2015; Wang & Pachankis, 2016). Although few studies have examined the mechanisms underlying these associations, one study found that gay men who were higher in RS used more disengaged coping strategies in response to discrimination, which in turn contributed to their depression and anxiety (Feinstein et al., 2017). Additionally, in a sample of sexual minority women, Dyar et al. (2018) found that sexual orientation-related RS contributed to other rejection-related processes (e.g., preoccupation with stigma, motivation to conceal one's sexual orientation, difficulty developing a positive sexual identity), which in turn contributed to depression and anxiety. Consistent with the broader literature on RS, these findings suggest that sexual orientation-

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related RS can influence mental health through various cognitive, affective, and behavioral processes.

Of note, most research on sexual orientation-related RS has focused on sexual minority men and there has been limited attention to potential gender differences. In an exception, Feinstein et al. (2012) did not find a significant difference in sexual orientation-related RS between gay men and lesbian women. Further, they did not find a significant gender difference in the associations between sexual orientation-related RS and mental health problems. However, they used an adapted version of the GRRSS, which was designed to capture situations in which gay men experience concerns about rejection. As such, it may not have adequately reflected the unique situations in which lesbian women experience similar concerns. As noted, Dyar et al. (2016) developed a measure of sexual orientation-related RS specifically for sexual minority women (the Sexual Minority Women Rejection Sensitivity Scale [SMWRSS]). Despite a strong correlation between the SMWRSS and the GRRSS, only the SMWRSS continued to predict anxiety symptoms when both measures were included in the same models. These findings highlight the importance of using group-specific measures of RS to understand the consequences of RS in specific populations.

There has also been a lack of attention to potential differences in sexual orientation-related RS between gay/lesbian and bisexual individuals. In an exception, Dyar et al. (2016) found that bisexual women reported lower sexual orientation-related RS than lesbian women. However, they did not statistically compare the groups and, although their measure was developed specifically for sexual minority women, it did not include items that reflected the unique situations in which bisexual women experience concerns about rejection. Regardless, Dyar et al. (2018) also found that sexual orientation-related RS and other rejection-related stressors mediated the association between discrimination and internalizing symptoms for both lesbian and bisexual women. As such, the antecedents and consequences of sexual orientation-related RS may be similar for lesbian and bisexual women. Of note, in a recent study, Dyar and London (2018) created two items to specifically assess RS related to one's bisexual identity. They found that more frequent positive experiences related to one's bisexual identity were associated with a decrease in RS, which in turn was associated with decreases in depression and anxiety. In sum, given the lack of attention to within-group heterogeneity in studies of sexual orientation-related RS, it will be important for future studies to continue to examine differences among subgroups of sexual minorities.

The rejection sensitivity model as a framework for understanding sexual minority mental health

Minority stress theory (Meyer, 2003) and the psychological mediation framework (Hatzenbuehler, 2009) provide important conceptual models for understanding why sexual minorities are at increased risk for mental health problems as well as the processes linking discrimination and violence to negative mental health outcomes in this population. The RS model can be used in conjunction with these models to further advance our understanding of the processes that contribute to negative mental health outcomes among sexual minorities. In this section, I describe four ways that the RS model can be used to further advance our understanding of sexual minority mental health including by: (1) emphasizing the role of

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perception in stigma-related experiences; (2) acknowledging the unique consequences of different anticipatory emotions (e.g., anxiety, anger); (3) describing additional mechanisms linking proximal minority stressors to mental health; and (4) further specifying the temporal order of these processes.

Prior to discussing the role of perception in stigma-related experiences, it is critical to emphasize that the RS model positions early experiences of rejection as the primary etiological factor in the development of RS (Downey & Feldman, 1996). Consistent with the proposed etiology of RS, sexual minorities are disproportionately affected by adverse childhood experiences including childhood sexual abuse, parental physical abuse, and peer victimization (e.g., Friedman et al., 2011), and previous cross-sectional research has found that parental rejection (Pachankis et al., 2008) and discrimination (Feinstein et al., 2012) are associated with sexual orientation-related RS. Although longitudinal research is needed to test the roles of parental rejection and discrimination in the etiology of sexual orientation-related RS, these findings are consistent with the conceptualization of RS as a consequence of early experiences of rejection.

Still, while RS is rooted in early experiences of rejection, a central tenet of the RS model is that individuals who are high in RS readily perceive rejection. In other words, they are primed to detect rejection in the presence of minimal or ambiguous cues, and they enter social situations on the lookout for signs of rejection. As such, even though early experiences of rejection are hypothesized to be the cause of RS, once an individual has developed the disposition to anxiously expect, readily perceive, and intensely react to rejection (Downey & Feldman, 1996), they are at risk of interpreting ambiguous social situations as evidence of rejection and having a more intense reaction to the perceived rejection. For example, if a gay man sits next to someone on a bus and the person moves to a different seat, the situation is ambiguous (i.e., it is unclear why the person moved). The gay man's affective reaction is likely to be stronger if he perceives it a sign of rejection (e.g., he assumes the person moved because of his sexual orientation) than if he does not perceive it as a sign of rejection (e.g., he assumes the person moved because they wanted more space). In this scenario, the gay man's perception of the situation plays an important role in his experience and reaction.

By acknowledging the role of perception in experiences of rejection, the RS model recognizes the subjective nature of these experiences (i.e., that some people are more likely than others to perceive rejection in a given situation). This conceptualization is consistent with transactional models of stress (e.g., Lazarus & Folkman, 1984) and prejudice (e.g., Major et al., 2003), which emphasize the roles of individual differences in the perception of stress and prejudice. Perception may be particularly important in this day and age, given that contemporary prejudice often manifests in subtler forms than it did in the past (Morrison & Morrison, 2002; Walls, 2008). While some experiences of rejection provide clear evidence of prejudice, others are ambiguous. For example, microaggressions have been described as "…subtle forms of discrimination, often unconscious or unintentional, that communicate hostile or derogatory messages, particularly to and about members of historically marginalized social groups" (Nadal, Whitman, Davis, Erazo, & Davidoff, 2016, p. 488). Given the subtle and often ambiguous nature of microaggressions, perceptions of

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microaggressions may be particularly susceptible to individual differences (e.g., negative emotionality; Lilienfeld, 2017). However, previous research has largely neglected the role of individual differences in shaping perceptions of microaggressions. Based on the RS model, some members of stigmatized groups are more likely than others to perceive ambiguous situations as evidence of rejection and, as such, to attend to them and to experience negative consequences. In sum, by emphasizing the role of perception in experiences of rejection and discrimination, scholars can develop a more precise understanding of the extent to which different cues are likely to elicit perceptions of rejection and in turn negative consequences for sexual minorities.

Second, the RS model highlights the importance of considering the specific affective experiences that accompany expectations of rejection. As described earlier, it is the combination of expecting rejection and being highly concerned about it that triggers the RS dynamic and leads to negative consequences. In light of this, measuring expectations of rejection without measuring the accompanying affective experience may not capture the experience that is most likely to lead to negative consequences. The RS model also proposes that expectations of rejection can be accompanied by different anticipatory emotions (e.g., anxiety, anger), each of which has unique consequences (Downey et al., 1999; London et al., 2007). For example, while anxious expectations of rejection tend to lead to social withdrawal, angry expectations of rejection tend to lead to aggression (London et al., 2007; Zimmer-Gembeck & Nesdale, 2013). Although previous research has demonstrated that sexual orientation-related RS is associated with unassertive interpersonal behavior, research has yet to examine the consequences of expectations of rejection accompanied by anger among sexual minorities.

Angry expectations of rejection may be particularly relevant to the experiences of sexual minorities given that anger is a common response to disrespect and injustice (Miller, 2001; Smart Richman & Leary, 2009), especially when it is believed to be related to one’s social identity (Wang, Leu, & Shoda, 2011). Previous research has found that sexual orientation-related discrimination and victimization are not only associated with anxiety, they are also associated with anger (Herek et al., 1999; Lewis, Mason, Winstead, & Kelley, 2017; Swim et al., 2007; Swim, Johnston, & Pearson, 2009), which in turn is associated with negative health outcomes (e.g., alcohol-related problems; Lewis et al., 2017). Research on coping with discrimination has also found that some sexual minorities engage in behaviors that reflect anger in response to discrimination (e.g., getting into an argument with the person, attacking others’ ignorant belief; Ngamake, Walch, & Raveepatarakul, 2014). Despite accumulating support for the role of anger in sexual minorities’ experiences of discrimination, angry expectations of rejection have yet to be studied in this population. The distinction between different affective responses associated with expectations of rejection has the potential to answer important questions about sexual minorities’ experiences of and reactions to stigma-related stressors.

Third, the RS model can be used to further advance our understanding of the mechanisms linking proximal minority stressors to mental health. As noted, the psychological mediation framework was developed to explain how minority stressors influence mental health (Hatzenbuehler, 2009), but it largely focused on the mechanisms linking distal minority

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stressors (e.g., discrimination) to mental health. It briefly noted that proximal minority stressors may also contribute to the general psychological processes that confer risk for psychopathology (Hatzenbuehler, 2009), but it did not expand on the mechanisms linking proximal minority stressors to mental health. The RS model describes various ways in which anxious expectations of rejection—a specific proximal minority stressor—can influence mental health.

While some of the proposed mechanisms in the RS model are similar to those in the psychological mediation framework (e.g., intense cognitive and emotional reactions), others are unique. For example, the RS model suggests that individuals who are high in RS are not only primed to detect rejection, they are also more likely to attend to and remember it once it has been detected. Specifically, they automatically experience a sense of threat in contexts in which rejection is possible, and this highly aroused negative emotional state narrows their attentional focus (Ayduk et al., 2000). Berenson et al. (2009) found that RS was associated with disruption of goal-directed attention by social threat cues, suggesting that an attentional bias toward threat may be a mechanism linking RS to its negative consequences. Previous research has also found that focusing attention away from arousing aspects of rejection can attenuate hostile and angry feelings (Ayduk, Mischel, & Downey, 2002) and that strategic attention deployment can be protective against the negative consequences of RS (Ayduk et al., 2000), highlighting the potential for attentional strategies to disrupt the RS dynamic. Scholars have also proposed that repeated activation of the cognitive representation of a stressor can exacerbate its negative effects (Brosschot, Gerin, & Thayer, 2006). Given that people who are high in RS are more likely to recall negative socially relevant information (Mor & Inbar, 2009), this memory bias may serve to prolong the negative consequences of perceived rejection after the social interaction has ended. In sum, attention and memory play important roles in the RS dynamic and, as such, they may also have an influence on other proximal minority stress processes.

Finally, the RS model can be used to further advance our understanding of the temporal sequence through which proximal minority stressors influence sexual minorities' mental health. In the psychological mediation framework, discrimination is proposed to lead to diverse cognitive, affective, and social processes that confer risk for psychopathology. However, the psychological mediation framework situates all of these general psychological processes at the same point in the causal chain (i.e., as mediators of the associations between distal minority stressors and psychopathology). In contrast, the RS model describes a specific chain of events, in which anxious expectations of rejection—again, a specific proximal minority stressor—lead to perceptions of rejection, then cognitive-affective reactions, then behavioral reactions and consequences (see Fig. 1). As such, once an individual who is high in RS detects rejection, their cognitive and emotional reactions are more intense and, as a result, they engage in behaviors that can have negative consequences for their interpersonal functioning and wellbeing (e.g., taking an avoidant approach to dealing with problems, generating additional stress, engaging in behaviors that elicit rejection). Clarifying the temporal sequence of this casual chain has important implications for intervening to disrupt the chain of events and, in turn, to reduce its negative consequences. Based on the RS model, intervening at the level of cognitive-affective

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reactions has the potential to prevent behavioral reactions as well as subsequent behavioral consequences.

Developmental considerations

In the broader literature on RS, scholars have attended to developmental processes in several ways. RS has been studied across the lifespan, including during childhood (e.g., Downey, Lebolt, Rincón, & Freitas, 1998; Zimmer-Gembeck, Nesdale, Fersterer, & Wilson, 2014)), adolescence (e.g., Hafen et al., 2014; Marston, Hare, & Allen, 2010; Norona et al., 2018; Purdie & Downey, 2000), and adulthood (e.g., Nowland, Talbot, & Qualtar, 2018), and several studies have found that RS tends to decrease throughout adolescence and into early adulthood (Hafen et al., 2014; Marston et al., 2010; Norona et al., 2018). However, there is also evidence of individual variability in the extent to which RS changes over time, and for some people it can increase (Hafen et al., 2014). Previous research has identified several factors that contribute to increases in RS over time, such as peer rejection (London et al., 2007) and symptoms of depression and anxiety (Marston et al., 2010), and increases in RS are associated with interpersonal difficulties (Hafen et al., 2014; Norona et al., 2018). Together, these findings highlight the importance of attending to developmental processes to understand antecedents and consequences of RS.

From a developmental perspective, peer relationships (and peer acceptance in particular) become increasingly important during adolescence (Brown, 2004). Adolescence is also a critical time for sexual identity development, as sexual minorities typically meet several “milestones” during this developmental period (e.g., initial awareness of same-sex attractions, first sexual experience with a same-sex partner; Calzo, Antonucci, Mays, & Cochran, 2011; Floyd & Stein, 2002). Further, sexual minorities are most likely to experience discrimination and victimization early in their development, and these experiences tend to decrease across adolescence and into early adulthood (e.g., Birkett, Newcomb, & Mustanski, 2015; Pachankis et al., 2018; Swann, Forscher, Bettin, Newcomb, & Mustanski, 2018). Given that adolescents contend with novel challenges (Brown, 2004) and that sexual minority adolescents contend with unique stressors (see Goldbach & Gibbs, 2017), sexual orientation-related RS may be particularly relevant during this developmental period.

In contrast to the broader literature on RS, there has been limited attention to developmental processes in the literature on sexual orientation-related RS. In an exception, Pachankis and colleagues examined trajectories of stigma-related experiences and mental health over eight years in a sample of young gay and bisexual men (Pachankis, Sullivan, Feinstein, & Newcomb, 2018). They found that all of the stigma-related experiences (including sexual orientation-related RS as well as discrimination, internalized stigma, and sexual orientation concealment) decreased over the course of the eight years. However, symptoms of depression remained stable and symptoms of social anxiety increased, suggesting that participants’ circumstances may have improved, but more time may have been needed for their mental health to improve as well. Additionally, Rendina and colleagues examined trajectories of sexual identity development and their associations with minority stress and mental health in adulthood among sexual minority men (Rendina, Carter, Wahl,

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Millar, & Parsons, 2018). They found that faster progression from initial awareness of same-sex attraction to adopting and disclosing a sexual minority identity was associated with higher levels of discrimination, emotion dysregulation, anxiety and depression, and sexual compulsivity in adulthood, but it was not associated with RS or internalized stigma. They suggested that RS and internalized stigma may be less influenced by developmental processes than discrimination and mental/behavioral health.

Scholars have also acknowledged that RS may develop as a form of self-protection, which has particular relevance for the experiences of sexual minority youth. Specifically, Downey and Feldman (1996) acknowledged that RS may develop as a form of self-protection, but that "When activated in a relatively benign social world, rejection sensitivity may lead people to behave in ways that undermine their chances of maintaining a supportive and satisfying close relationship" (p. 1328). While the social environment has been improving for sexual minorities in the US (Pew Research Center, 2017), they continue to experience prejudice and discrimination at the individual and structural levels. As such, the social world is not benign for sexual minorities and it is possible that RS continues to serve a protective function for them, at least in certain contexts. For example, being primed to detect subtle cues of rejection may help sexual minorities avoid unsafe situations. This may be especially important for sexual minority youth, who generally have less control over their environment than adults, and sexual minorities who live in more hostile social environments. Further, sexual minorities may experience some interpersonal relationships as affirming and others as hostile, in which case their anxious expectations of rejection may be maladaptive in one context and adaptive in another. Of note, it has been suggested that the anticipation of a stressor can be beneficial because it can allow an individual to prepare to cope (Feldman & Hayes, 2005). As such, RS may be adaptive if it prepares an individual to cope with potential rejection. However, while RS may serve a protective function for sexual minorities in certain contexts, it can still have negative consequences for their mental health, and there is a critical need to understand the extent to which RS is adaptive versus maladaptive across individuals and contexts.

Interventions to reduce sexual orientation-related rejection sensitivity

A number of interventions have been developed to reduce sexual minority stress and its consequences, most of which are in the early stages of efficacy testing (for a review, see Chaudoir, Wang, & Pachankis, 2017). Given that RS is rooted in early experiences of rejection, interventions that seek to reduce stigma and improve attitudes toward sexual minorities, especially among their parents (e.g., Huebner et al., 2013), have the potential to prevent or disrupt the development of sexual orientation-related RS. Further, interventions that bolster coping resources also have the potential to reduce sexual orientation-related RS. For example, the ESTEEM intervention was designed to reduce mental and behavioral health problems among young gay and bisexual men by targeting minority stress as well as universal risk factors (e.g., emotion regulation, unassertiveness; Pachankis, 2014). In a randomized controlled trial, ESTEEM led to significant reductions in depression, alcohol use problems, and condomless sex compared to a waitlist, and participants who received the intervention also reported significant reductions in minority stress, including sexual orientation-related RS (Pachankis et al., 2015).

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ESTEEM utilizes various techniques to address minority stress, such as facilitating awareness, regulation, and acceptance of emotional experiences, restructuring maladaptive cognitions, and empowering assertive communication (for a detailed description, see Burton, Wang, & Pachankis, in press). Of particular relevance to sexual orientation-related RS, ESTEEM utilizes an ambiguous picture exercise, in which clients are presented with an image of an individual potentially being socially rejected and they are asked to consider non-rejection-based explanations for what is occurring in the picture. While preliminary evidence supports the use of these techniques to reduce sexual orientation-related RS (Pachankis et al., 2015), additional testing is needed prior to dissemination and implementation. Further, the broader literature on RS points to additional intervention strategies for reducing RS, such as identifying and challenging negatively biased interpretations of ambiguous situations (Normansell & Wisco, 2017) and problem-solving therapy to improve documented deficits in social problem-solving assoicated with RS (Kraines & Wells, 2017). However, the efficacy of these additional approaches for reducing RS remain in question.

Limitations and future directions

Throughout this article, I have described the RS model and its potential to advance our understanding of sexual minorities' mental health. However, it is important to acknowledge that research on sexual orientation-related RS is still in its infancy and important questions remain. In this section, I briefly describe some of the methodological and conceptual limitations of existing research on sexual orientation-related RS. By acknowledging these limitations, I hope to inspire scholars to continue to study sexual orientation-related RS and its influence on mental health.

First, despite advances in the measurement of sexual orientation-related RS (e.g., the development of measures for specific sexual minority populations), our understanding of the extent to which sexual minorities perceive rejection in ambiguous social situations is limited to their self-report. In contrast, the broader literature on RS has used diverse experimental paradigms to examine the associations between self-reported RS and aspects of perception, attention, memory, affect, and behavior. As such, it will be important for future research on sexual orientation-related RS to incorporate experimental paradigms to validate previous findings and to examine aspects of the RS model that have not been investigated among sexual minorities (e.g., perception, attention, memory).

Second, most of the research on sexual orientation-related RS has been cross-sectional, limiting our understanding of the extent to which RS fluctuates and influences changes in mental health over time among sexual minorities. In an exception, Feinstein et al. (2017) found that gay men's anxious expectations of rejection varied from week to week, and this weekly fluctuation had a significant influence on their responses to discrimination and their mental health. Further, as noted, another recent study found that young gay and bisexual men's anxious expectations of rejection significantly decreased over the course of eight years (Pachankis, Sullivan, Feinstein, & Newcomb, 2018). These findings highlight the importance of using longitudinal designs to capture the fluctuating nature of RS and its influence on mental health. Further, a strength of the RS model is its temporal

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specificity, but longitudinal research is needed to test the sequence of cognitive, affective, and behavioral reactions involved in the RS dynamic.

Third, the cues that trigger anxious expectations of rejection differ across populations, and additional research is needed to capture the specific situations that elicit anxious expectations of rejection among subgroups of sexual minorities. Previous research has documented unique stigma-related experiences among bisexual individuals (Bostwick & Hequembourg, 2014; Brewster & Moradi, 2010; Feinstein & Dyar, 2017), sexual minorities of color (Balsam, Molina, Beadnell, Simoni, & Walters, 2011), and sexual minority youth (Goldbach & Gibbs, 2017), but existing measures of sexual orientation-related RS may not capture the situations that trigger anxious expectations of rejection among these specific populations. Further, the cues that trigger anxious expectations of rejection may be different from those that trigger angry expectations of rejection. Given the lack of attention to angry expectations of rejection among sexual minorities, this reflects an important direction for future research.

Fourth, scholars have acknowledged the need to attend to the social context in which rejection occurs in order to understand RS and its consequences (Romero-Canyas et al., 2010). Despite advances in our understanding of sexual orientation-related RS, little is known about the extent to which contextual factors influence anxious expectations of rejection among sexual minorities. For example, do the consequences of perceived rejection depend on contextual factors such as who enacted the rejection (e.g., a friend, a family member, a stranger), whether it was overt or covert, and whether it was personally or vicariously experienced? Do sexual minorities anxiously expect rejection from in-group members (e.g., others sexual minorities) as well as out-group members (i.e., heterosexuals)?

Fifth, despite accumulating evidence that sexual orientation-related RS is associated with negative mental health outcomes, few studies have examined the underlying mechanisms (for exceptions, see Dyar et al., 2018; Feinstein et al., 2017). The broader literature on RS has identified several underlying mechanisms (e.g., information processing biases, deficits in social problem-solving, stress generation; Kraines & Wells, 2017; Liu et al., 2014; Normansell & Wisco, 2017), which could help explain how RS influences sexual minorities' mental health. Further, given the role of attention (Ayduk et al., 2000) and memory (Mor & Inbar, 2009) in the RS dynamic, it will be important for future research on sexual orientation-related RS to test these biases and their influence on sexual minority mental health. Research has also identified coping strategies that racial minorities use to cope with anxious expectations of rejection (e.g., avoiding out-group members, disengaging from domains in which one's group is stereotyped, becoming involved in organizations that bring members of one's group together; Mendoza-Denton et al., 2002), and these could also help explain how sexual orientation-related RS influences mental health.

Sixth, few studies have examined individual differences in the associations between sexual orientation-related RS and negative mental health outcomes (i.e., moderators). In an exception, one study found that sexual orientation-related RS was associated with depression for gay/lesbian individuals who reported low levels of parental acceptance, but not for those who reported high levels of parental acceptance (Feinstein, Wadsworth, Davila, & Goldfried,

2014). There is also evidence that self-regulation abilities (e.g., abilities to manipulate attentional focus and to delay gratification) can buffer the extent to which RS leads to negative outcomes (Ayduk et al., 2000; Ayduk, Mischel, & Downey, 2002), but this has not been studied among sexual minorities. As such, it will be important for future research to continue to examine potential moderators of the associations between sexual orientation-related RS and mental health (e.g., peer and romantic partner support, the centrality of one's sexual orientation to one's identity).

Conclusions

In sum, the RS model is well-suited to further advance our understanding of sexual minorities' mental health. Its focus on the social origins of stress is consistent with the predominant conceptual models in the field (e.g., minority stress theory, the psychological mediation framework). Further, it builds on these models in several important ways, including by emphasizing the role of perception in stigma-related experiences, acknowledging the unique consequences of different anticipatory emotions, describing additional mechanisms linking proximal minority stressors to mental health, and further specifying the temporal order of these processes. By drawing on diverse conceptual models, scholars can develop a more comprehensive understanding of the factors that influence sexual minorities' mental health and identify novel targets for clinical intervention.

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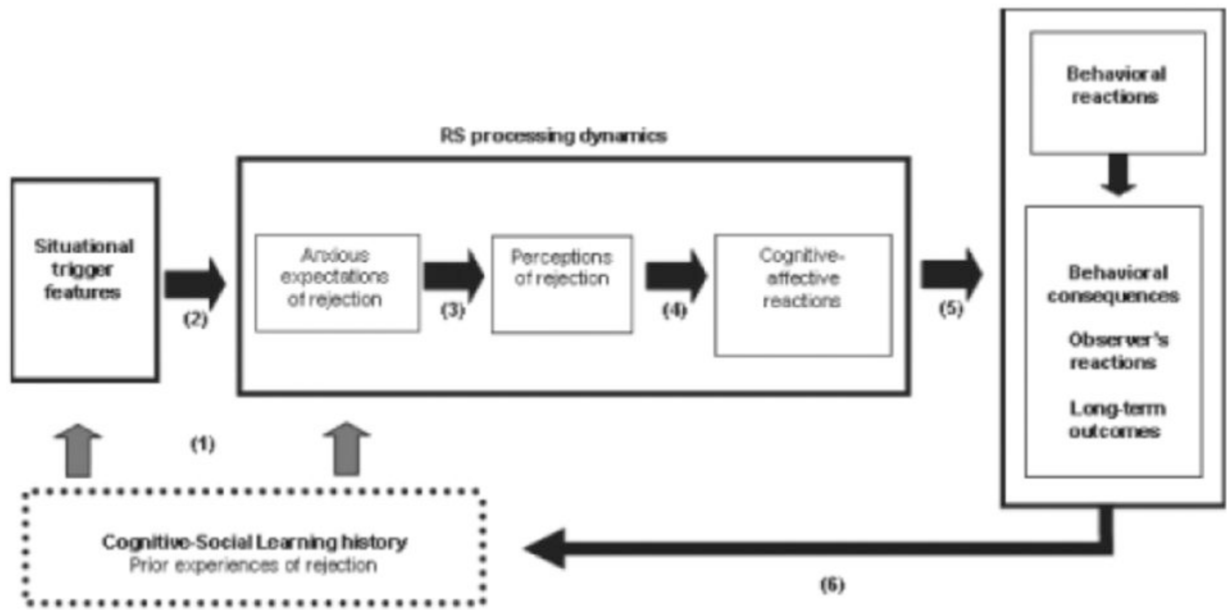

Figure 1.
The rejection sensitivity (RS) model. Reproduced from Romero-Canyas et al. (2010) with permission from the corresponding author.