Resilience Through Relational Connection: A Relational Model to Sexual Minority Mental and Physical Health

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Boston College
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Counseling Psychology

RESILIENCE THROUGH RELATIONAL CONNECTION: A RELATIONAL MODEL TO SEXUAL MINORITY MENTAL AND PHYSICAL HEALTH

Dissertation

by

ETHAN H. MEREISH

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of the requirements for the degree of
Doctor of Philosophy

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Abstract

Resilience Through Relational Connection: A Relational Model to Sexual Minority Mental and Physical Health

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Sexual minorities (e.g., lesbian, gay, and bisexual individuals) are at higher risk for mental and physical health disparities than heterosexuals, and research has related some of these disparities to minority stressors such as institutional heterosexism, sexual prejudice, and discrimination. Yet, there is a dearth of research elucidating factors that predict the development of these health risks, and factors that protect and promote resiliency against them. Building on the minority stress model, the present study utilized relational cultural theory to situate sexual minority health disparities within a relational framework. Specifically, the study examined the mediating and moderating factors between the deleterious effects of distal stressors (i.e., heterosexist relational disconnections such as discrimination and victimization) and proximal stressors (i.e., self-disparaging relational images such as internalized homophobia, sexual orientation concealment) on mental and physical health for sexual minorities.

Among 719 sexual minority adults, structural equation modeling analyses were used to test three models of: the relations between minority stressors and health; mediating effects of diminished agency, loneliness, and shame on the relations between minority stressors and health; and the moderated-mediation effects of growth-fostering relationships with peers, mentors, and community on the mediating pathways between minority stressors and health. Results indicated that heterosexist distal and proximal minority stressors predicted poor mental health (i.e., depression, anxiety, and suicidality) and physical health (i.e.,
cardiovascular disease risk, distressing physical symptoms). The relations between proximal minority stressors and health were mediated by diminished sense of agency, loneliness, and shame, and there were mixed results for the relations between distal stressors and health. Although the direct effects of growth-fostering relationships were significant in predicting lower levels of diminished agency, loneliness, and shame, these factors had mixed moderating effects. Findings have research, practice, and policy implications that underscore the possible mechanisms by which sexual minority stressors lead to poor health. Researchers and practitioners need to addresses and advocate against societal forces contributing to heterosexist relational disconnections and for sexual minority health policies and research.
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Chapter 1

Introduction

Lesbian, gay, and bisexual (LGB; i.e., sexual minorities) individuals are at higher risk for mental and physical health disparities than heterosexuals (Dean et al., 2000), and research has related some of these disparities to institutional heterosexism, sexual prejudice, and discrimination (e.g., Meyer, 2003). Additionally, even though sexual minorities seek mental health services at greater rates than heterosexuals, they experience barriers in receiving culturally competent health services, which can exacerbate their health concerns (Dean et al., 2000). Yet, there is a dearth of literature elucidating factors that predict these health risks, as well as factors that protect and promote resiliency against them. Promoting the health and resilience of sexual minorities is critical to counseling psychologists’ social justice focus and for the advancement of more affirming and culturally responsive interventions (Goodman et al., 2004; Moradi, Mohr, Worthington, & Fassinger, 2009; Vera & Speight, 2003). Therefore, this study addressed these issues.

Sexual Minorities’ Health Disparities

Sexual minorities report more psychological distress, depressive and anxiety symptoms and disorders, substance abuse problems, and suicidality than heterosexuals (Cochran & Mays, 2009; Dean et al., 2000; King et al., 2008; Meyer, Dietrich, & Schwartz, 2008). These health disparities vary within subgroups of sexual minorities. For instance, lesbians have higher rates of alcohol abuse than heterosexual women (Burgard, Cochran, & Mays, 2005; Dean et al., 2000), whereas gay men are at increased risk for illicit drug abuse (e.g., methamphetamine; Stall et al., 2001). Also, sexual minority men are at greater risk for negative body image and eating disorders than heterosexual men (Russell & Keel, 2002).
Although the literature on sexual minority mental health disparities has existed for decades, the literature on physical health disparities is more recent and burgeoning.

Similar to mental health disparities, sexual minorities are also at higher risk for physical health disparities. When compared to heterosexuals, lesbians and gay men report more activity limitation, tension, and asthma, bisexual individuals report more cardiovascular disease risk, and lesbians are more likely to be obese and have multiple risk factors for cardiovascular disease (Conron, Mimiaga, & Landers, 2010). Additionally, gay men report more acute physical complaints (i.e., headache, sore throat, heartburn, and fever) and chronic conditions (e.g., diabetes, migraine, asthma, and high blood pressure) than heterosexual men (Cochran & Mays, 2007; Sandfort, Bakker, Schellevis, & Vanwesenbeeck, 2007).

Furthermore, sexual minorities might be at greater risk for specific cancers (e.g., breast, cervical, and anal cancer; Mayer, Bradford, Makadon, Stall, Goldhammer, & Landers, 2008). It is important to note that many mental health issues are associated with and can predict physical health complaints, and, recursively, physical health problems can predict psychological distress (Cochran & Mays, 2007). Thus, it is important to examine health more holistically.

Despite the clear health disparities that sexual minorities experience, research has not sufficiently examined factors that contribute to them or explain their etiology. To address this limitation, the minority stress model (Meyer, 2003) and relational cultural theory (Jordan, 2001; Miller & Stiver, 1997) were used to understand the underlying causes to these health risks. The minority stress model provides a conceptual and socio-contextual backdrop to mental health disparities (e.g., oppression, discrimination, and stigma); concomitantly, relational cultural theory (RCT) illuminates key relational processes (e.g., mutually empathic
and empowering relationships, loneliness) that explain the relationship between stress and deleterious health outcomes as well as factors that promote resilience. This study tested a theoretically informed model examining the effect of stress (e.g., discrimination) on mental and physical health (Figure 1), as well as two other models examining factors that mediate (Figure 2) and moderate (Figure 3) these relationships.

**Positioning Health Disparities within Theoretical Frameworks: Minority Stress Model**

In addition to general adverse life experiences, the minority stress model posits that sexual minorities face unique, hostile and adverse experiences (e.g., stigma, discrimination) related to their sexual minority identity; consequently, these experiences have pernicious effects on their mental health (Meyer, 2003). The model assumes there are proximal and distal stressors that are unique (i.e., related to minority social position), chronic (i.e., stable and enduring), and socially based (i.e., founded in structures and systems and are not related to general individual level stressors; Meyer, 2003). Sexual minority stress is related to these external distal stressors (e.g., microaggressions). Proximal stressors are related to the development of expectations of such stressful events and of rejection, and internalization of sexual stigma and prejudice as part of individuals’ identities and sense of self (i.e., internalized homophobia; Meyer, 2003).

A limitation of the minority stress model is that it does not comprehensively identify psychological processes that explain the relationship between stress and poor mental health (Hatzenbuehler, 2009). In fact, multiple risk and protective factors lead all individuals toward different trajectories of either healthy adaptation or poorer health (Cicchetti & Sroufe, 2000; Masten, 2007; Rutter & Stroufe, 2000). Also, the model primarily focuses on mental health, with little attention to physical health. Additionally, research studies using the minority stress
model often focus on either proximal or distal stressors and infrequently include all minority stress domains.

Moreover, minority stress is inherently a relationally disruptive and toxic process; however, the minority stress model does not fully articulate a relational framework to understanding health risks. This is despite the movement of several psychological fields toward a relational understanding of individuals (e.g., relational psychoanalysis, relational feminist, family systems, and human development; Gilligan, 1982; Miller & Stiver, 1997; Mitchell, 1988). For instance, homophobic microaggressions create relational disconnection between individuals that could result in poorer relational and psychological outcomes such as isolation. To this end, RCT complements the minority stress model by positioning distress within a relational framework. It also suggests moderators and mediators that might explain the relationship between stress and health. RCT informs the minority stress model by suggesting relationally-based factors not previously considered as mechanisms by which stress leads to health risks (e.g., growth-fostering relationships, social isolation) and by framing existing processes between sexual minority stress and health from a relational lens (e.g., sense of agency).

**Illuminating Health Outcomes and Resilience through Relational Cultural Theory**

RCT provides a complementary perspective to the minority stress model by positioning psychological distress within the context of relational and cultural disconnections (Miller & Stiver, 1997). It assumes that all people desire connection with others (Miller, 1976), and that psychological growth and development occurs through connections and interpersonal relationships. More specifically, empathy, mutuality, and empowerment are
important elements to relationships that can foster psychological growth, connection, and
healing (i.e., growth-fostering relationships; Jordan, 2001; Miller & Stiver, 1997).

Although relational factors contribute to positive growth, well-being, and relational
resilience (Jordan, 2009), other processes inhibit or exacerbate health. Instances in which one
individual in a relationship instigates relational disconnections (i.e., any behavior or
experience that creates relational distance or inflicts emotional and/or physical pain) toward
another individual in the relationship and does not acknowledge this experience can lead to
psychological injury. The injured individual can become psychologically distressed because
of the pain and suffering of such disconnection (Jordan, 2008). In fact, recent neuroscience
research has documented that relational disconnections (e.g., exclusion, rejection) are
experienced in the same neurobiological and neural brain regions as physical pain
(Eisenberger, 2012).

Disconnections can be more harmful when one individual in the relationship has more
power over another (Jordan, 2008), as in the case of discrimination. In line with this, RCT
posits that there are also socio-cultural forms of disconnection that impair individuals’ mental
health and encumber them from having and engaging in growth-fostering relationships
(Jordan, 2008). These concepts are quite connected to the experiences of sexual minorities,
who have less social power and privileges than heterosexuals.

As framed by the minority stress model, sexual minorities experience relational
disconnection from heterosexuals at individual and socio-cultural levels that vary in
extremity (e.g., subtle microaggressions, hate crimes, and institutional oppression such as
lack of civil rights to marry; Hatzenbuehler, McLaughlin, Keyes, & Hasin, 2010; Meyer,
2003). Concomitantly, these disconnections are most often invalidated, leaving sexual
minorities to experience psychological injury and in turn poorer health. Congruent with these concepts, sexual minority stress has deleterious effects on the mental and physical health of sexual minorities (Huebner & Davis, 2007; Meyer, 2003; Wilson, Okwu, & Mills, 2011).

Additionally, experiences of disconnection lead individuals to develop relational images that guide how they relate to others and perceive themselves (Miller & Stiver, 1997). For sexual minorities, disconnection and oppression might lead them to develop self-disparaging relational images, such as internalized homophobia and rejection sensitivity, which are also considered proximal stressors in the minority stress model (Meyer, 2003). Internalized homophobia is related to poorer psychological and physical health outcomes (Newcomb & Mustanski, 2010; Szymanski, Kashubeck-West, & Meyer, 2008).

**Relational Mediating Pathways to Health**

According to RCT, chronic disconnections and invalidations (i.e., distal stressors) compounded with harmful relational images (i.e., proximal stressors) can lead to outcomes contrary to growth-fostering relationships and in turn poorer health (Jordan, 2008, 2009; Miller & Stiver, 1997). This can include drop in energy and motivation, decreased sense of worth and productivity, interpersonal confusion, and withdrawal or avoidance of connections and relationships with people; in turn, these outcomes can lead to psychopathology. In fact, sexual minority stress (e.g., discrimination, internalized homophobia) is associated to fewer social supports, loneliness, isolation, and poorer psychological and physical health (Díaz, Ayala, Bein, Henne, & Marin, 2001; Hatzenbuehler, Nolen-Hoeksema, & Dovidio, 2010; Kuyper & Fokkema, 2011; Newcomb & Mustanski, 2010; Szymanski, Kashubeck-West, Meyer, 2008). Thus, these factors may be understood as mediators between relational
disconnection (e.g., sexual minority stress) and health outcomes. However, research has not examined such mediating effects in the sexual minority health literature.

The present study examined the mediating effects of two specific outcomes of relational disconnections on the association between minority stressors (i.e., disconnections) and health: loneliness or lack of desire for connection, and feelings of disempowerment or lack of sense of agency. Experiences of oppressive disconnection (e.g., hate-crimes) are related to isolation and a lowered sense of agency (Hatzenbuehler, Nolen-Hoeksema, & Dovidio, 2009; Herek, Gillis, & Cogan, 1999). Isolation and lack of sense of agency are also related to poorer and physical health outcomes (Hatzenbuehler, et al., 2009; Lehavot, Walters, & Simoni, 2010; Spencer & Patrick, 2009). However, the mediating role of loneliness and lack of desire for more connection as well as sense of agency between disconnection and mental and physical health has not yet been tested.

Moreover, individuals in positions of power may utilize relational disconnections as shaming tactics to remain in power as well as to silence, disempower, and isolate marginalized people. This can lead to shame for the individuals hurt by such disconnections (Jordan, 2004; Miller & Stiver, 1997). Shaming tactics such as discrimination enable heterosexuals to maintain power over sexual minorities; consequently, this leads sexual minorities to feel a sense of inadequacy and shame (Russell, 2009). Jordan (1989, 2004) defined shame as “an essential relational affect...as a sense of unworthiness to be in connection, an absence of hope than empathic response will be forthcoming from another person” (p. 122). Shame is immobilizing and can lead to psychological distress, disempowerment, and difficulty experiencing mutual and authentic connection (Hartling, Rosen, Walker, & Jordan, 2004). A recent meta-analysis found that shame is strongly
associated with depressive symptoms (Kim, Thibodeau, & Jorgensen, 2011). Among sexual minorities, sexual minority stress is related to shame (Allen & Oleson, 1999; Sherry, 2007) and shame is related to poor mental health outcomes (Bybee, Sullivan, Zielonka, & Moes, 2009). Therefore, it is plausible that shame can be understood as a mediator between sexual minority stress or disconnection and health. The present study’s mediation model examined the effects of shame on the association between sexual minority stress and health (see Figure 2).

Promoting Relational Health and Resilience through Growth-Fostering Relationships

RCT posits that the outcomes of growth-fostering relationships (i.e., “the five good things”) are: a sense of vitality and energy (i.e., zest); sense of action and agency; greater knowledge about one’s self and others; greater sense of worth; and, desire for more connections with others (Jordan, 2009; Miller & Stiver, 1997). These components of growth-fostering relationships are all conceptually related to well-being and psychological development (Miller & Stiver, 1997).

Growth-fostering relationships are positively associated with higher levels of self-esteem, school engagement, and belonging, and they are negatively related with psychological distress, loneliness, depression, and stress (Frey, Beesley, & Miller, 2006; Frey, Tobin, & Beesley, 2004; Liang et al., 2002; Liang, Tracy, Kenny, Brogan, & Gatha, 2010; Liang, Tracy, Taylor, & Williams, 2002). Thus, it is plausible to conceptualize growth-fostering relationships as mitigating the adverse and relationally disconnecting effects of oppression on relational health as they provide validation, empathy, and empowerment. As such, the current study examined a model accounting for the moderating effects of three unique growth-fostering relationships: relationships with peers, mentors, and the sexual
minority community (Figure 3) on the relations between minority stressors and the mediating relational processes.

Although examining factors that relate to health outcomes among sexual minorities is important, it is also pertinent to examine factors that promote resilience. Sexual minorities are resilient in their ability to resist the insidious sociocontextual messages and disentangle stigma from their own identities (Szymanski & Kashubeck-West, 2008). In fact, despite the disparities they face, a majority of sexual minorities are mentally healthy (Cochran & Mays, 2006). It is plausible that resilient sexual minorities are individuals with supportive relational connections and communities. According to RCT, psychological growth and resilience is rooted in relational connection and is facilitated through growth-fostering relationships (Miller & Stiver, 1997). However, these core concepts of the theory (e.g., growth-fostering relationships) have not been examined empirically with sexual minorities, nor have they been examined as factors that promote their resilience in the face of sexual minority stress.

**Purpose of Proposed Study/Research Questions**

The current study examined relational models of the effects of sexual minority stress and disconnection on mental and physical health (Figure 1), as well as tested theoretically informed relational factors that mediate (Figure 2) and moderate (Figure 3) these associations. I hypothesized that sexual minority stress would predict poorer mental and physical health (Figure 1). Building on the first model, I hypothesized that RCT relational processes (i.e., sense of agency, loneliness, and shame) would mediate the association between distal (i.e., disconnection) and proximal stressors (i.e., self-disparaging relational images) and health (Figure 2). I expected that minority stress would be negatively associated with these three processes, and in turn that they would be associated with poorer health.
Moreover, extending the second model, I hypothesized that growth-fostering relationships would moderate this association and buffer the negative effects of minority stress on these relational mediators (Figure 3).

**Significance**

Researchers are called upon to examine the multiple sources and levels of minority stress and disconnection and how they affect sexual minorities’ health (Meyer, 2003; Szymanski, Kashubeck-West, & Meyer, 2008). This study is unique because it addresses calls for research on sexual minority health disparities as well as examined novel risk and protective factors that illuminate these disparities (Hatzenbueller, 2009; Meyer, 2009; Moradi et al., 2009). By pairing RCT with the minority stress model, the study also tested a comprehensive and integrated model of mediators and moderators of the process by which minority stress or relational disconnection may lead to mental and physical health outcomes. The present study also provides a broader integration of relational and socio-contextual frameworks to understand not only health but also resilience among sexual minorities.
Chapter Two

**Literature Review**

Lesbian, gay, bisexual, and transgender (LGBT; i.e., sexual minorities) individuals are at higher risk for mental and physical health disparities than heterosexuals (Dean et al., 2000; Institute of Medicine, 2011). These disparities exist across the lifespan, with health disparities documented among sexual minority adolescents, adults, and older adults (Institute of Medicine, 2011). Health disparities also vary within sexual minority group identification (e.g., lesbian women, gay men; Institute of Medicine, 2011). Moreover, there is a dearth of literature elucidating factors that predict the development and prevalence of these health disparities, as well as factors that protect and promote resiliency. Gay-affirmative research on sexual minorities’ health is needed, especially in light of the oppressive history in the field of psychology, such as classification of homosexuality as a mental disorder in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM; American Psychiatric Association, 1973). Furthermore, promoting the health of sexual minorities is critical to counseling psychologists’ social justice focus and for the advancement of more affirming and culturally responsive psychological interventions.

Counseling psychologists are called upon to step outside of their traditional roles and integrate research and practice on sexual minorities to promote social change and inform policy and advocacy (Goodman et al., 2004; Moradi et al., 2009; Vera & Speight, 2003). Social justice advocacy and interventions that address sexual minority oppression are necessary, because discrimination, sexual prejudice, and institutional heterosexism have deleterious effects on sexual minorities’ mental health (e.g., Díaz, Ayala, Bein, Henne, & Marin, 2001; Hatzenbuehler, McLaughlin, Keyes, & Hasin, 2010; Mays & Cochran, 2001;
Meyer, 2003; Rostosky, Riggle, Horne, & Miller, 2009). Moreover, even though sexual minority individuals seek mental health services at greater rates than heterosexuals, there is a dearth of evidence-based treatments that culturally and competently address the unique health needs of sexual minorities (Cochran, 2001). In fact, sexual minorities experience several barriers to seeking and receiving culturally competent health services, which can exacerbate their health (Dean et al., 2000; Johnson, Mimiaga, & Bradford, 2008; Mayer, Bradford, Makadon, Stall, Goldhammer, & Landers, 2008). Thus, the need for counseling psychologists to intervene in all of these contexts is overdue.

In addition to its critical connection to counseling psychologists’ social justice orientation, investigating and illuminating sexual minority health disparities is a national and federal health priority. The U.S. Department of Health and Human Services (2010) released Healthy People 2020, which is the blueprint that outlines national public health and policy goals for the next decade. For the first time in history, this report explicitly included sexual minority health as a topic area, wherein sexual minorities’ health disparities were acknowledged as a priority. Gender minorities (i.e., transgender individuals) were also included in the report for the first time. This monumental milestone recognizes the impact of heterosexism on sexual minority health and the importance and need for additional research in this area. Furthermore, the Institute of Medicine’s (IOM, 2011) most recent report on LGBT health accentuated the health disparities facing sexual minority people and the need for more research examining these disparities. Therefore, the study aimed to support these federal public health initiatives and to contribute empirical work to advance sexual minority health. In this effort, the following section will briefly review some of these health disparities.
Health Disparities

**Mental health.** For over two decades, the literature has documented a higher prevalence of mental health disparities among sexual minority adults than heterosexuals. Sexual minorities report more psychological distress, depression, anxiety, substance abuse, and suicidality than heterosexuals (Cochran & Mays, 2000a, 2000b, 2009; Dean et al., 2000; IOM, 2010; King et al., 2008). Sexual minority men are also at greater risk for negative body image and eating disorders than heterosexual men (Russell & Keel, 2002). Recent meta-analyses of published studies between 1966 and 2005 found that sexual minorities are at 1.5 times higher risk for depression and anxiety than heterosexuals (King et al., 2008). A more recent study using a representative sample of adult residents of California and while adjusting for demographic variables (e.g., gender, age, educational attainment, family income, relationship status, and U.S. nativity) found that sexual minorities are at 1.73 to 2.54 times higher risk for psychological distress and for meeting criteria for one-year prevalence of DSM disorders, such as major depression, generalized anxiety, panic, and drug dependence disorders, than heterosexuals (Cochran & Mays, 2009). Although some differences in disparities depend on how sexual orientation is measured (e.g., behavior, identity, attraction), these mental health disparities have been consistently documented in population-based, cross-sectional, and longitudinal cohort studies (Cochran & Mays, 2009).

Moreover, research continues to document that sexual minorities are at greater risk for suicidality than heterosexuals (Cochran & Mays, 2000a, 2009; King et al., 2008). More specifically, the findings of a recent meta-analysis indicated that gay and bisexual men are four times more likely to attempt suicide over their lifetime than heterosexual men, and lesbian and bisexual women are twice as likely as heterosexual women (King et al., 2008).
Sexual minorities are also twice as likely to report suicidal ideation that heterosexual individuals (King et al., 2008). In a study of gay and heterosexual siblings, higher rates of suicidality were found among gay individuals than their heterosexual siblings (Balsam, Beauchaine, Mickey, & Rothblum, 2005). Given the seriousness of all of these findings, continued research is needed to examine suicidality and factors that contribute to it with greater detail (Haas et al., 2011).

Sexual minorities are also at increased risk for substance abuse and dependency (e.g., tobacco, cigarette, alcohol, and other drugs) than heterosexuals (Cochran & Mays, 2009; Cochran, Sullivan, & Mays, 2003; Conron, Mimiaga, & Landers, 2010; King et al., 2008; McCabe, Hughes, Bostwick, West, & Boyd, 2009; Meyer, 2003). In fact, meta-analyses have found that sexual minorities have higher risk for alcohol and substance dependence than heterosexuals (King et al., 2008; Meyer, 2003). These health disparities are accentuated within subgroups of sexual minorities. For example, the literature has documented more significant risk for sexual minority women compared to heterosexual women (Burgard, Cochran, & Mays, 2005; Cochran et al., 2000; Cochran & Mays, 2000b). Also, sexual minority men have high prevalence rates of recreational drug and alcohol use (Stall et al., 2001), and mostly heterosexual and bisexual women have higher rates of binge drinking than exclusively heterosexual women (Hughes, Szalacha, & McNair, 2010). Moreover, bisexual men and women have more substance use disorders than lesbians and gay men (Meyer, Dietrich, & Schwartz, 2008).

There are mixed findings in substance abuse rates among sexual minorities of color (Hughes et al., 2006; Meyer et al., 2008). For instance, Latina and Asian bisexual and lesbian women are more likely to have a substance abuse problem than their heterosexual
counterparts; in contrast, Latino and Asian gay and bisexual men are less likely to have substance abuse problems than their heterosexual counterparts (Cochran, Mays, Alegria, Ortega, & Takeuchi, 2007). Additionally, Black lesbian women are more likely to have alcohol and drug problems than Black heterosexual women (Hughes, Matthews, Razzano, & Aranda, 2002). Despite sexual minority disparities across a wide range of mental health outcomes, little research has identified factors contributing to these poorer health outcomes.

**Physical health.** Similar to mental health disparities, sexual minorities are at higher risk for several physical health disparities. According to the IOM's (2011) recent review of the literature, sexual minority individuals are at greater risk for acute or chronic medical and physical conditions than heterosexuals. Sexual minority women are at greater risk for obesity than heterosexual women. Also, sexual minorities have greater risk factors for cardiovascular disease and cancers (IOM, 2011).

Sexual minority women and men are more likely to report poorer physical health symptoms and chronic medical conditions than heterosexuals (Cochran & Mays, 2007; Conron et al., 2010; Sandfort, Bakker, Schellevis, & Vanwesenbeeck, 2007). For example, when compared to heterosexuals, sexual minorities report more activity limitation, tension, and asthma (Conron et al., 2010). Moreover, bisexual women and gay men also report more chronic conditions, such as diabetes, migraine, asthma, and high blood pressure than heterosexuals (Sandfort et al., 2007). Additionally, Hispanic sexual minority women are at higher risk for arthritis and physical disability than White heterosexual women (Kim & Fredriksen-Goldsen, 2012).

Although, sexual minorities report poorer health than heterosexuals, there are some nuanced gender disparities in some of their physical health symptoms. Among a
representative sample of California, bisexual women are more likely to report digestive complaints, back problems, chronic fatigue syndrome, functional health limitation, overall poorer physical health, and receive disability income than exclusively heterosexual women (Cochran & Mays, 2007). In addition, homosexually experienced heterosexual women are more likely to report asthma and back problems than exclusively heterosexual women, and lesbian women are more likely to report arthritis and receive disability income (Cochran & Mays, 2007). Similar to sexual minority women, gay men are more likely to report digestive problems, urinary problems, migraines or headaches, and chronic fatigue syndrome than exclusively heterosexual men (Cochran & Mays, 2007). Homosexually experienced heterosexual men are more likely to report heart disease, liver disease, digestive problems, migraines or headaches, asthma, back problems, chronic fatigue syndrome, and overall poorer physical health than exclusively heterosexual men (Cochran & Mays, 2007). Also, sexual minority men are more likely to have erectile dysfunction when compared to heterosexual men (Bancroft, Carnes, Janssen, Goodrich, & Long, 2005). It is noteworthy that many of these physical health concerns are strongly related to psychological distress levels among sexual minority women, and are related to HIV and sexually transmitted diseases among sexual minority men (Cochran & Mays, 2007).

In terms of obesity, sexual minority women and men differ in their risk. Gay men are less likely to be overweight and obese than heterosexual men; whereas, lesbian women are more likely to be obese than heterosexual women (Conron et al., 2010). For example, in a population-based study, lesbians had twice the odds of being overweight and obese than heterosexual women (Boehmer, Bowen, & Bauer, 2007). Similarly, in a study of heterosexual and sexual minority siblings, lesbian women are more likely to have higher
body mass index scores, greater waist circumference, and waist-to-hip ratio than their heterosexual sisters (Roberts, Dibble, Nussey, & Casey, 2003). In a review of the literature on obesity and sexual minority women, researchers found similar patterns in obesity differences between sexual minority women and heterosexual women; however, there were some mixed findings in these results (Bowen, Balsam, & Ender, 2008). Notably, the researchers indicated that there was a lack in the use of high-quality methodological approaches in the reviewed studies and none used population-based samples; thus, limiting the generalizability of these findings (Bowen et al., 2008).

In addition to acute physical health symptoms, chronic medical conditions, and obesity, sexual minorities are also at greater risk for cardiovascular disease than heterosexuals (Cochran & Mays, 2007; Conron et al., 2010). Before discussing the research on sexual minority cardiovascular risk, it is noteworthy to have a backdrop to cardiovascular disease more generally. Cardiovascular disease involves several different types of conditions and complications in the structures and function of the heart (e.g., coronary artery disease, heart failure, abnormal heart arrhythmias) and it is the leading cause of death in all men and women in the United States (Heron et al., 2009). According to the American Heart Association and the American College of Cardiology, the following are some major independent risk factors: cigarette smoking, elevated blood pressure and cholesterol, diabetes mellitus, and advancing age (Grundy, Pasternak, Greenland, Smith, & Fuster, 1999; Wilson, D’Agostino, Belanger, Silbershatz, & Kannel, 1998). Some predisposing risk factors are obesity, physical inactivity, family history of premature coronary heart disease, and psychosocial factors (Grundy et al., 1999; Wilson et al., 1998). All of these risk factors are additive in their nature of leading to greater disease risk (Grundy et al., 1999).
Some research has documented the prevalence of multiple cardiovascular risk factors among sexual minorities. For instance, sexual minority women are more likely to receive a diagnosis of heart disease than heterosexual women (Diamant & Wold, 2003). Moreover, more gay men and bisexual women report having diabetes and higher blood pressure than heterosexual men (Sandfort et al., 2007). Additionally, several studies have documented that sexual minorities are more likely to smoke cigarettes than heterosexuals (Gruskin, Hart, Gordon, Ackerson, 2001). Also, lesbians are more likely to be obese than heterosexual women (Conron et al., 2010; Roberts et al., 2003). Therefore, it is plausible that sexual minorities have more risk factors for cardiovascular disease than heterosexuals; however, there is limited research documenting these disparities and examining processes that lead to them.

Similar to cardiovascular disease, sexual minorities are at greater risk for several cancers (e.g., breast, cervical, and anal cancer; IOM, 2011; Mayer et al., 2008). For example, sexual minority women are at greater risk for breast and lung cancer, because of their high risk of alcohol use, cigarette smoking, and obesity (IOM, 2011; Roberts et al., 2003). Sexual minority men are at greater risk for anal cancer (Koblin et al., 1996), especially in relation to the high rates of the human papillomavirus (HPV) in this group (IOM, 2011). Sexual minority men are also less likely to obtain prostate-specific antigen tests than heterosexual men (Conron et al., 2010).

Research on sexual minority physical health disparities is slowly burgeoning in the literature and remains greatly understudied. It is also important to note that many mental health issues and psychological distress are greatly associated with and can be predictive of physical health complaints, and recursively, physical health issues can be predictive of
psychological distress (Cochran & Mays, 2007). Thus, it is important to examine sexual minority health more holistically. However, very few studies have considered this holistic approach in their approach to sexual minority health disparities. Furthermore, despite the clear health disparities that sexual minorities experience, research has not sufficiently examined factors that contribute to them or explain their etiology. To address these limitations, the minority stress model (Meyer, 2003) and RCT (Jordan, 2001; Miller & Stiver, 1997) will be used to understand some of the underlying causes of these disparities.

**Positioning Health Disparities within the Minority Stress Model**

Building on social stress theories, the minority stress model utilizes sociological and social psychological theories to better understand the effects of stress on mental health for individuals from minority or disadvantaged groups. More specifically, the model aims “to distinguish the excess stress to which individuals from stigmatized social categories are exposed as a result of their social, often a minority, position” (p. 675, Meyer, 2003). In addition to general adverse life experiences, the minority stress model posits that sexual minorities experience minority stressors that are unique (i.e., related to minority social position), chronic (i.e., related to stable and enduring oppressive socio-cultural systems), and socially based (i.e., founded in structures and institutions and is not related to individual level stressors), which are all related to their sexual minority identity (Meyer, 2003).

Meyer (2003) described sexual minority stressors along a continuum from distal stressors to proximal stressors. Distal stressors are “external, objective stressful events and conditions (chronic and acute)” (p. 676, Meyer, 2003). Although some may consider self-reports of these events as subjective, they are still external stressors that can be objective. Examples of such sexual minority stressors are subtle forms of discrimination, such as
microaggressions, and prejudice and discriminatory events (e.g., hate crimes, homophobic bullying). Proximal stressors are considered “personal processes, which are by definition subjective because they rely on individual perceptions and appraisals” (p. 676, Meyer, 2003). Proximal stressors are related to the internalization of sexual stigma and prejudice as part of their identities and sense of self (i.e., internalized homophobia), the development of expectations of stressful events and rejection (i.e., rejection sensitivity), and concealment of one’s sexual identity (Meyer, 1995, 2003). Consequently, these distal and proximal stressful experiences have pernicious effects on sexual minorities’ mental health (Meyer, 2003). The processes in which distal and proximal stressors lead to poorer health have not been adequately examined (Hatzenbuehl, 2009).

The sexual minority stress model assumes that there are “stress-ameliorating factors” that individuals utilize in response to minority stressors (Meyer, 2003). These factors are critical to coping and resilience. Meyer (2003) posits that these processes are found on the individual level (e.g., personal psychological or coping resources), which can vary for each individual, and on the group level (e.g., gay-affirming organizations). With this perspective, the minority stress model also asserts shifting the conceptualization of sexual minorities from passive victims of oppression to “resilient actors” who have strengths and who can effectively cope in the face of prejudice. As such, this study examined individual and group level processes in mitigating the effects of sexual minority stress on health and promote resilience among sexual minorities.

**Understanding the Effects of Distal Sexual Minority Stressors on Health**

In terms of distal minority stressors, there is cogent empirical evidence connecting several forms of sexual minority social injustice (e.g., sexual and physical victimization,
microaggressions, every day and lifetime discriminatory experiences) to poorer mental health outcomes (e.g., Balsam et al., 2005; Corliss, Cochran, & Mays, 2002; D’Augelli, Grossman, & Starks, 2006; Hatzenbuehler, 2009; Mays & Cochran, 2001; Meyer, 2003; Mills et al., 2004). Sexual minorities experience more lifetime and daily experiences of discrimination than heterosexuals and these experiences are predictive of increased odds of psychiatric disorders (i.e., depressive, anxiety, substance dependence), psychological distress, and self-rated mental health (Mays & Cochran, 2001). For instance, sexual minority adults who report experiencing discrimination related to all their minority social identities (i.e., gender, race, or sexual orientation) are four times more likely to have a substance use disorder than for sexual minority adults not reporting discrimination (McCabe, Bostwick, Hughes, West, & Boyd, 2010). Additionally, the predictive validity of the effects of discrimination on mental health was demonstrated in a longitudinal study of gay men, in which experiences of discrimination were related to HIV risk behavior, substance use, and depressive symptoms over time (Hatzenbuehler, Nolen-Hoeksema, & Erickson, 2008).

Some of the effects of distal stressors on health are also generalizable to sexual minorities of color. For example, homophobic, racist, and classist social discrimination strongly predict negative psychological symptoms for Latino gay and bisexual men (Díaz et al., 2001). Szymanski and Sung (2010) also found that Asian American sexual minorities experience minority stress in both heterosexual communities of color and sexual minority communities, and these minority stressors are predictive of greater psychological distress. Although there is much research identifying the negative effects of distal stressors on mental health, there is a dearth of literature identifying the deleterious effects of distal stressors on physical health for sexual minorities. In general, the relationship between psychological
stress and poor physical health and diseases is explained by physiological processes that cause:

frequent and prolonged activation of the sympatho-adrenal-medullary (SAM) and hypothalamic-pituitary-adrenal-cortical (HPA) axes (Grant, 1999). These systems that are triggered by stress are associated with pathophysiological changes related to cardiovascular disease risk. SAM activation is characterized by increased sympathetic tone and release of catecholamines, whereas HPA activation is characterized by cortisol secretion and immune and inflammatory dysregulation. (p. 615, Roepke & Grant, 2011).

Therefore, it is plausible that sexual minority stressors may cause frequent neural activations and increased cortisol secretion that are related to poorer bodily functioning and physical health. The relationship between minority stressors and physical health has received more attention within the racial health disparities literature. Sexual minorities and racial minorities might share similar psychological and physical experiences in their response to the effects of minority stressors (e.g., discrimination and oppression). Within the racial minority health disparities literature, the exposure to acute and chronic stressors, such as racism, has been described to:

“lead to structural and functional changes in multiple physiological systems, including the neuroendocrine, autonomic, and immune systems. These changes in physiology and behavior can lead to changes in health. Importantly, stressors, including discrimination can play a role in the onset, progression, and severity of illness” (p. 18, Williams & Mohammed, 2009).

Thus, sexual minority stressors may lead to physiological changes and poorer health behaviors. Specific to sexual minorities, Huebner and Davis (2007) found that perceived anti-gay discrimination (e.g., being called homophobic names) was associated with more sick days taken from work during the past year as well as greater frequency of nonprescription medication use. In a sample of lesbian women, sexual minority distal stressors were positively associated with self-reported distressing physical symptoms (e.g., diarrhea,
faintness, cold, cough; Lewis, Derlega, Clarke, & Kuang, 2006). Moreover, heterosexist discrimination is positively associated with overall perceived poorer physical health among a sample of African American lesbian and bisexual women (Wilson, Okwu, & Mills, 2011). Although these recent findings suggest some of the negative relations between discrimination and physical health, more research is needed.

**Proximal Sexual Minority Stressors and Health**

Proximal stressors are all related to various aspects of the sexual minority identity and sense of self (Meyer, 2003). Internalized sexual stigma, concealment, and expectations of rejection are all examples of proximal stressors. These stressors are all related to negative health outcomes.

**Internalized homophobia.** The process of internalizing sexual stigma (i.e., negative stereotypes and messages about sexual minorities) into one’s sense of self and self-concept is called internalized homophobia, internalized heterosexism, or self-stigma (Herek, Gillis, & Cogan, 2009; Szymanski, Kashubeck-West, & Meyer, 2008; Weinberg, 1972). In a review of empirical research on internalized homophobia among sexual minorities, several studies have documented that internalized homophobia is negatively associated with psychological distress, self-esteem, body image, mental health (e.g., depression, suicidality), substance abuse, physical outcomes, and sexual health (e.g., risky sexual behaviors, sexual compulsivity) among sexual minorities (Szymanski et al., 2008). More recently, a meta-analysis of 31 empirical studies has found that internalized homophobia is associated with higher levels of depression and anxiety for sexual minorities (Newcomb & Mustanski, 2010) and another meta-analysis has found that it is associated with risky sexual behavior among sexual minority men (Newcomb & Mustanski, 2011).
Furthermore, longitudinal research has documented the deleterious relationship between internalized homophobia and psychological distress among HIV-positive gay men (Wagner, Brondolo, Rabkin, 1996). Also, internalized homophobia is associated with less advanced sexual identity development, less disclosure of identity to others, less social support, and greater relationship problems both generally and among coupled participants (Frost & Meyer, 2009; Szymanski et al., 2008).

There is also very limited research documenting the relationship between internalized homophobia and physical health. Among lesbian women, internalized homophobia is positively associated with self-reported distressing physical symptoms (e.g., diarrhea, faintness, cold, cough; Lewis et al., 2006) and somatic complaints (Szymanski, Chung, & Balsam, 2001). Additionally, internalized homophobia is related to less frequent Pap smears, gynecological visits before cancer diagnosis, and breast examinations among a sample of lesbian women (McGregor, Carver, Antoni, Weiss, Yount, & Ironson, 2001). Internalized homophobia is also related to illness concerns among a sample of gay men with AIDS (Wolcott, Namir, Fawzy, Gottlieb, & Mitsuyasu, 1986). More research is needed to understand the effects of internalized homophobia on physical health, as well as mediators (e.g., social support, coping strategies) and moderators that explain the relationship between internalized homophobia and health outcomes (Szymanski et al., 2008).

**Concealment.** In addition to internalized sexual stigma, sexual minorities often conceal their sexual minority identity as a mean of coping with and protecting themselves from discrimination, victimization, stigma, and oppression (D’Augelli & Grossman, 2001; Meyer, 2003). Concealment for sexual minorities can include acts such as hiding parts of their identities or interests, friendship circles, and even romantic partners. Efforts of
concealing one’s sexual identity can be a sexual minority stressor that has negative health outcomes (Meyer, 2003). For instance, self-concealment is positively related to social anxiety and negatively related to social support among a sample of sexual minorities (Potoczniak, Aldea, & DeBlare, 2007). In contrast, depressive symptoms are inversely related to being out about one’s sexual orientation and feeling more integrated among gay men (Bybee, Sullivan, Zielonka, & Moes, 2009). Self-concealment is also related to internalized homophobia and less outness about one’s sexual orientation (Mohr & Kendra, 2011). Concealment can even limit sexual minorities from accessing sexual minority communities or gay-affirming resources (Meyer, 2003).

Concealment of one’s sexual orientation is also related to some physical health outcomes. For instance, among a sample of gay men, those who concealed their sexual identity were three times more likely to have higher rates of cancer and two more times likely to have infectious diseases (e.g., pneumonia, bronchitis, sinusitis, and tuberculosis), even when accounting for sociodemographic variables (age, ethnicity, socioeconomic status), psychological processes (e.g., coping style), and mental health (Cole, Kemeny, Taylor, & Visscher, 1996). Self-concealment is also positively associated with greater reported physical symptoms (e.g., back pain, headache, muscle soreness) even when accounting for previous traumatic experiences (Larson & Chastain, 1990).

**Rejection sensitivity.** Similar to concealment, due to frequent experiences of rejection and oppression, sexual minorities can become vigilant to these threatening experiences as a way of defensive coping (Allport, 1954; Meyer, 2003). According to the sexual minority stress model (Meyer, 2003), this sense of vigilance can lead sexual minorities to anticipate, expect, or be sensitive to potential disregard, rejection, or
discrimination from others (i.e., rejection sensitivity). Although expectations of rejection and oppression might serve as protective factors (i.e., being vigilant of future stressors to protect one’s self), this prolonged and chronic sense of vigilance can be cognitively, psychologically, and physically draining as it involves much exertion of energy.

Stigma consciousness, which is the expectation of prejudice and discrimination due to one’s sexual orientation, is predictive of depressive symptoms among gay men (Lewis, Derlega, Griffin, & Krowinski, 2003). Similarly, social sensitivity (i.e., fear of negative evaluation or rejection by others) is related to body dissatisfaction, restrictive emotionality, restrictive affection, negative affect, and eating disorder symptomatology among a sample of gay men (Blashill & Vander Wal, 2009). Additionally, gay-related rejection sensitivity is related to lower levels of self-esteem (Pachankis, Goldfried, & Ramrattan, 2008). This sensitivity to rejection can also have long term effects on mental and physical health. For example, in a longitudinal study of gay men, expectations of rejection were related to HIV risk behavior, substance use, and depressive symptoms over time (Hatzenbuehler et al., 2008). Among HIV-positive gay men, sensitivity to rejection is related to the acceleration in the course of HIV infection (Cole, Kemeny, & Taylor, 1997).

Moreover, gay-related rejection sensitivity may also lead to interpersonal difficulties, such as diminished sense of agency to assert one’s needs in relationships (Pachankis et al., 2008). Although these studies provide support for the relationship between rejection sensitivity and health, they have only used samples of sexual minority men and none have looked at its relationship to physical health. The proposed study aims to address these limitations by examining the effects of rejection sensitivity on sexual minorities’ mental and physical health for both sexual minority women and men.
Limitations of the Minority Stress Model

A limitation of the minority stress model is that it does not comprehensively identify psychological processes that explain the relationship between stress and poor mental health (Hatzenbuehler, 2009). In fact, multiple risk and protective factors lead all individuals toward different trajectories of either healthy adaptation or poorer health (Cicchetti & Sroufe, 2000; Masten, 2007; Rutter & Stroufe, 2000). The model also primarily discusses the role of identity (e.g., prominence, valence, or integration) in buffering or exacerbating the effects on stress on health (Meyer, 2003), but does not identify other types of psychological processes. Furthermore, the model primarily focuses on mental health, with little attention to physical health.

Additionally, minority stress is inherently a relationally disruptive and toxic process. For instance, homophobic microaggressions create relational disconnection between individuals, which could result in poorer relational and psychological outcomes such as isolation. However, the minority stress model does not fully articulate a relational framework to understand health disparities, despite the movement of several disciplines to a relational understanding of individuals (e.g., relational psychoanalysis, relational feminism, family systems, and human development; Gilligan, 1982; Miller & Stiver, 1997; Mitchell, 1988). To this end, RCT provides a complementary perspective to the minority stress model by positioning psychological distress within the context of relational and cultural disconnections (Miller & Stiver, 1997). RCT informs the minority stress model by suggesting relationally-based factors not previously considered as mechanisms by which stress leads to health risks. It also frames existing processes between sexual minority stress and health from a relational lens.
A New Perspective to Examining Sexual Minority Health: Basic Assumptions of Relational Cultural Theory

In response to traditional assumptions of models of psychological development (i.e., autonomy, separation), RCT is grounded in a new and relational perspective of understanding women’s development and growth (Jordan, 2009; Miller, 1976; Miller & Stiver, 1997). The theory assumes that all people desire connection with other people (Miller, 1976), and that psychological growth and development occurs through human connection and interpersonal relationships (Miller & Stiver, 1997). The feminist thinking behind the basic assumptions and foundations of RCT started with a group of women in the late 1970s who began meeting to discuss and learn from each other how to work with their clients, as well as to challenge the basic and damaging assumptions of traditional therapy and Western socialization on women (Jordan & Walker, 2004). A series of published papers and conferences since that time began to take place at the Stone Center at Wellesley College, which was directed by Jean Baker Miller, and further informed the development of the theory (Jordan & Walker, 2004).

Relational culturally posits that empathy, mutuality, and empowerment are important elements to relationships that can foster psychological growth, connection, and healing; these types of relationships are called growth-fostering relationships (Jordan, 2001; Miller & Stiver, 1997). Growth-fostering relationships have five key elements, which are considered, “the five good things” (Jordan, 2009). These elements are: relationship with a sense of vitality and energy (i.e., zest); sense of action and agency and the ability to take action in relationships (i.e., empowerment); greater knowledge and understanding of one’s self and the other and the relationship (i.e., clarity); greater sense of worth; and desire for more connections and relationships beyond the specific relationship under consideration (Jordan,
These components of growth-fostering relationships are all expected to be related to positive well-being and psychological development.

Although relational factors contribute to positive growth, well-being, and relational resilience (Jordan, 2009), there are also processes that inhibit or exacerbate health. Instances in which one individual in a relationship instigates relational disconnections (i.e., any type of behavior or experience that creates relational distance or inflicts emotional and/or physical pain to the other person in the relationship) toward another individual in the relationship and does not validate this experience can lead to psychological injury (Miller & Stiver, 1997). It is human nature that disconnections inevitably occur in all relationships, even in growth-fostering relationships (Jordan, 2009; Miller & Stiver, 1997). When these disconnections are acknowledged and healed, the relationship becomes stronger. However, if they are not validated and the injured individual is devalued or ignored, the injured individual can become psychologically distressed in relation to the pain and suffering of such disconnection (Jordan, 2009; Miller & Stiver, 1997). More recently, social neuroscience research has found that relational disconnections (e.g., exclusion, rejection) are experienced in the same neurobiological and neural brain regions as physical pain (Eisenberger, 2012). These disconnections can become more harmful when one individual in the relationship has more power over another (Miller & Stiver, 1997). For sexual minorities, experiences of discrimination, prejudice, and victimization are all examples of relational disconnections that are often invalidated or unacknowledged and they reflect significant power differentials.

According to RCT, an individual may internalize experiences of connection and disconnection and develop “relational images” (Miller & Stiver, 1997). Relational images can be defined as perceptions of oneself in relationships and as expectations from
relationships with others (Miller & Stiver, 1997). RCT assumes that people utilize relational images (e.g., relational schemas) to guide their behaviors and interactions with others. Distorted or harmful relational images often develop as a result of experiencing disconnection; they can lead individuals to expect harmful disconnections in relational interactions with others (Jordan, 2008; Miller & Stiver, 1997). For sexual minorities, experiences of oppression and stigma may lead some to internalize negative perceptions of themselves (i.e., proximal stressors such as internalized homophobia) and develop self-disparaging relational images (e.g., rejection sensitivity, concealment). For example, a lesbian or bisexual woman might develop a relational image of needing to conceal her sexual orientation in connections with others at her workplace in response to previous experiences of discrimination (e.g., being harassed at work or previously fired due to her sexual orientation). However, this concealment relational image might become harmful because it keeps her from being authentic and empowered in relationships with friends and coworkers, and in turn negatively impact her mental health.

In addition to individual-level forms of disconnection, RCT posits that there are socio-cultural forms of disconnection that contribute to individuals’ mental health and encumber them from engaging in growth-fostering relationships (Jordan, 2008, 2009; Miller & Stiver, 1997). As aforementioned in the minority stress model (Meyer, 2003), sexual minorities experience several systemic and cultural barriers and stigma that isolate them and are deleterious to their mental health (i.e., cultural forms of disconnection). As such, both individual-level and cultural-level disconnections are quite connected to the experiences of sexual minorities, who have less social power and privileges than heterosexuals.
Relational Mediating Pathways to Health and Resilience

As indicated in the minority stress model, sexual minorities experience both socio-cultural and individual level forms of relational disconnection from heterosexuals that vary in extremity (e.g., subtle or implicit microaggressions, hate crimes, and institutional oppression such as lack of civil rights to marry or adopt children). In addition, these disconnections are most often invalidated, leaving sexual minorities to experience psychological injury and pain and in turn poorer health outcomes. These experiences also lead individuals to develop relational images that guide how they relate to others and perceive themselves (Miller & Stiver, 1997). For sexual minorities, experiences of disconnection and oppression might lead them to develop self-disparaging relational images, such as internalized homophobia and rejection sensitivity, which are also considered proximal stressors in the minority stress model (Meyer, 2003).

Moreover, individuals in positions of power may utilize relational disconnections as shaming tactics to remain in power as well as to silence, disempower, and isolate marginalized people. This can lead to shame and humiliation for the individuals hurt by such disconnections (Jordan, 2004; Miller & Stiver, 1997). Shaming tactics such as discrimination enable heterosexuals to maintain power over sexual minorities; consequently, this leads sexual minorities to feel a sense of inadequacy and shame (Russell, 2009). In fact, inherit in shame is “judgment and blame” (Jordan, 2004, p. 125).

Chronic disconnections and invalidations (i.e., distal stressors) compounded with self-disparaging relational images (i.e., proximal stressors) can lead to the outcomes (or “five good things”) contrary to growth-fostering relationships and in turn poorer health (Jordan, 2008, 2009; Miller & Stiver, 1997). These outcomes include drop in energy and motivation,
decreased sense of worth and productivity, interpersonal confusion, and withdrawal and avoidance of connections and relationships with people; and in turn, these outcomes can lead to psychopathology. Furthermore, experiences of disconnections may lead to feelings of shame and in turn poor psychological health. Thus, these factors may be understood as mediating factors between relational disconnections (e.g., sexual minority stress) and health; however, the literature has not examined them empirically in the sexual minority health literature. The present study examined a model that includes the mediating effects of three specific insidious outcomes of relational disconnections on the relationship between sexual minority stressors (i.e., disconnections) and health. These are: sense of agency, lack of desire for connection and feelings of loneliness, and shame.

**Sense of agency.** Sense of agency, which is also known as sense of mastery, is considered as a personal psychological resource that can be utilized to respond to stressors or threats from others or the environment (Pearlin, Lieberman, Menaghan, & Mullan, 1981; Pearlin & Schooler, 1978). According to Pearlin and Schooler (1978), sense of mastery is defined as “the extent to which one regards one's life-chances as being under one's own control in contrast to being fatalistically ruled” (p. 7). RCT posits that one of the outcomes of growth-fostering relationships (i.e., “the five good things”) is a sense of action and agency in relationships (Jordan, 2009; Miller & Stiver, 1997). Although a sense of agency or mastery can serve as a psychological resource to defend against minority stressors, it can disintegrate or become diminished with frequent, unique, and structural sexual minority specific stressors and in turn lead to poorer health. In fact, chronic relational disconnections compounded with harmful relational images can lead to disempowerment or lack of agency, and in turn poorer health (Jordan, 2008, 2009; Miller & Stiver, 1997).
It is plausible that both distal and proximal sexual minority stressors question a sexual minority individual’s sense of agency and control over one’s environment. From a RCT perspective, experiences of individual-level relational disconnection, such as discrimination and victimization, are disempowering and deplete an individual’s sense of control and agency in relationships and in their contexts (Miller & Stiver, 1997). Additionally, experiencing cultural forms of relational disconnection, such as living in a society where sexual minorities are denied civil rights (e.g., marriage rights), may also be disempowering. Similarly, due to the taxing nature of proximal sexual minority stressors on psychological resources, proximal stressors may deplete individuals’ sense of agency. Complementary to this perspective, an individual’s distorted relational images (e.g., rejection sensitivity, internalized homophobia) may make him or her feel disempowered or have no agency or control over her or his life and/or relationships and in turn may have deleterious consequences to one’s health.

Research has documented some of the effects of sexual minority stressors on sense of agency. In fact, in a sample of 2,259 lesbians, gay men, and bisexual individuals from California, lesbian and gay hate-crime survivors had a lower sense of mastery than did sexual minorities who experienced non-biased crime or who were not crime-victims (Herek, Gillis, & Cogan, 1999). Moreover, sexual minorities of color reported more experiences of discrimination and stress and lower levels of sense of mastery than White sexual minorities (Meyer, Schwartz, & Frost, 2008). Although these relations exist, research has not clearly documented the effects of both distal and proximal stressors on sense of agency and health for sexual minorities.
The literature has also elucidated the relationship between sense of agency and health outcomes. More recently, in a study comparing heterosexual and sexual minority emerging adults, personal mastery accounted for the relationship between sexual orientation and depressive symptoms and self-esteem (Spencer & Patrick, 2009). In an empirical review of 32 studies, sense of mastery is associated with improved cardiometabolic health and reduced risk for cardiovascular disease and/or death (Roepke & Grant, 2011). However, sexual orientation was not considered in these studies; thus, it remains unclear how sense of agency may relate to both physical and mental health for sexual minorities.

Furthermore, the mediating effect of sense of agency on the association between sexual minority stressors and health has not yet been examined. A more recent study on abuse and health provides some potential support for this mediating path. Among a sample of Two-Spirit American Indian and Alaska Native lesbian and bisexual women, experiences of physical and sexual assault as well as childhood trauma were negatively related to sense of mastery (Lehavot, Walters, & Simoni, 2010). Additionally, sense of mastery was positively related to both mental and health physical (Lehavot et al., 2010). In fact, the researchers tested the mediating role of sense of agency on the relationship between violence experiences (e.g., childhood trauma, partner violence, physical or sexual assault) and mental and physical health outcomes. They hypothesized that experiences of violence would lead to a diminished sense of control and in turn would lead to poor health. The researchers found that sense of mastery was a significant mediator between violent experiences, specifically childhood trauma, partner violence, and physical assault, and mental and physical health; they also found that mastery was a mediator between childhood trauma and physical health (Lehavot et al., 2010). Although sense of agency was a mediator between abusive experiences (e.g., violence) and
health outcomes, the researchers did not examine this for the unique aspects of sexual minority stressors. Thus, the present study is innovative because it examined the mediating effect of sense of agency on the associations between sexual minority stressors and health (see Figure 2).

**Need for connection and loneliness.** Similar to sense of agency, RCT posits that one of the outcomes of growth-fostering relationships (i.e., “the five good things”) is a desire for more connection with others (Jordan, 2009; Miller & Stiver, 1997). However, relational disconnections can lead to withdrawal or avoidance of connections with people, and in turn poorer health (Jordan, 2008, 2009; Miller & Stiver, 1997). Withdrawal or avoidance of others or lack of desire for connection with others may also be conceptualized as a form of a strategy for disconnection (Miller & Stiver, 1997) and may be related to feelings of loneliness and isolation.

RCT honors individuals’ strategies for disconnection as they serve meaningful purposes such as protection from further relational disconnection and in turn more psychological pain. However, a paradoxical relational dynamic, called the *central relational paradox*, often develops when individuals utilize their strategies of disconnection (Miller & Stiver, 1997). As RCT posits that all people need, want, and thrive in connection, people can have relational paradoxes, in which they inadvertently create disconnection in an effort to create, maintain, or keep relational connection. Specifically, despite an individual’s human yearning and efforts to create and maintain connection with others, he or she may unconsciously or unintentionally utilize strategies of disconnection (e.g., withdrawal or lack of desire for connection) to protect one’s self from others. Consequently, this inadvertently leads to the contrary outcome of obtaining more connection and can create further
disconnection, thus forming a central relational paradox and leading to additional psychological anguish (Miller & Stiver, 1997). Therefore, it is plausible that sexual minorities’ experiences of disconnection (i.e., distal and proximal stressors) may lead them to have feelings of lack of desire for connection with others and feelings of loneliness (i.e., strategies for disconnection), which in turn would create a relational paradox and be associated to poorer health.

It is important to note that feelings of loneliness and isolation are also embedded within a larger context of cultural relational disconnection. From a RCT lens, individuals with more societal power often utilize efforts to isolate minority groups as a way to remain in power (Miller & Stiver, 1997). For the case of sexual minorities, experiencing relational disconnection on both the individual and structural level can lead to feelings of loneliness and isolation and in turn leads to deleterious health consequences. Jordan (2004) even posits that “when people are unable to move from disconnection to connection, the resulting combination of immobilization and isolation may become a prison…and may contribute to psychological anguish, physical deterioration, and sometimes even death” (p. 28). In fact, in a qualitative analysis of a lesbian periodical, Lesbian Connection, Erwin (2006) found that loneliness and mental and physical health are two main discussion categories in the journal. In addition, prevalence of psychiatric disorders is higher among sexual minorities living in states with discriminatory policies (e.g., ban of gay marriage) than those living in states with protective policies (Hatzenbuehler, McLaughlin, Keyes, & Hasin, 2010). Thus, cultural forms of disconnection often isolate sexual minorities and might lead to their health disparities.
Research has documented the relation between the harmful effects of relational disconnection and oppression on feelings of loneliness for sexual minorities. For instance, homophobic physical attacks were related to more loneliness among a sample of sexual minority older adults; more specifically, sexual minority victims of physical attacks reported more loneliness than non-victims (D’Augelli & Grossman, 2001). In another study, researchers found that sexual minority stressors (e.g., experiences of prejudice events, expectations of rejection) were predictive of loneliness among a sample of older sexual minority adults (Kuyper & Fokkema, 2011).

There is also empirical support for the relation between feelings of loneliness and poorer health outcomes. Loneliness is related to depressive symptoms and suicidality among a sample of sexual minority college students (Westefeld, Maples, Buford, & Taylor, 2001) and suicidal ideation among a sample of sexual minority men (Schneider, Taylor, Hammen, Kemeny, & Dudley, 1991). Alienation from the gay community is associated with depression in a large probability sample of sexual minority men (Mills et al., 2004). Loneliness is also positively correlated to fear of intimacy among lesbians and gay men (Greenfield & Thelen, 1997). In addition, findings from a longitudinal study of gay men found that sense of isolation is related to subsequent mental health at all time points in the study (Lackner et al., 1993).

Moreover, in a probability sample of Latino sexual minority men from three U.S. cities, minority stressors (e.g., homophobia, racism, financial hardship) were predictive of social isolation (e.g., feeling lack of companionship), and in turn, social isolation was predictive of psychological distress (Díaz et al., 2001). Similarly, in terms of proximal stressors, internalized heterosexism and internalized sexism were negatively related to
greater number and satisfaction with social supports, which in turn was negatively related to psychological distress among a sample of sexual minority women (Szymanski & Kashubeck-West, 2008). Although both studies did not actually examine the mediating role of social isolation between minority stressors and mental health, their results suggest potential mediating effects.

There is one study that has tested the mediating effects of isolation on the association between sexual minority stressors and health. In a daily diary study, researchers found that sexual minority participants were more likely to isolate themselves when they experienced stigma-related proximal and distal stressors (e.g., discrimination and rejection sensitivity), and in turn, social isolation was related to psychological distress (Hatzenbuehler, Nolen-Hoeksema, & Dovidio, 2009). In fact, the researchers found that social isolation mediated the relationship between sexual minority stressors and psychological stress (Hatzenbuehler et al., 2009).

Although these studies have demonstrated the relations between sexual minority stress and loneliness or social isolation and their relations to health, the literature is limited in examining the effects of sexual minority stressors on the desire for connection with others as well as loneliness. Additionally, the mediating roles of both processes have not been adequately tested. Therefore, the present study examined the mediating effects of loneliness and lack of desire for connection on the relation between sexual minority stressors and health (see Figure 2).

**Shame.** As aforementioned, heterosexuals may utilize shame tactics such as discrimination to maintain their power over sexual minorities, which instigates feelings of inadequacy and shame in sexual minorities and in turn poorer health (Miller & Stiver, 1997).
Jordan (1989, 2004) defined shame as “an essential relational affect…as a sense of unworthiness to be in connection, an absence of hope than empathic response will be forthcoming from another person” (p. 122). Feelings of shame may also be related to the *central relational paradox*. For example, when individuals feel shameful, they might keep parts of themselves out of the relationship as a way to preserve and maintain relational connections. However, this can backfire and may lead to inauthenticity and lack of mutuality in connections and could even create disconnection or unmet needs, in turn creating a relational paradox. Thus, shame is immobilizing and can lead to psychological distress, disempowerment, and difficulty experiencing mutual and authentic connection (Hartling, Rosen, Walker, & Jordan, 2004).

The literature has documented the relations among minority stressors, health, and shame. A recent meta-analysis found that shame is strongly associated with depressive symptoms (Kim, Thibodeau, & Jorgensen, 2011); however, it is not clear how shame is related to sexual minorities’ physical health. Among sexual minorities, sexual minority stress is related to shame (Allen & Oleson, 1999; Sherry, 2007). Consequently, shame is related to poor mental health outcomes (Bybee et al., 2009).

More specifically, the literature has mainly examined the association between proximal stressors with shame and psychological health. For instance, proximal stressors, such as internalized homophobia, are positively related to feelings of shame among a sample of sexual minority men and women (Sherry, 2007). For instance, there is a positive association between internalized homophobia and shame among gay men (Allen & Oleson, 1999). Concealment or lack of disclosure of sexual identity is also related to feelings of shame; moreover, chronic feelings of shame are significantly positively related to depression
and suicidality among gay men (Bybee et al., 2009). Shame is also related to feeling perverted, effeminate, weak, sick or defective, passive, lacking masculinity, and engaging in anal sex among a sample of gay men (Allen & Oleson, 1999).

In addition to the relations between proximal stressors and shame for gay and bisexual men, shame is also related to lesbian women’s experiences. For instance, in a recent study of lesbians living in mainland China and Hong Kong, researchers found that internalized heterosexism was positively related to shame, and less concealment (i.e., outness to family and friends) was negatively related to feelings of shame (Chow & Cheng, 2010). In contrast, less feelings of shame are related to increased lesbian identity integration (Wells & Hansen, 2003).

Within the physical health literature, shame has been conceptualized as a chronic stressor that is detrimental to physical health (Mills, 2005). Researchers have found that social evaluation is related to shame and shame is related to increased cortisol levels (Gruenewald, Kemeny, Aziz, & Fahey, 2004). In a meta-analysis, researchers also found that cortisol levels are heightened in contexts where social negative evaluation is likely to occur (Dickerson, Gruenewald, & Kemeny, 2004). Thus, shame appears to have some detrimental effects on physical health. The extent to which these effects exist among sexual minorities has not yet been examined.

Overall, it appears that shame may be a relational affect that results from harmful relational images (e.g., internalized homophobia) and experiencing disconnection (e.g., discrimination). It is also likely that shame can be understood as a mediator between sexual minority stress or disconnection and health; however, such relations have not yet been
examined. As such, the present study’s mediation model examined the effects of shame on the association between sexual minority stress and health (see Figure 2).

**Illuminating Health Outcomes and Resilience through Growth-Fostering Relationships**

Although examining factors that explain the relations between minority stress and health outcomes among sexual minorities is important, it is also pertinent to examine factors that promote resilience. Sexual minorities are resilient in their ability to resist the insidious sociocontextual messages they receive and disentangle stigma from their own identities (Szymanski & Kashubeck-West, 2008). In fact, despite the disparities they face, a majority of sexual minorities are mentally healthy (Cochran & Mays, 2006; Herek & Garnets, 2007). It is plausible that resilient sexual minorities are individuals with supportive relational connections and communities.

According to RCT, psychological growth and resilience is rooted in relational connection and is facilitated through growth-fostering relationships (Miller & Stiver, 1997). Concomitantly, a critical task in development is the capacity for individuals to develop in relation to others and to foster the ability to develop and maintain growth-fostering relationship (Miller & Stiver, 1997). Growth-fostering relationships are characterized by mutual engagement, authenticity, empowerment, and zest (Liang, Tracy, Taylor, Williams, Jordan, & Miller, 2002; Miller & Stiver, 1997). Meaningful and growth-fostering relationships lead to the development of a greater sense of purpose, personal transformation, and connection and integration with the larger community (Jordan, 2004; Miller & Stiver, 1997). Through experiences of mutual empathy and empowerment, individuals obtain personal transformation, which “involves awareness of the forces creating the disconnection, discovery of a means for reconnecting, and building a more differentiated and solid
connection” (Jordan, 2004; p. 43). As a result of relational resilience and transformation, individuals may work beyond personal relational pain and toward a larger social change approach to societal forces contributing to disconnection (e.g., heterosexism) through sociopolitical activism and empowerment (Jordan, 2004; Miller & Stiver, 1997). Although these core concepts of the theory (e.g., growth-fostering relationships) are quite relevant to sexual minorities, they have not been examined empirically nor have they been examined as factors that promote their resilience in the face of sexual minority stress.

Nonetheless, emerging research has operationalized and provided support for growth-fostering relationships (Liang et al., 2002). These types of relationships are important to consider because they attempt to assess the quality of relationships. Researchers have indicated that the quality and nature of relationships or social support is more important than their quantity (Liang et al., 2002). Growth-fostering relationships have been operationalized using the Relational Health Index (Liang et al., 2002). This measure assesses the quality of relationships with peers, mentors, and community members characterized by principles of RCT (e.g., mutual engagement authenticity, and empowerment; Liang et al., 2002). Overall, growth-fostering relationships are positively associated with higher levels of self-esteem, school engagement and belonging, and they are negatively related with psychological distress, loneliness, depression, and stress for youth, college students, and adults (Frey, Beesley, & Miller, 2006; Frey, Tobin, & Beesley, 2004; Liang et al., 2002; Liang, Tracy, Kenny, Brogan, & Gatha, 2010; Liang, Tracy, Taylor, & Williams, 2002).

More specifically, researchers found that growth-fostering relationships with peers, mentors, and community members were all negatively associated with psychological distress among a sample of college men and women (Frey et al., 2004; Frey et al., 2006).
Additionally, growth-fostering relationships with peers, mentors, and community members were negatively associated with loneliness, whereas growth-fostering relationships with community members were negatively associated depression and perceived stress (Liang et al., 2002). Concomitantly, poor growth-fostering relationships with peers were significantly associated with greater alexithymia and psychological distress among a sample of college women (Liang & West, 2011). Thus, it appears that there is some empirical support for the positive effects of growth-fostering relationships on health.

Moreover, growth-fostering relationships with peers and community members are positively associated with self-esteem (Liang et al., 2002). Similarly, high quality growth-fostering relationships with mentors are associated with greater self-esteem and less loneliness among college women (Liang, Tracy, Taylor, & Williams, 2002). Furthermore, growth-fostering relationships with peer and community members were found to moderate the relationship between heavy drinking and negative consequences of drinking for college women (LaBrie, Thompson, Ferraiolo, Garcia, Huchting, & Shelesky, 2008). More specifically, college women who were heavy drinkers and who had high quality growth-fostering relationships had fewer alcohol-related negative consequences than those women with lower quality relationships (LaBrie et al., 2008). Additionally, growth-fostering relationships buffer the negative effects of discrimination on being cooperative in school for Chinese American adolescents (Grossman & Liang, 2008). Chinese American adolescents with reduced quality growth-fostering relationships with close peers experienced greater negative effects of discrimination on their cooperation in school compared to adolescents with high quality growth-fostering relationships with peers (Grossman & Liang, 2008).
Therefore, it is plausible to conceptualize growth-fostering relationships as mitigating the adverse and relationally disconnecting effects of oppression on relational processes as they provide validation, empathy, and empowerment. Although growth-fostering relationships have not been examined with sexual minorities, the literature indicates that social support buffers against the effects of sexual minority stress on health (Meyer, 2003). For example, in a longitudinal study of gay men, researchers found that certain types of social support were related to mental health (Lackner et al., 1993). Additionally, perceived social support from friends was negatively related to internalized heterosexism, and perceived social support from friends and family was negatively related to feelings of shame among Chinese lesbians (Chow & Cheng, 2010). Moreover, lower levels of community sense of belonging were related to increased levels of depression among gay men (McLaren, Jude, & McLachlan, 2007). Similarly, feeling a sense of belonging to the general and/or lesbian communities were both negatively associated to depression (McLaren, 2009). As such, the current study examined a model accounting for the moderating effects of the unique growth-fostering relationships with peers, mentors, and the LGBTQ community (Figure 3).

Summary

The literature has documented significant mental and physical health disparities among sexual minorities. Many of these poorer health outcomes are associated with experiences of distal and proximal stressors and relational disconnections. Using the sexual minority stress model and RCT, this study examined relational models of the effects of sexual minority stress and disconnection on mental and physical health, as well as test theoretically informed relational factors that might mediate (Figure 2) or moderate (Figure 3) these associations.
Researchers are called upon to examine the multiple sources and levels of minority stress and disconnection and how they affect sexual minorities’ health disparities (IOM, 2011; Meyer, 2003; Szymanski et al., 2008). This study is unique because it addresses calls for research on sexual minority health risks as well as examined novel risk and protective factors that illuminate these risks and resilience (Hatzenbueller, 2009; Meyer, 2010; Moradi et al., 2009). This study is also important because it addresses several limitations in the empirical literature. By pairing RCT with the minority stress model, the study tested comprehensive and integrated models of mediators and moderators of the process by which minority stress or relational disconnection may lead to mental and physical health outcomes. The present study also provides a broader integration of relational and socio-contextual frameworks to understand not only mental health but also physical health and the relational processes that lead to resilience among sexual minorities.
Chapter 3

Method

The following chapter proposes the research design and methodology for this study. This chapter identifies the study’s hypotheses and describes its research design. Additionally, it describes the sampling strategy, identifies the measures and their psychometric properties, and presents the procedures and analytic strategies.

Review of Purpose and Hypotheses

The present study examined three integrated relational models of the effects of sexual minority stress and relational disconnection on mental and physical health of sexual minorities (Figure 1). These models tested theoretically informed relational factors that mediate (Figure 2) and moderate (Figure 3) these relationships. Model 1’s hypothesis is:

**Hypothesis 1:** Distal (i.e., relational disconnections) and proximal (i.e., self-disparaging relational images) sexual minority stressors will predict poorer mental and physical health (Figure 1).

A second model tested the mediating effects of RCT processes (i.e., sense of agency, social isolation, and shame) on the relationship between distal (i.e., disconnection) and proximal stress (i.e., self-disparaging relational images) and health outcomes (Figure 2).

**Hypothesis 2a:** Sexual minority stress will predict shame, isolation and lack of desire for connection, and diminished sense of agency.

**Hypothesis 2b:** Shame, isolation and lack of desire for connection, and diminished sense of agency will all predict poorer mental and physical health outcomes.
Hypothesis 2c: The relationships between sexual minority stress and poorer mental and physical health outcomes will be mediated by relational factors of shame, loneliness and lack of desire for connection, and diminished sense of agency.

Building on Model 2, a third model proposed that growth-fostering relationships would moderate the relationship between sexual minority stressors and the three mediators. The following hypothesis pertains to Model 3:

Hypothesis 3: Growth-fostering relationships with peers, mentors, and the sexual minority community will each moderate the relationship between sexual minority stressors and each of the three mediators (i.e., shame, isolation and lack of desire for connection, and decreased sense of agency; Figure 3). More specifically, high levels of growth-fostering relationships will buffer against the negative effect of minority stress on shame, loneliness, and lack of desire for connection, and decreased sense of agency.

Research Design

The present study utilized a quantitative, descriptive correlational design (Heppner, Wampold, & Kivlighan, 2008). The exogenous variables are the two sexual minority stress factors and the moderating factors: distal stressors (i.e., relational disconnections such as harassment and discrimination); proximal stressors (i.e., self-disparaging relational images such as internalized homophobia and rejection sensitivity); and moderating variables (i.e., growth-fostering relationships with peers, mentors, and the community). The endogenous variables are the mediating relational factors (i.e., shame, loneliness, and sense of agency) and the outcome health factors (i.e., mental and physical health).
Participants

Participants were 719 sexual minority adults, who ranged in age from 18 to 91 years ($M = 42.21$, $SD = 15.16$). About half of the sample’s participants identified as male (54.8%), whereas 42.3% identified as female and 2.9% as transgender. When asked to report their sexual orientation, they identified their sexual orientation as gay (45.1%), bisexual (25.3%), lesbian (21.6%), queer (5.3%), unsure/questioning (1.5%), and other (1.3%). Participants were White (77%), Black or African American (6.4%), Hispanic or Latina/o American (6.1%), Biracial or Multiracial (3.4%), Asian or Asian American (2.1%), Native American, American Indian, or Alaska Native (1.4%), Pilipino or Pilipino American (0.7%), Middle Eastern or Arab American (0.6%), Native Hawaiian or other Pacific Islander (0.6%), Jewish/Ashkenazi (0.6%), Afro-Caribbean American (0.3%), East Indian or East Indian American (0.3%), and Chinese or Chinese American. Due to small sample sizes in several of these ethnic groups ($n = 1$ to $n = 6$), racial/ethnic groups were collapsed into the following categories: White (77%), Black/Afro-Caribbean/African American (6.4%), Hispanic/Latino/a (6.1%), Asian/Asian American and Pacific Islander (3.8%), Biracial and Multiracial (3.4%), Native American (1.4%), and Other (2%).

Participants reported living in the following U.S. regions: Northeast (30.6%), West (19.4%), Midwest (18.4%), South (15.6%), Southwest (8.9%), Northwest (5%), or Other U.S. Territories (0.1%); 1.8% reported living internationally in a non U.S. territory. Participants varied across the following educational levels: some high school (1.8%), high school degree or GED equivalent (27.2%), associate degree (15.1%), bachelor’s degree (30.8%), master’s degree or higher (25.1%). Half of the participants were employed full-time (46.4%) and 62.9% of all participants had an income of $25,000 or higher. Participants were
single and not dating (35.5%), partnered or in a committed relationship (23.5%), married
with legal recognition status (14.7%), single and dating (12.4%), partnered or committed but
not living together (8.3%), married with no legal recognition (2.9%), and separated/divorced
(2.7%). Most participants reported being HIV- (87.8%), whereas 6% were HIV+, 5.6% did
not know their status, and 0.6% preferred not to report.

Procedures

Participants were recruited through two methods: online listservs (i.e., social groups
and online networks) and an online panel of research participants. The online listservs
method included online groups (e.g., social groups, sports groups), forums/websites, and
listservs. LGBTQ groups with online listserv moderators were asked to forward the study’s
advertisement to their members. I attempted to recruit a racially and ethnically diverse
sample of participants was conducted by over-sampling LGBT participants of color through
specific culturally relevant social and community groups as well as online forums and
listservs. Overall, I contacted 550 groups. From these groups, 461 participants started the
survey, and 345 participants completed the survey in its entirety. It is not possible to compute
a response rate due to the lack of information on the number of group members per group
contacted. For the second method, an online research database of participants (i.e., panel of
research participants) was utilized. A random sample of panelists who met the study’s criteria
(i.e., participants who were over 18 years of age and who identified as a sexual minority) was
invited to participate. A total of 375 participants completed the survey through the online
research panel.

The Boston College Institutional Review Board provided approval for the study.

Qualtrics, an online data collection tool, was used to collect participants’ responses to the
survey. All potential participants received instructions directing them to an online link to the Qualtrics website, at which they viewed the consent form and participated in the study. Upon completing the survey, listserv participants were invited to obtain two incentives. They were invited to select an LGBTQ non-profit/charity organization, to which they could have $1 donated. Listserv participants were also invited to enter into a raffle to win one of five $50 gift certificates or cash prizes for completing the survey. They were invited to enter their email at the end of the survey if they wished to enter the raffle, or they had the option to enter a name of a non-profit/charity organization instead. Online panel participants were compensated two to four dollars depending on the time spent for completing the survey; they did not participate in the two incentives provided for the listserv participants. At the end of the survey, all participants were presented with a list of online resources providing LGBTQ-specific mental health support and services.

Measures

**Distal Stressors.** Participants’ experiences with harassment, rejection, discrimination, and victimization were measured with two scales.

*Heterosexist harassment, rejection, and discrimination.* The Heterosexist Harassment, Rejection, and Discrimination Scale (HHRDS; Szymanski, 2006) is comprised of 14 items that measure the frequency lesbians, gay men, and bisexual individuals experienced harassment, rejection, and discrimination in the past year. The HHRDS has three subscales: Harassment and Rejection (7 items; e.g., “How many times have you been rejected by family members because you are a gay, lesbian, or bisexual person?”), Workplace and School Discrimination (4 items; e.g., “How many times have you been treated unfairly by your co-workers, fellow students, or colleagues because you are a gay, lesbian, or bisexual
person?”), and Other Discrimination (3 items; e.g., “How many times have you been treated unfairly by strangers because you are a gay, lesbian, or bisexual person?”). Item response options are on a 6-point frequency scale, ranging from 1 (the event has never happened to you) to 6 (the event happened almost all the time [more than 70% of the time]). Previous studies have reported high alpha reliability coefficients for the total scale with a lesbian sample (α = .90; Szymanski, 2006), bisexual and lesbian women sample (α = .90; Lehavot & Simoni, 2011), gay and bisexual men sample (α = .91, Szymanski, 2009), and with an Asian American LGBTQ sample (α = .91; Szymanski & Sung, 2010). The scale’s psychometric properties were examined and validated with sexual minority samples and studies have found associations between the scale and measures of mental health, psychological distress, and substance abuse (Lehavot & Simoni, 2011; Szymanski, 2006, 2009; Szymanksi & Sung, 2010). For the purposes of this study, the discrimination subscales were combined into one 7-item subscale, and the harassment and rejection scale remained the same. For this investigation, the Cronbach alpha reliability was .95 for the total scale, .91 for the harassment and rejection subscale, .90 for the workplace and school discrimination subscale, .87 for the other discrimination subscale, and .93 for the combined discrimination subscale.

**Victimization.** Although the HHRDS measures experiences of discrimination, rejection, and harassment, another measure of heterosexist prejudice events was used to adequately assess other experiences of victimization. A 7-item frequency scale of LGB-based prejudice events over the past year (Lehavot & Simoni, 2011) was used, which is an adapted version of another measure of verbal and physical victimization experiences (D’Augelli, 2005). Response options are on a 4-point frequency scale, ranging from 0 (never) to 3 (three or more times). Participants were asked to rate the frequency they experienced several
heterosexist events over the past year (e.g., “verbal abuse or harassment” and “objects being thrown”) due to their lesbian, gay, or bisexual identity. Previous empirical work has documented adequate alpha reliability with a sample of sexual minority women (α = .78), and reported significant relationships between this scale and depression, anxiety, and substance abuse (Lehavot & Simoni, 2011). This scale is also highly correlated with experiences of harassment, rejection, and discrimination (Lehavot & Simoni, 2011). For this investigation, the Cronbach alpha reliability was .84.

**Proximal stressors.** Participants’ proximal stressors (i.e., self-disparaging relational images) were assessed by the three measures below of internalized homophobia, rejection sensitivity, and concealment.

**Internalized homophobia.** The Revised Internalized Homophobia Scale (IHP-R; Herek, Gillis, & Cogan, 2009) assessed internalized homophobia over the past year. This 5-item scale is a shortened version of the 9-item Internalized Homophobia Scale (Martin & Dean, 1987), which was developed with a sample of gay men and was based on the third edition of the Diagnostic and Statistical Manual of Mental Disorders’ diagnostic criteria for ego-dystonic homosexuality (American Psychiatric Association, 1980). The revised items’ response options are on a 5-point Likert scale ranging from 1 (disagree strongly) to 5 (agree strongly), with items such as “I wish I weren’t lesbian/gay/bisexual” and “If someone offered me the chance to be completely heterosexual, I would accept the chance.” The IHP-R’s psychometric properties have been tested with a sample of LGB adults, and researchers have reported adequate alpha reliability coefficients (α = .82; Herek et al., 2009). The IHP-R predicts decreased self-esteem and increased depressive symptoms and state anxiety; it is
also associated with sexual orientation disclosure to parents and non-family members (Herek et al., 2009). For this investigation, the Cronbach alpha reliability was .89.

**Rejection sensitivity.** The 12-item Brief Fear of Negative Evaluation Scale (BFNE; Leary, 1983), an abbreviated version of the 30-item Fear of Negative Evaluation Scale (Watson & Friend, 1969), was used to assess rejection sensitivity over the past year. Item response theory analyses have found that BFNE can better discriminate than the full scale (Rodebaugh, Woods, Thissen, Heimberg, Chambless, & Rapee, 2004). The BFNE measures participants’ anxiety and apprehension toward perceived and expected negative evaluations by others. Item response options are on a 5-point Likert scale and range from 1 (not all characteristic of me) to 5 (extremely characteristic of me), including four reverse-coded items. Example items are “I am frequently afraid of other people noticing my shortcomings” and “Other people’s opinions of me do not bother me” (reverse coded). The BFNE scale has demonstrated high internal consistency in previous studies (\(\alpha = .90\), Leary, 1983; \(\alpha = .80\), Duke, Krishnan, Faith, & Storch, 2006; \(\alpha = .88\), Rodebaugh et al., 2004) and four-week test-retest reliability (\(r = .75\); Leary, 1983). Construct validity has been demonstrated, in that the BFNE is related to depressive symptoms and loneliness (Duke et al., 2006); it is also associated with gay-related rejection sensitivity among gay men (Pachankis, Goldfried, & Ramrattan, 2008). For this investigation, the Cronbach alpha reliability was .92.

**Concealment.** The 3-item Concealment Motivation subscale of the Lesbian, Gay, and Bisexual Identity Scale (Mohr & Kendra, 2011) assessed concealment of sexual orientation over the past year. Item response options are on a 6-point Likert scale, ranging from 1 (disagree strongly) to 6 (agree strongly). Participants were asked to indicate their experience as an LGB person to three items (e.g., “I prefer to keep my same-sex romantic relationships...
rather private”). The measure has strong validity as the factor structure was supported with exploratory and confirmatory factor analyses and it was highly correlated with outness, ego-dystonic homosexuality, and self-concealment (Mohr & Kendra, 2011). Additionally, the scale developers also found adequate alpha reliability coefficients in their samples (α = .72, .78, and .79) and good test-rest reliability (r = .70; Mohr & Kendra, 2011). For this investigation, the Cronbach alpha reliability was .92.

**Mediating factors.** The four measures below assessed the three mediating factors of shame, sense of agency, and loneliness and lack of desire for connection.

**Shame.** Feelings of shame over the past year were measured with the shame subscale of the Personal Feelings Questionnaire-2 (PFQ2-Shame; Harder & Zalma, 1990), which is a modified and more robust version of the original Personal Feelings Questionnaire (Harder & Lewis, 1987). Participants were presented with 10 shame feelings (e.g., “embarrassed,” “feeling ridiculous,” and “feeling disgusting to others”) and response options are on a 4-point scale ranging from 0 (never experience the feeling) to 4 (experience the feeling continuously or almost continuously). Previous studies have reported adequate alpha reliability coefficients (α = .78) and high test-retest reliability with their samples (r = .91; Harder & Zalma, 1990). The PFQ2-Shame is significantly correlated with self-derogation, instability of self, shyness, social anxiety, depression, and public self-consciousness (Harder, Curtler, & Rockart, 1992; Harder, Rockart, & Curtler, 1993). More recently, researchers found high alpha coefficients among women with borderline personality disorder (α = .91) and found shame to be negatively correlated with self-efficacy, and empowerment, and positively correlated with trait-anxiety, experiential avoidance, and general psychopathology (Rüsch,
Corrigan, Bohus, Jacob, Brueck, & Lieb, 2007). For this investigation, the Cronbach alpha reliability was .91.

**Sense of agency.** The 7-item Mastery Scale (Pearlin & Schooler, 1978) assessed participants’ sense of agency and perceptions of personal control and influence in their own lives. Item response options are on a 4-point Likert scale, ranging from 1 (*strongly agree*) to 4 (*strongly disagree*). Example items are: “I have little control over the things that happen to me” and “I can do just about anything I really set my mind to do” (reverse coded). The scale has demonstrated good construct validity (Pearlin, Lieberman, & Menaghan, 1981), and high alpha reliability has been reported with a sample of gay men (α = .85; Davidson, Dew, Penkower, Becker, Kingsley, & Sullivan, 1992). More recently, the measure has been used with sexual minority and Two-spirit American Indian and Alaska Native women, with reported adequate reliability in their sample (α = .73) and significant positive associations with mental and physical health (Lehavot, Walters, & Simoni, 2010). For this investigation, the Cronbach alpha reliability was .86.

**Loneliness.** Feelings of loneliness over the past year were measured with the 6-item short form scale of the 12-item De Jong Gierveld Loneliness Scale (De Jong Gierveld & Van Tilburg, 2006). Loneliness is conceptually considered to have social and emotional domains; thus, this scale has social (e.g., “I miss having people around”) and an emotional (e.g., “I experience a general sense of emptiness”) loneliness subscales. Item response options are on a 5-point scale ranging from 1 (*yes!*), 3 (*more or less*), to 5 (*no!*). The scale was psychometrically validated with exploratory and confirmatory factory analyses in three studies with samples ranging from 2,945 to 7,244 participants; reported alpha reliability coefficients ranged from .70 to .76 for the 6-item scale across these samples (De Jong
Gierveld & Van Tilburg, 2006). Additionally, the researchers found that the 6-item loneliness scale was correlated with subjective self-report of health as well as partner status. More recently, the measure’s psychometric properties were supported with large samples from seven different countries (De Jong Gierveld & Van Tillburg, 2010). For this investigation, the Cronbach alpha reliability was .82.

**Lack of desire for connection.** The 5-item Desire to Affiliate with Close Others scale (Park & Maner, 2009) was reverse-coded to measure participants’ lack of desire for connection with others. Item response options are on a 7-point frequency scale and range from 1 (*not at all*) to 7 (*very much*). Participants rated how much they currently would like to engage in activities to connect with close others (e.g., “talk on the phone with a friend” and, “spend time with a close friend”). Four studies reported adequate alpha coefficients, ranging from .70 to .84, in their samples (Park & Maner, 2009). This scale is associated with high self-esteem (Park & Maner, 2009). For this investigation, the Cronbach alpha reliability was .81.

**Moderating factors: Growth-fostering relationships.** High quality growth-fostering relationships over the past year were measured with the Relational Health Index (RHI; Liang et al., 2002; Liang et al., 2007). The RHI has three indices measuring quality of growth-fostering relationships (i.e., mutually engaging, empowering, and authentic) with close peers (RHI-Peer; 8 items), mentors (RHI-mentor; 9 items), and community members (RHI-Community; 10 items). The psychometric properties of the RHIs were initially examined among a diverse sample of college women (Liang et al., 2002). The indices were later assessed among a sample of men and women and the number of items was reduced (Liang et al., 2007). Item response options are on a 5-point Likert scale, ranging from 1 (*never*) to 5.
(always), including some reverse coded items for each index. Participants were presented with definitions for each index (e.g., peer, mentor). For the RHI-Peer, participants were presented with:

“The following questions pertain to your friendships with peers (excluding family members or a romantic partner) over the past year. A close friend is someone whom you feel attached to through respect, affection and/or common interests, someone you can depend on for support and who depends on you. Please answer the next questions regarding just ONE of your closest friends. (Please do not select a family member or romantic partner).”

Following this prompt, participants were presented with items such as “My friendship inspires me to seek other friendships like this one.” They were also asked to report the sexual orientation of this peer. Among the participants, 49% indicated that they perceived their closest peer to be LGBTQ-identified, whereas 46.7% indicated they perceived their peer to be heterosexual, and 4.3% did not know their peer’s sexual orientation. Similarly, participants were presented with the following prompt for the RHI-Mentor:

“The following questions pertain to your relationships with "mentors" (other than your parents or whoever raised you) who you go to for support and guidance over the past year. A mentor is not a peer or romantic partner. Even if you do not refer to this person as a mentor, by mentor, we mean someone who sometimes is older than you, has more experience than you, and /or is willing to listen, share her or his own experiences, and guide you through some area of your life (e.g., academic, work/career, social, athletic, religious, personal, or sexual orientation or identity).

Following this prompt, participants were presented with items such as “I can be genuinely myself with my mentor.” They were asked to report the sexual orientation of their mentor. Among the participants, 38.4% indicated that they perceived their mentor to be a sexual minority, whereas 50.7% indicated they perceived their mentor to be heterosexual, and 10.9% did not know. Furthermore, participants were presented with the following prompt for the RHI-Community:
“The following questions pertain to your lesbian, gay, bisexual, transgender, same-sex loving, and/or queer community (LGBTQ) over the past year. Next to each statement below, please indicate the number that best applies to your relationship with or involvement in this community over the past year.”

Following this prompt, participants were presented with items such as “I have a greater sense of self-worth through my connection with this community.” Although none of the RHI indices have been used with sexual minority samples, they have been used with samples of men and women. High alpha reliability coefficients have been reported with samples of men and women for all three indices (ranging from $\alpha$’s = .82 to .95; Frey, Beesley, & Liang, 2009; Frey, Tobin, & Beesley, 2004; Liang et al., 2007). Factor structure and validity tests have been conducted with the indices; more specifically, confirmatory factor analyses and invariance tests among men and women were conducted and the indices are all invariant (Liang et al., 2007). The RHI-Mentor is positively associated to measures of mentor mutuality and measures of relationship quality, depth, and conflict, and the RHI-Peer is positively associated to a measure of perceived social support from friendships (Liang et al., 2007). Additionally, all three indices are negatively associated with psychological distress among a sample of college men and women (Frey et al., 2004; Frey et al., 2006). For this investigation, the Cronbach alpha reliability coefficients for peers, mentors, and the LGBTQ community were .93, .96, and .91, respectively.

**Health outcomes.** The measures below assess participants’ mental and physical health. Two measures assessed depression, anxiety, and suicidality as factors of mental health. Three indicators measured physical health: body mass index, cardiovascular and heart risk factors, and frequency of physical/somatic symptoms.
Depression and anxiety. The depression and anxiety subscales of the Depression, Anxiety, and Stress Scale-21 (DASS-21; Lovibond & Lovibond, 1995) were used to assess symptoms of depression and anxiety over the past year. The DASS-21 is a 21-item measure examining domains of depression, anxiety, and stress. For the purposes of this study, the depression subscale (7-items; e.g., “I felt down-hearted and blue”) and anxiety subscale (7-items; e.g., “I found it difficult to relax”) were used. Item response options are on a 4-point scale ranging from 1 (Did not apply to me at all), to 4 (Applied to me very much, or most of the time). The DASS-21 scale was psychometrically validated with a large non-clinical sample of participants (Crawford & Henry, 2003), and studies have found support for the validity of the depression and anxiety subscales (Crawford & Henry, 2003; Lovibond & Lovibond, 1995). Previous researchers have reported alpha reliability coefficients of .88 for the depression subscale and .82 for the anxiety subscale (Henry & Crawford, 2005). Researchers using sexual minorities samples have reported alpha reliability coefficient of .89 for the anxiety subscale in a sample of lesbian, gay, and bisexual adults (Basini & Barrett, 2007) and .94 for the depression subscale and .83 for the anxiety subscale with men who have sex with men (Nance, 2008). For this investigation, the Cronbach alpha reliability coefficients were .86 for the depression subscale and .94 for the anxiety subscale.

Suicidality. The Suicidal Behaviors Questionnaire-Revised (SBQ-R; Osman et al., 2001) assessed suicidality. The SBQ-R is a 4-item scale with the following items: “Have you ever thought about or attempted to kill yourself?”; “How often have you thought about killing yourself in the past year?”; “Have you ever told someone that you were going to commit suicide, or that you might do it?”; and “How likely is it that you will attempt suicide someday?” Each item has its own Likert scale. For instance, participants are asked to indicate
their frequency of having suicidal ideation in the past year over a 5-point frequency scale ranging from 1 (never) to 5 (very often). The sum of all four items indicates greater suicidality. The SBQ-R has been found to differentiate between suicidal and non-suicidal subgroups among non-clinical samples (Osman et al., 2001). The SBQ-R has been used with diverse samples, and researchers have reported high alpha reliability coefficients among a college student sample ($\alpha = .83$; Harris, McLean, Sheffield, & Jobes, 2010) and Latino adults ($\alpha = .80$; Chang, Sanna, Hirsch, & Jeglic, 2010). For this investigation, the Cronbach alpha reliability was .80.

**Body Mass Index.** The first indicator of physical health is participants’ body mass index (BMI), which consisted of asking participants for their current height and weight in the U.S. Units of Measurement (e.g., feet, inches, pounds). Participants’ height and weight was converted to the metric system to calculate their BMI, which was computed by dividing weight in pounds by height in inches squared and then multiplying by a conversation factor of 703 (Centers for Disease Control and Prevention, 2012). Participants were in the following statuses as defined by the Centers for Disease Control and Prevention (2012), 1.5% were underweight (BMI below 18.5), 38.1% were normal (BMI between 18.5 to 24.9), 33.7% were overweight (BMI between 25-29.9), and 26.7% were obese (BMI between 30 and above). The sample’s average BMI was 27.65, which is considered overweight.

**Cardiovascular and heart risk factors.** The second indicator measured participants’ risk factors for cardiovascular and heart disease as determined by previous research (Grundy, Pasternak, Greenland, Smith, & Fuster, 1999; Wilson, D’Agostino, Belanger, Silbershatz, & Kannel, 1998). Participants’ risk factors were measured by their self-report on 10-items with response options of 0 (No) or 1 (Yes). Participants were asked three questions regarding high
blood pressure, high blood cholesterol levels, diabetes (e.g., “Have you ever been told by a doctor, nurse, or other health professional that you have high blood pressure?”), and treatment for high blood pressure (e.g., “Are you taking medication to treat high blood pressure?”). Participants were also asked to indicate if they engaged in specific behaviors to put them at risk (e.g., “use tobacco,” “eat food high in saturated fats, salt, or sodium”). Participants’ responses were summed to determine their risk index. For this investigation, the Cronbach alpha reliability was .67.

**Distressing physical symptoms.** Additionally, participants’ distressing physical symptoms were assessed with the 33-item Cohen-Hoberman Inventory of Physical Symptoms scale (CHIPS; Cohen & Hoberman, 1983). The CHIPS assesses distressing physical symptoms on a 5-point scale, ranging from 0 (not at all) to 4 (extremely). Example items are: “back pain,” “dizziness,” “diarrhea,” and “headache.” Two studies have used the CHIPS with sexual minority samples, and reported high alpha reliability coefficients (α = .88 among lesbians, Lewis, Derlega, Clarke, & Kuang, 2006; and α = 86 among gay men, Larson & Chastain, 1990). The CHIPS is associated with sexual minority distal and proximal stressors (i.e., discrimination, harassment, and internalized homophobia), negative mood states, stigma consciousness, social constraints, and intrusive thoughts among lesbians (Lewis et al., 2006). Self-concealment among gay men is predictive of poorer physical health, measured by the CHIPS (Larson & Chastain, 1990). For this investigation, the Cronbach alpha reliability was .95.
Chapter 4

Results

Preliminary Analyses

Data cleaning. I used SPSS Statistics 19.0 to examine the data for missing values. First, I removed 17 participants who identified as “exclusively heterosexual” on one of the sexual orientation measures. Additionally, there was a disproportionate amount of missing data for items on the Relational Health Index for Mentors relative to other measures. This reflected participants who skipped the entire measure or did not have a mentor ($n = 49$). As such, I divided the dataset into two datasets: the first dataset included participants who had completed all the measures except for the mentor data ($N = 719$) and the second dataset reflected participants with completed mentor data ($n = 670$). The first dataset was used for all analyses conducted in the present study, with the exception of the multiple imputation procedures for mentor data and for structural equation modeling analyses involving mentors. Missing data for the full dataset was only 0.82%. Missing data for the mentor dataset was only 0.04%.

For any other missing cases, I conducted multiple imputation in LISREL 8.80 (Jöreskog & Sörbom, 2006) to impute missing values with plausible simulated values based on the actual data. Multiple imputation is recommended and considered as an optimal method for handling missing data; it is also preferred over list-wise deletion or mean substitution because these latter methods can introduce statistical bias in the analyses (Schafer & Graham, 2002; Schlomer, Bauman, & Card, 2010). Multiple imputation procedure at the item level was first performed for the full dataset with the exception of the mentor measure’s items.
Then, another multiple imputation procedure at the item level was conducted for the second dataset to include the mentor measure’s items.

After cleaning the data and computing the study’s measures, I conducted diagnostic testing. To analyze the data distribution, I examined skewness patterns. As reported in Table 1, most of the variables were within the range of -1 to 1, which were nearing a normal distribution. However, the distal stressors (i.e., harassment and rejection, discrimination, victimization) and internalized homophobia had skewness values above 1.5, which is indicative of positive skew of the data (i.e., most participants had low scores on these measures). These variables also had large positive kurtosis values, which is indicative of high peaks in their distribution. Analyses to address these non-normally distributed data will be discussed in the Bootstrapping section of this chapter.

**Correlations.** Due to the large number of variables, basic correlations among the variables are reported in Tables 2, 3, and 4 for simple descriptive purposes. I included participants’ age was in these analyses to examine its relationships to the variables in the study. Correlations among age, the exogenous (i.e., distal and proximal stressors), endogenous (i.e., mental and physical health), and mediating (i.e., shame, loneliness, and diminished agency) variables are reported in Table 2. Correlations among age, the exogenous, endogenous, and moderating (e.g., growth-fostering relationships with peers, mentors, and the LGBTQ community) variables are reported in Table 3. Correlations among the mediating and moderating variables are reported in Table 4. The correlations are based on computed scales (e.g., internalized homophobia, shame, depression), and these should not be confounded with the latent factors in the structural model. For the most part, variables were
associated in conceptually consistent directions. These patterns are explained in greater detail in the tested latent structural models.

**Basic group comparisons.** I conducted five MANOVAs to test for sampling and demographic group differences (i.e., gender, race, and sexual orientation) on all 19 measures. One MANOVA tested for sampling group differences. Additionally, I conducted four MANOVAs per demographic group (for a total of 12 MANOVAs) to test for differences among each demographic group on the measures. The four MANOVAs examined group differences on measures that were conceptually interrelated: (a) minority stressors; (b) health outcomes; (c) mediators; and, (d) moderators. The gender categories were: male, female, and transgender. The sexual orientation categories were: lesbians; gay men; bisexual individuals; queer individuals; and all other groups were included under “other”. Racial/ethnic categories that had less than 15 participants were not included in the analyses due to small cell sizes and power limitations. The racial/ethnic categories were: African American/Afro-Caribbean American/Black American; Asian/Asian American and Pacific Islander; Biracial and Multiracial; Hispanic American and Latino/a American; and, White American. To reduce the inflation of a Type 1 error, I utilized the Bonferroni adjustment to set a higher alpha level value for follow-up ANOVAs. Interactions among the demographic variables were not tested due to the small cell sizes when examining gender, race, and sexual orientation interactions. Finally, due to missing data on the mentor measure, I conducted four ANOVAs to test for sampling and demographic group differences on the mentor measure.

**Sampling.** I conducted a MANOVA to test for differences between the two samples on the study’s 18 of the 19 measures, while excluding the mentor measure. There was a significant effect for sampling, Wilks’s $\Lambda = .77$, $F (18, 698) = 11.76, p < .001$, $\eta_p^2 = .23$. 
Follow-up ANOVAs revealed significant sampling differences, although trivial in many cases based on effect sizes, on: internalized homophobia, $F(1, 715) = 12.39, p < .001, \eta_p^2 = .02$; rejection sensitivity, $F(1, 715) = 35.14, p < .001, \eta_p^2 = .05$; concealment, $F(1, 715) = 32.08, p < .001, \eta_p^2 = .04$; diminished sense of agency, $F(1, 715) = 15.68, p < .001, \eta_p^2 = .02$; lack of desire for connection, $F(1, 715) = 14.91, p < .001, \eta_p^2 = .02$; anxiety, $F(1, 715) = 10.61, p < .002, \eta_p^2 < .01$; BMI, $F(1, 715) = 13.02, p < .001, \eta_p^2 = .02$; cardiovascular disease risk, $F(1, 715) = 15.27, p < .001, \eta_p^2 = .02$; and distressing physical symptoms, $F(1, 715) = 11.58, p < .002, \eta_p^2 = .02$. The online panel sample’s participants reported higher scores on internalized homophobia, concealment, diminished sense of agency, lack of desire for connection, anxiety, BMI, cardiovascular disease risk, and distressing physical symptoms than the listserv sample’s participants. The listserv sample’s participants reported higher scores on rejection sensitivity than the panel sample’s participants. I compared the samples on the mentor measure using a separate ANOVA. Results indicated that the listserv sample’s participants ($M = 3.73, SD = .09$) reported higher scores on the quality of growth-fostering relationships with mentors than the panel sample’s participants ($M = 3.43, SD = 1.16$), $F(1, 666) = 13.13, p < .001, \eta_p^2 = .02$.

**Gender.** I conducted four MANOVAs to test for gender differences on the measures. There was a significant effect for: minority stressors, Wilks’s $\Lambda = .94, F(12, 1422) = 4.07, p < .001, \eta_p^2 = .03$; health outcomes, Wilks’s $\Lambda = .91, F(12, 1422) = 5.64, p < .001, \eta_p^2 = .05$; and mediators, Wilks’s $\Lambda = .98, F(8, 1426) = 2.01, p < .05, \eta_p^2 = .01$. Follow-up ANOVAs revealed significant gender differences on some measures, although trivial in some cases based on effect sizes: harassment/rejection, discrimination, victimization, anxiety, depression, suicidality, distressing physical symptoms, cardiovascular disease risk, and...
feelings of shame (see Table 5). Bonferroni post-hoc analyses indicated that sexual minority women reported higher scores on harassment/rejection, discrimination, victimization, anxiety, depression, suicidality, distressing physical symptoms, and feelings of shame than sexual minority men. Transgender individuals reported higher scores on harassment/rejection and victimization than sexual minority women and men. Transgender individuals reported higher scores on discrimination, suicidality, and distressing physical symptoms than sexual minority men. Sexual minority men reported higher scores on cardiovascular disease risk than sexual minority women. I conducted a separate ANOVA to test gender differences on the mentor measure, $F(2, 667) = 1.86, p > .05, \eta^2_p = .01$, and found no statistically significant difference.

**Sexual orientation.** I conducted four MANOVAs to test for sexual orientation differences on the measures. There was a significant effect for: minority stressors, Wilks’s $\Lambda = .84, F(14, 2474.62) = 5.29, p < .001, \eta^2_p = .04$; health outcomes, Wilks’s $\Lambda = .89, F(24, 2474.62) = 3.58, p < .001, \eta^2_p = .03$; mediators, Wilks’s $\Lambda = .94, F(16, 2172.78) = 2.81, p < .001, \eta^2_p = .02$; and moderators, Wilks’s $\Lambda = .98, F(8, 1426) = 2.26, p < .05, \eta^2_p = .01$.

Follow-up ANOVAs revealed significant sexual orientation differences on some measures, although trivial in some cases based on effect sizes: harassment/rejection, internalized homophobia, rejection sensitivity, concealment, anxiety, depression, suicidality, distressing physical symptoms, diminished agency, loneliness, feelings of shame, and growth-fostering relationships with peers and the LGBTQ community (see Table 6). Bonferroni post-hoc analyses indicated that bisexual individuals reported higher scores on internalized homophobia and concealment than lesbians, gay men, and queer individuals. Bisexual individuals reported higher scores on anxiety, depression, diminished agency, loneliness, and
shame than lesbians and gay men. Bisexual individuals also reported higher scores on
distressing physical symptoms than gay men. Bisexual and queer individuals reported higher
scores on rejection sensitivity than lesbians. Gay men reported higher scores on concealment
than queer individuals. Queer individuals and participants who were categorized as other
reported higher scores on harassment/rejection than gay men. Queer individuals reported
higher scores on depression than lesbians. Bisexual, queer, and other individuals reported
higher scores on suicidality than lesbians and gay men. Lesbians reported higher scores on
growth-fostering relationships with peers and the LGBTQ community than bisexual
individuals. I conducted a separate ANOVA to test sexual orientation differences on the
mentor measure, $F(4, 665) = 1.78, p > .05$, $\eta^2_p = .01$, and found no statistically significant
difference.

**Race/ethnicity.** I conducted four MANOVAs to test for racial/ethnic group
differences on the measures. There was a significant effect for: minority stressors, Wilks’s $\Lambda$ = .90, $F(24, 2380.42) = 3.11, p < .001$, $\eta^2_p = .03$; health outcomes, Wilks’s $\Lambda$ = .94, $F(24, 2380.42) = 1.91, p < .01$, $\eta^2_p = .02$; and mediators, Wilks’s $\Lambda$ = .95, $F(16, 2090.29) = 2.10, p$
$< .01, \eta^2_p = .01$; but not for the moderators, Wilks’s $\Lambda$ = .98, $F(8, 1372) = 1.89, p > .05$, $\eta^2_p =$
$.01$.

Follow-up ANOVAs revealed significant racial/ethnic group differences on some measures,
although trivial in most cases based on effect sizes: harassment/rejection, discrimination,
victimization, internalized homophobia, rejection sensitivity, and cardiovascular disease risk
(see Table 7). African/Afro-Caribbean/Black American and Hispanic/Latino(a) American
participants scored higher on harassment/rejection and victimization than White Americans.
African/Afro-Caribbean/Black American participants scored higher on discrimination and
internalized homophobia than White Americans. Biracial/Multiracial Americans scored higher on rejection sensitivity than African/Afro-Caribbean/Black American and Hispanic/Latino(a) American participants. White Americans scored higher on cardiovascular disease risk than African/Afro-Caribbean/Black American. I conducted a separate ANOVA to test racial/ethnic differences on the mentor measure, $F(4, 642) = 2.83, p < .05, \eta^2_p = .01$, and found a statistical significant difference; however, the post-hoc Bonferroni analysis indicated no significant differences between the groups.

**Testing the Proposed Models**

Structural equation modeling (SEM) using LISREL 8.80 (Jöreskog & Sörbom, 2006) was used to test (a) the measurement models; AMOS 16.0 (Arbuckle, 2007) was used to test (b) the direct and indirect effects of minority stress on mental and physical health, and (c) and the moderating role of growth-fostering relationships on the relationship between minority stress and the relational mediators. I used two different SEM software programs because AMOS 16.0 does not permit for the analysis of single indicators (i.e., BMI indicator) in the measurement model, specifically it does not permit single indicators to covary with latent factors. Several fit indices were used and are reported to assess whether each model is a good fit to the data: root-mean-square error of approximation (RMSEA), incremental fit (IFI), comparative fit (CFI), and non-normed fit (NNFI) indices. Values of at least .90 for the IFI, CFI, and NNFI indicate the model is a good fit to the data as outlined by Kline (1998). RMSEA values of .08 or below indicate good model fit (Hu & Bentler, 1999). The chi-square statistic was not considered for model fit because several researchers have asserted many limitations and discrepancies with the chi-square statistic (Tomarken & Waller, 2003), especially with large sample sizes (Bollen, 1989; Cheung & Rensvold, 2002).
Model specification. Three indicators were used to specify each latent factor, with the exception of BMI. BMI was specified as an observed indicator. The distal stressors/relational disconnections factor was composed of three indicators: harassment/rejection, discrimination, and victimization. The proximal stressors/self-disparaging relational images factor was composed of the following three indicators: internalized homophobia, rejection sensitivity, and sexual orientation concealment. The mental health factor was composed of three indicators: anxiety, depression, and suicidality.

Furthermore, I computed three parcels per factor and they were used as indicators for the rest of the latent factors (i.e., distressing somatic symptoms, cardiovascular disease risk, diminished agency, isolation, shame, and the three growth-fostering relationships moderating factors). Parcels can improve reliability and minimize potential violations of assumptions of multivariate normality (Coffman & MacCallum, 2005). Exploratory factor analyses for the latent constructs were conducted, and parcels were computed based on the factor loadings of the items, such that the factor loadings are evenly distributed across the three parcels of each construct.

Each indicator was constrained to load only on its respective factor. Although correlations among the factors were free to be estimated, the measurement errors were not allowed to correlate. Additionally, the scaling of the model was conducted by assigning the first observed variable of each factor to be equal to 1, as a way to set a reference indicator. Finally, some methodologists have suggested that covarying endogenous variables in some statistical software is not permitted; however, covarying residuals is permitted if a correlation is desired between endogenous variables (Kenny, 2011). Therefore, in the structural model, the residuals of the endogenous health factors were allowed to covary with each other. This
was conducted because AMOS16.0 does not permit endogenous variables to covary; as such, the covarying of the residuals in this model served as a proxy to measure and represents the conceptual and empirical relationships among these health variables.

**Bootstrapping.** As aforementioned in the preliminary analyses, some of the measures (i.e., measures of distal stressors and the internalized homophobia measure; see Table 1) were positively skewed. As such, I conducted bootstrapping procedures to address these non-normally distributed data. The bias-corrected bootstrapping procedure with 90% confidence intervals for 1000 samples from each original dataset was used. This resampling procedure is optimal, effective, and recommended to handling non-normally distributed data (Chernick, 1999; MacKinnon, Lockwood, & Williams, 2004). Bias-corrected bootstrapping is also relatively best compared to other bootstrapping techniques and it offers greater statistical power and precision (MacKinnon et al., 2004; Mallinckrodt, Abraham, Wei, & Russell, 2006).

**Testing the Hypotheses**

**Hypothesis 1:** Distal (i.e., relational disconnections) and proximal (i.e., self-disparaging relational images) sexual minority stressors will predict poorer mental and physical health.

The measurement and structural models were both good fits to the data (see Table 8; Figure 1). As hypothesized, the structural model indicated that both distal stressors (i.e., relational disconnections) and proximal stressors (i.e., self-disparaging relational images) predicted poorer mental health and greater distressing physical symptoms as well as greater cardiovascular and heart disease risk. Neither exogenous factor was significant in predicting greater BMI. Both proximal and distal stressors strongly covaried.
Hypotheses 2a: Sexual minority stress will predict shame, loneliness and lack of desire for connection, and diminished sense of agency.

Hypotheses 2b: Shame, loneliness and lack of desire for connection, and diminished sense of agency will all predict poorer mental and physical health outcomes.

Hypotheses 2c: The relationships between sexual minority stress and poorer mental and physical health outcomes will be mediated by relational factors of shame, loneliness and lack of desire for connection, and diminished sense of agency.

The measurement and structural models were good fits to the data (see Table 8; Figure 2). Consistent with Hypothesis 2a, proximal stressors (i.e., distorted relational images) strongly predicted higher diminished sense of agency, isolation, and shame. Distal stressors (i.e., relational disconnections) only predicted more feelings of shame, but did not significantly predict diminished sense of agency or isolation. These non-significant effects are potentially suppressed by the powerful effects of the proximal stressors factor.

Also as hypothesized in Hypothesis 2b, diminished sense of agency, loneliness and lack of desire for connection, and shame all predicted poorer mental health, higher distressing physical symptoms, as well as higher cardiovascular disease risk. None of the three mediators predicted higher BMI.

Finally, consistent with Hypothesis 2c, the indirect effects of distal and proximal stressors on mental health and distressing physical symptoms through diminished agency, isolation, and shame were significant (Table 9). The indirect effects of proximal stressors on cardiovascular disease were also significant. The indirect effects of distal and proximal stressors on BMI were not significant and neither were the indirect effects of distal stressors on cardiovascular disease risk.
**Hypothesis 3:** Growth-fostering relationships with peers, mentors, and the LGBTQ community will each moderate the relationship between sexual minority stressors and each of the three mediators (i.e., shame, isolation and lack of desire for connection, and diminished sense of agency; Figure 3). More specifically, high levels of growth-fostering relationships will buffer against the negative effect of minority stress on shame, loneliness, and lack of desire for connection, and diminished sense of agency.

To conduct the moderation analyses, I followed the recommendations of Marsh, Wen, and Hau (2004). More specifically, I centered the indicators of each main effect (i.e., distal and proximal stressors) and the moderators (i.e., peer, mentor, and the LGBTQ community), and these centered indicators were used for their respective factors. Additionally, I computed interaction parcels among the centered observed variables of the minority stressors and each of the three growth-fostering relationships factors (i.e., peer, mentor, the LGBTQ community) to serve as indicators of the latent moderating effect. I tested two structural models per moderator: one model tested the interaction of the distal stressors factor and the respective moderator on the relational mediators, and the second model tested the interaction of the proximal stressors factor and the respective moderator on the relational mediators. Their respective measurement models were tested first and then followed by their structural models. A total of six structural models were tested. All measurement and structural models were good fits to the data (see Table 8).

The moderating hypotheses were mostly not supported because most of the moderating effects were not significant (see Table 10). The peer moderating effect was evident for proximal stressors on diminished agency and isolation. The mentor moderating effect was evident for proximal stressors on shame. The LGBTQ community moderating
effect was evident for proximal stressors on diminished agency and shame and was trending, but not significant, for isolation. In contrast to the hypotheses, these moderating effects did not buffer against the effects of proximal stressors on their respective relational mediator; they exacerbated the effects of stress on their respective relational mediator. For example, higher experiences of proximal stress and higher quality relationship with a peer predicted greater diminished agency and feelings of isolation.
Chapter 5

Discussion

Sexual minority health disparities have been documented in the literature (IOM, 2010); yet, there is a dearth of research elucidating factors that predict the development of these disparities, and factors that protect and promote resiliency against these health risks. To address several limitations in the literature and building on the minority stress model (Meyer, 2003), relational cultural theory ([RCT]; Jordan, 2001; Miller & Stiver, 1997) was applied to examine a relational framework to sexual minority health. Three main hypotheses were proposed to test theoretically informed models.

The first hypothesis tested the effects of distal and proximal stressors on mental (i.e., depression, anxiety, and suicidality) and physical health (i.e., distressing physical symptoms, cardiovascular disease risk). This was supported, with the exception of the effects of stress on body mass. The second hypothesis tested whether diminished sense of agency, loneliness and lack of desire for connection, as well as shame mediated the relationship between stressors/disconnections and health. This hypothesis had mixed support. As hypothesized, distal and proximal stressors were indirect predictors of poorer mental health and distressing physical symptoms, and proximal stressors were also indirect predictors of cardiovascular disease risk. However, none of the minority stressors or the relational mediators predicted body mass. Finally, the third hypothesis tested the moderating effects of growth-fostering relationships on the relation between minority stressors on relational factors. This, too, had mixed results. Growth-fostering relationships with peers, mentors, and the LGBTQ community were only significant moderators of the relation between proximal stressors and
the relational mediators, and were not significant for distal stressors and the relational mediators.

**Relational Disconnections, Minority Stressors, and Poorer Mental Health**

According to the sexual minority stress model, experiences with distal and proximal stressors lead to psychological distress (Meyer, 2003). Similarly, RCT posits that relational disconnections as well as harmful relational images, which can be seen as distal and proximal stressors, are the source of psychological anguish (Miller & Stiver, 1997). Consistent with these theories, both distal stressors (i.e., relational disconnections) and proximal stressors (i.e., self-disparaging relational images) were related to poorer mental health in the first model.

This finding is consistent with the body of empirical literature on sexual minority stress and mental health (e.g., Hatzenbuehler, 2009; Meyer, 2003), and furthers echoes the deleterious effects of oppression on the mental health of sexual minorities. Most extant studies have only examined single or a limited number of indicators of minority stress (e.g., discrimination, internalized homophobia) with little attention to other stressors (i.e., rejection sensitivity) and a paucity of studies have comprehensively examined all of the minority stress theory’s identified stressors. The results of this study are among the first to demonstrate the harmful effects of all theory-based and nuanced aspects of minority stress (i.e., specific distal and proximal stressors) on mental health.

**Relational Disconnections and Minority Stressors Physically Hurt**

The results of the first model demonstrated that both distal (i.e., relational disconnections) and proximal stressors (i.e., self-disparaging relational images) predicted distressing physical symptoms, such as physical pain and aches (e.g., heart, chest), stomach
pain (e.g., constipation, vomiting), headaches, and constant fatigue. These results extend the minority stress model and RCT’s focus on mental health to a broader assessment of health that includes physical health. These findings are also consistent with the emerging yet limited literature documenting the relations between distal and proximal minority stressors and self-reported distressing physical symptoms (Cole et al., 1996; Lewis et al., 2006; Szymanksi et al., 2001; Wilson et al., 2011). Furthermore, these results are congruent with recent neuroscience research documenting that relational disconnections (e.g., exclusion, rejection) are experienced in the same neurobiological and neural brain regions as physical pain (Eisenberger, 2012).

Unique to these results is the finding that distal and proximal stressors and relational disconnections have negative effects on cardiovascular and heart disease risk. Although sexual minorities are at greater risk for cardiovascular disease than heterosexuals (Cochran & Mays, 2007; Conron et al., 2010; IOM, 2011), little is known on what factors put sexual minorities at risk. These results are among the first to demonstrate that sexual minority stressors are potential risk factors of cardiovascular and heart disease. It is plausible that prolonged and frequent sexual minority stressors may lead to physiological changes or cause frequent neural activations and increased cortisol secretion (Roepke & Grant, 2011; Williams & Mohammed, 2009), which are related to poorer bodily functioning and in turn cardiovascular disease risk. This is an important and serious finding because cardiovascular disease is the leading cause of death in all men and women in the United States (Heron et al., 2009), and these findings suggest why some sexual minorities are at even greater risk.

Lastly, neither distal nor proximal stressors were significant predictors of greater body mass. There are several potential explanations for this non-significant pattern. Although
the body mass index (BMI) was used as one of three indicators of overall physical health, it is important to note that the literature has only documented that sexual minority women are at greater risk for obesity (Boehmer et al., 2007). The relationships between minority stressors and obesity might be evident for sexual minority women but not sexual minority men. However, it is important to note that overall, the sample was considered to be overweight according to the established BMI categories (World Health Organization, 1997); thus, for the sample of sexual minorities, obesity could be a health problem. Also, other general factors might more strongly contribute to obesity among sexual minorities, such as poor health behaviors (e.g., not exercising, eating poorly, etc.). Furthermore, the assessment of body mass was not an objective estimate; thus, participants might have inaccurately reported their body size. In general, people living in the U.S. tend to underestimate their weight and overestimate their height when participating in research surveys (Wen & Kowaleski-Jones, 2012). Therefore, it is possible that the BMI was not as accurate a measure as others, and this may have attenuated any relationship that may have existed.

**Relational Mediating Pathways to Poorer Mental and Physical Health**

Building on the first model, the effects of proximal and distal stressors on indices of mental and physical health were generally mediated by a diminished sense of agency, feelings of loneliness and lack of desire for connection, and shame. These findings suggest that attention to the effects of minority stressors on relational dynamics is critical in effort to understand the process by which relational disconnections affect health. Furthermore, these findings build on the sexual minority stress model by indicating other potential pathways by which minority stressors predict poorer health. These results expand the minority stress
model to include relational mediating factors informed by RCT, and they provide support for RCT’s theoretical assumptions.

**Relational pathways to mental and physical anguish.** Experiencing relational disconnections in the form of distal and proximal stressors as well as internalizing these harmful experiences into one’s relational images has detrimental costs to sexual minorities’ mental health and distressing physical symptoms. Based on the mediation results, they appear to affect these health domains through their harmful effects on some relational processes. Heterosexist relational disconnections compounded with stigmatizing relational images seem to disempower sexual minorities and instigate feelings of loneliness and shame; this is consistent with the limited findings that discrimination and minority stress are related to a diminished agency, isolation, and shame (Hatzenbuehler et al., 2009; Herek et al., 1999; Kuyper & Fokkema, 2010; Sherry, 2007). The current results extend this to demonstrate that these feelings are in turn related to poor psychological and distressing physical symptoms, which is consistent with previous research (Bybee et al., 2009; Díaz et al., 2001; Hatzenbuehler, et al., 2009; Lehavot et al., 2010). This study connects these areas by demonstrating that these relational factors are potential mediating mechanisms that explain how minority stressors and disconnections are related to compromised health. These findings underscore the need to consider other relational mechanisms in future research and intervention.

**Relational pathways that pain the heart.** The relational factors also served as mediating processes on the relations between proximal stressors and cardiovascular disease risk. Psychobiological and physiological research has documented that affective components (e.g., shame) related to social evaluation and threat serve as key pathways between the stress
and health responses (Dickerson et al., 2004). These affective responses predict negative long-term physical health through their harmful impact on cortisol levels, the immune system, as well as motivational and behavioral changes (Dickerson et al., 2004). The findings of this study build on these studies of general stress and demonstrate the unique and harmful physiological effects of proximal minority stressors (e.g., vigilance for or expectation of rejection, perpetual concealment of one’s sexual orientation) on physical health through related powerful affective consequences (i.e., feelings of shame). In addition to these physiological changes, these immobilizing effects may also have negative effects on overall health behaviors (e.g., exercise, healthy eating).

**Nuanced pathways.** Distal stressors, or heterosexist relational disconnections, may not have had an indirect effect on cardiovascular disease risk for multiple reasons. Proximal stressors are often experienced over time and are related to both the direct experience of oppressive disconnection as well as the internalization of society’s stigmatizing culture into one’s identity. Cardiovascular and heart disease risk factors are related to more long-term stress and poor health behaviors (Grundy et al., 1999; Wilson et al., 1998); therefore, it is plausible that these data were better able to capture proximal stressors’ negative effects on relational factors and in turn cardiovascular risk, rather than distal stressors’ negative effects. Although distal stressors are related to proximal stressors, distal stressors are distinct because they represent the objective experiences of discrimination and oppression (Meyer, 2003). Thus, it is plausible that these two types of stressors are not potentially experienced in the same manner; subsequently, they may have varying effects on health. Furthermore, the effects of distal stress and disconnections on cardiovascular disease might be partially mediated through proximal stressors. Indeed, there was strong covariation between these two
stressors. It is also possible that proximal stressors were such powerful indicators that they might have statistically suppressed distal stressors’ effects. More research is needed to better understand these potential pathways.

**Theoretical implications.** Overall, the results from the mediation model provide empirical support for some of the principles of RCT. Feelings of disempowerment, loneliness, and shame are immobilizing relational factors that can be psychologically debilitating (Hartling et al., 2004; Jordan, 2011). More specifically, these feelings can lead sexual minorities to feel unworthy of relational connections and to experience relational connections that lack empathy, authenticity, and mutuality (Hartling et al., 2004). When these debilitating feelings are experienced and internalized, they have toxic mental and physical health effects. Simultaneously, experiencing chronic heterosexist disconnections and harmful relational images may also lead sexual minorities to engage in strategies for disconnection (e.g., isolation, engage inauthentic connections) that might further harm their psychological and physical health. The study not only provides empirical support for these theoretical concepts, but it also expands the theory to more clearly consider the unique experiences of sexual minorities.

Furthermore, these results accentuate the intertwined relationship between mental and physical health. Mental and physical health have long been conceptualized as inseparable (U.S. Surgeon General Report on Mental Health, 1999) and have recursive effects on each other (Cochran & Mays, 2007); however, both RCT and the minority stress model have focused mainly on psychological and mental health with little attention to physical health. The mediating results demonstrate that both distal and proximal stressors had similar effects on mental health and distressing physical symptoms and through similar pathways. This
further echoes the importance of examining both health factors in health disparities research and to integrate both into theoretical frameworks.

**Are Growth-Fostering Relationships a Source of Relational and Psychological Health?**

Growth-fostering relationships are characterized by relational elements of empathy, mutuality, and empowerment (Jordan, 2001; Miller & Stiver, 1997). Thus, these relationships should have important positive effects on health as well as agency, isolation, and shame. The results of this study add support to these theoretical principles, as the correlations and main effects in the structural models were significant in theoretically congruent ways. Specifically, growth-fostering relationships with peers, mentors, and the LGBTQ community all significantly predicted lower levels of diminished sense of agency as well as lower levels of loneliness and lack of desire for connection; additionally, growth-fostering relationships with peers predicted lower levels of shame. Consistent with RCT and its focus on the “five good things” experienced as a result of growth-fostering relationships (Miller & Stiver, 1997), these findings indicate that growth-fostering relationships promote a sense of agency and empowerment, feelings of connection and desire for more connection, as well as a sense of relational growth and development (e.g., lowered shame). These results support prior literature that has documented positive relations between growth-fostering relationships and health and overall well-being (Frey et al., 2006; Frey et al., 2004; Liang et al., 2002; Liang et al., 2010; Liang et al., 2002) and extend this to provide empirical support to growth-fostering relationships with sexual minorities.

The findings also highlight the relationally powerful role of growth-fostering relationships with peers on all three relational factors. Congruent with feminist thinking, RCT emphasizes power dynamics (Jordan, 2006). Despite the presumed mutuality of power
in growth-fostering relationships, it is possible that growth-fostering relationships with peers had a consistent significant health-promoting effect due to their “power with” role in connections as opposed to having a “power over” role that might more likely to occur in other types of relationships (e.g., mentors).

Are Growth-Fostering Connections a Potential Source of Harmful Socialization and Risk?

In contrast to the hypotheses and RCT conjectures, the results from the moderated-mediation model indicated that growth-fostering relationships with peers, mentors, and the LGBTQ community did not have a buffering effect on the relation between distal relational disconnections and relational mediators, and in turn health. In addition, within certain relational contexts, growth-fostering relationships had exacerbating effects on the relation between proximal stressors and relational mediators, and in turn health. Growth-fostering relationships with peers, mentors, and the community are considered conceptually similar in their overall commonalities and shared elements in growth-fostering connections (i.e., mutuality, empathy, authenticity; Liang et al., 2001); thus, mutual interpretations and discussion of the results for these three relationships will be considered.

The moderation findings suggest complexity and critical challenges to the role of growth-fostering relationships. Growth-fostering relationships with peers, mentors, and the LGBTQ community did not buffer the harmful effects of relational disconnections (i.e., distal stressors) on health outcomes. These findings not only elucidate the detrimental power of prejudiced relational disconnections on relational factors and health, but they also illuminate that growth-fostering relationships with peers, mentors, and the community cannot always be expected to protect against these oppressive disconnections and minority stressors. Peers,
mentors, or LGBTQ community members may certainly empathize, connect, and provide support in important ways; however, they may lack the skills or expertise to handle these oppressive disconnections in ways that promote healthy coping strategies or other processes that buffer the effects of discrimination on health.

Growth-fostering relationships did have overall positive effects on relational factors and health as demonstrated in their main effects. Yet, chronic heterosexist relational disconnections and minority stressors may be toxic to a degree that more substantial and comprehensive psychological interventions, such as psychotherapy, might be needed. Thus, while these growth-fostering relationships remain an important part of treatment and well-being, they should not be substituted as the sole source of healing from the effects tied specifically to discrimination.

As moderators, growth-fostering relationships with peers, mentors, and the LGBTQ community exacerbated the effects of proximal stressors (i.e., harmful internalized images) on relational factors in certain cases. While noting that the moderating effects were small, it is informative to examine and understand their potential contributions. There are two possible interconnected explanations for these findings: homophily within social networks and the process of co-rumination.

**Risk through homophily of social networks?** Building on the homophily hypothesis, individuals select and initiate relationships with others who are similar to them; through socialization over time, individuals within these social networks also have effects on each other (Kandel, 1978). For example, depressed or anxious individuals connect with others who are also depressed or anxious, and over time these influence one another in ways
that further exacerbate their psychological distress (e.g., Prinstein, Borelli, Cheah, Simon, & Aikins, 2005; Van Zalk, Van Zalk, Kerr, & Stattin, 2011).

The homophily hypothesis offers a theoretically grounded explanation for the current results. Sexual minorities likely develop their self-disparaging relational images as a product of being in a heterosexist culture and from experiencing oppressive relational disconnections. Operating from these distorted and deeply internalized relational images, sexual minorities who have highly self-disparaging relational images (i.e., high proximal stressors) might seek peers, mentors, or communities that share their relational images and beliefs. Over time, relationships with these particular peers, mentors, and communities may have negative effects on sexual minorities because they further socialize and exacerbate the harmful and self-disparaging relational images.

**Risk through co-rumination?** The process by which the socialization of distorted relational images occurs through these relational connections might be explained by a co-rumination process that serves to reinforce one’s beliefs. Co-rumination is defined as the process by which individuals dwell on and repetitively discuss problems together, and as a result focus inordinately on the discussed problems (Rose, 2002). This process initially is intended to be positive, in that it is used to build and strengthen relational connections (Rose, 2002); however, the process of co-rumination can cause individuals to become more distressed (i.e., more depressed or anxious; e.g., Prinstein et al., 2005, Van Zalk et al., 2011).

Sexual minorities who experience high levels of proximal stressors or have quite self-disparaging relational images might co-ruminate with their peers, mentors, or community members on these issues. As a result, this may accentuate the effects of their harmful images. Consequently, amplification of one’s harmful images may have detrimental effects on
relational processes (e.g., agency, shame, loneliness) and health (e.g., depression, physical symptoms). For instance, a lesbian woman might co-ruminate and discuss her dislike for socializing with other lesbians (i.e., as a reflection of her internalized homophobia) with another peer or mentor who shares her internalized prejudiced beliefs. As a result, they may connect, relate, and co-ruminate on these harmful distorted images or beliefs (e.g., her friend or mentor might share her dislikes of other lesbians) and further accentuate these distorted images for each other. Subsequently, this relational cycle and these ways of connecting may have negative effects on her overall feelings of shame, agency, and desire for connection with others, and in turn her health.

This is an important finding to consider in terms of theory and research. First, this finding conflicts with RCT’s assumptions that growth-fostering relationships are invariably positive. Quality relationships are important and necessary for connection; however, the theory assumes that individuals are engaging in beneficial and healthy dialogue within these quality relationships. Although these relationships might be important sources of validation, empathy, and mutuality, some forms of relational dialogue could create more harm than relational healing and psychological growth.

**Differences between peers, mentors, and the LGBTQ community.** Additionally, these findings provide nuance to the impact of varying types of growth-fostering relationships on health. Growth-fostering relationships with peers, mentors, and the LGBTQ community similarly exacerbated the effect of proximal stressors on the relational mediators. However, they differed in which relational mediators they moderated. These differences highlight the uniqueness of each type of relationship and its potential impacts for sexual minorities.
Growth-fostering relationships with peers intensified the effects of self-disparaging relational images on diminished agency and loneliness but not shame. The homophily hypothesis might be most consistent with peers, because individuals usually have more choice in selecting their peers as opposed to their mentors. As such, friendship selection and socialization processes (e.g., co-rumination) might be more easily facilitated with peers who share similar characteristics (e.g., self-disparaging relational images). Thus, through shared co-rumination of self-disparaging relational images, peers might have exacerbated the effects of proximal stressors on diminished agency and loneliness.

In contrast to quality relationships with peers, growth-fostering relationships with mentors only had significant moderating effects on shame. Sexual minorities with high self-disparaging relational images who connect with mentors with similar hurtful images might experience more shame due to the inherit power dynamics in mentoring relationships. Thus, these sexual minorities might feel more judged and shamed than they would with a peer. Mentors might not exacerbate the effects of proximal stressors on diminished agency and loneliness because individuals might not seek mentors for these purposes. Although mentors may improve overall agency and feelings of loneliness, as indicated in the main effects, sexual minorities might seek and expect their peers rather than their mentors to fulfill and meet their feelings of loneliness and diminished agency when facing discrimination; consequently, peers may have these accentuation effects as opposed to mentors.

Growth-fostering relationships with LGBTQ community members exacerbated the effects proximal stressors on diminished agency, loneliness, and shame. Relationships with the LGBTQ community were broadly conceptualized in this study. These relationships could be inclusive of peers, family, mentors, community leaders, and many other relational
connections as well as a general sense of connection to the LGBTQ community as a whole. Thus, it is plausible that participants could have included their peers and mentors in their understanding of their community. As such, growth-fostering relationships with the community might serve as a comprehensive source of relationships for sexual minorities in this sample, and in turn, they had the combined accentuation effects of both peers and mentors.

**Nuanced findings.** It is noteworthy that the moderating results of growth-fostering relationships were not significant for distal relational disconnections. It is possible that sharing and connecting about one’s experiences of discrimination and rejection might be validating and comforting rather than having negative relational effects. Sexual minorities might be in relationships with others who have varying levels of experienced discrimination, especially because oppressive events can happen at any time and they can fluctuate in their type and frequency depending on the context. From a homophily hypothesis perspective, it is possible then that sexual minorities might be in relational connections with individuals who do not share similar experiences of discrimination but might have selected these connections for other shared commonalities. As such, potential co-rumination on experiences of discrimination in these growth-fostering relationships might not necessarily take place as a way of bonding or connecting or might not even exist in these relationships. In fact, individuals in these growth-fostering relationships might provide counterarguments or other perspectives that might be beneficial rather than detrimental to the relational domains of agency, loneliness, and shame, and in turn, health.

**Limitations**
Although the results of this study contribute to research and practice, there are some limitations that are important to note. First, the study is limited by its cross-sectional design. Causal inferences cannot be made between the variables. Longitudinal and experimental research is needed to examine the casual processes and pathways discussed in the study. Second, all of the models aggregated lesbian, gay, bisexual, queer, and “other” participants into one sample of sexual minorities. Although the study was interested in the overall experience of sexual minorities, future research should examine the unique experiences and processes of specific groups within the broader sexual minority community. Sexual minority groups have their own unique experiences with stressors and disconnections (e.g., bisexual individuals experience biphobia) as well as their own unique health experiences (e.g., lesbians have higher rates of obesity; Boehmer et al., 2007); therefore, future research should examine these nuances. Third, the sample had a small group of transgender participants who identified as sexual minorities. There is a dearth of health disparities literature addressing transgender individuals’ experiences; as such, future research is needed to identify potential unique stressors and mechanisms that are related to their health. Fourth, the sample was predominately White; thus, the study’s generalizability to sexual minorities of color is limited. Research is greatly needed to examine the complexity of multiple intersecting minority identities (e.g., race, sexual orientation, and gender) in relation to the study’s findings.

There are also limitations to some of the scales used and to aspects of measuring some of the conceptual constructs in the present study. The study relied on participants’ self-reported health, which might not be as accurate an assessment of the participants’ health as would that reported by a trained medical doctor. For instance, recent research suggests that
participants’ levels of anxiety and depression have significant effects on their reports of current and past physical health symptoms (Suls & Howren, 2012). Objective measures of health used in the field of health psychology (e.g., physiological measures such as cortisol level) would be important to utilize in future studies to assess relationships between relational disconnections and physical health. Furthermore, some heterosexist relational disconnections are more subtle and nuanced (e.g., microaggressions) than measured in the present study. Thus, it is also possible that modern heterosexism and its nuances were not captured in this study’s measures of more overt experiences (e.g., blatant rejection, victimization, or discrimination). In fact, most participants in this study did not report experiencing much direct oppressive relational disconnections over the past year. Future research should utilize more subtle assessments of heterosexist disconnection over the past year as well as their lifetime.

**Implications for Future Research**

This study provides several directions for future research in addition to those mentioned previously. Researchers must utilize longitudinal research designs and include objective measures of health to more adequately examine the effects of minority stressors on health over time. For instance, the results of the study indicated that sexual minority stressors and the relational mediators were all predictors of cardiovascular disease risk; however, it is unclear how these factors and other pathways lead to this serious health risk. Longitudinal research could help examine how minority stressors, relationships, and health behaviors are potentially related to underlying mechanisms to sexual minorities’ cardiovascular disease risk over time.
Additionally, the results demonstrated unique moderating effects of varying types of growth-fostering relationships. Thus, research is needed to better examine the complexity and the unique contributions of these growth-fostering relationships on health. Moreover, research examining growth-fostering relationships with romantic partners as well as the nuances in growth-fostering relationships specifically with sexual minority and heterosexual peers, mentors, and community members would be fruitful to better understand their impact on well-being. The effects of quality relationships with heterosexuals and sexual minorities might have their own unique effects, especially because these stressors are related to sexual orientation.

Moreover, future social network-based research could provide important tests of potential socialization effects in connection to the results of the moderated-mediation model. For instance, longitudinal social network-based research could help illuminate how sexual minorities select and engage in relational connections throughout their lifespan. Additionally, this type of research could identify the processes by which sexual minorities’ social connections improve or exacerbate their health risks over time.

**Implications for Practice and Social Justice**

There is a dearth of evidence-based treatments that culturally and competently address the unique health needs of sexual minorities (Cochran, 2001). Utilizing RCT enables the study’s research findings to be more translatable and relatable to practitioners because it positions the models and results within a counseling framework. They also inform more culturally sensitive practice with sexual minorities.

**Practical and clinical implications.** The results inform counseling and clinical practice because they provide some empirical support for the theoretical foundations of RCT.
More specifically, the results of this study provide several important areas for assessment and intervention. First, the findings accentuate the importance of assessing clients’ experiences with relational disconnections (e.g., discrimination, rejection) as well as their processes in internalizing sexual prejudice into their own psychological well-being and relational images. As demonstrated in the results, practitioners must assess not only for mental distress but also for distressing physical concerns and health behaviors. Similarly, medical doctors and clinicians must take into consideration their patients’ experiences with oppression as a potential source of their physical symptoms.

Most importantly, the results of the study accentuate the strong and insidious effects of proximal stressors and distorted relational images on relational outcomes and health; thus, this serves as a major point of clinical intervention. Practitioners must explore with their clients the effects of sexually prejudiced culture on their internalization of their own relational images. For instance, a bisexual woman who is in a sexually prejudiced community might have developed harmful relational images that push her to conceal her sexual orientation in order to develop and maintain relational connections. However, and congruent with the central relational paradox, despite this woman’s strong desire for connection with others (Miller & Stiver 1997), she might engage in relational strategies (e.g., conceal her sexual identity) that create further disconnection due to individual and cultural forms of disconnections or lack of authenticity in these connections. As such, this woman would benefit from exploring her own relational images that have been intertwined with her culture’s oppression and understanding of bisexuality as a way to better understand her ways of relating with others and in turn her health.
Furthermore, the study suggests several points of clinical intervention related to feelings of diminished agency, loneliness, and shame. Practitioners who work with sexual minority clients who have experienced chronic relational disconnections or who have distorted relational images must also understand the role of empowerment, social connections, and shame in their client’s healing and treatment. Clinicians must help their clients find ways to gain control of their environment to help them feel empowered. Additionally, they must work with their clients to identify and honor strategies for disconnection, and in turn help their clients identify strategies for meaningful and growth-fostering connections.

Furthermore, the results also emphasize that practitioners should not only focus on their clients’ own distorted relational images but also better examine their social supports and networks. Clients who have highly self-disparaging relational images might already be in social groups that are prejudiced; in turn these relational interactions could further perpetuate their harmful relational images. Therefore, practitioners must help their clients assess their existing relational connections and their potential ways of connecting as well as to critically examine the dialogue that occurs in connection.

**Social justice advocacy and policy.** Congruent with RCT, psychologists’ roles include promoting social justice by advocating against cultural disconnections and oppressions (Jordan, 2004; Miller & Stiver, 1997). Concomitantly, psychologists are called upon to integrate research and practice on sexual minorities in order to promote social change and inform policy and advocacy (Goodman et al., 2004; Moradi et al., 2009; Vera & Speight, 2003). The results of this study provide empirical support for related policies and advocacy for sexual minorities’ health. Psychologists must advocate for more sexual minority-
affirming health policies that address sexual minorities’ mental and physical health. Intervention, prevention, policy, and advocacy efforts that provide equal rights for all sexual and gender minorities are critical for a more socially just society.

According to RCT, all people must work beyond personal relational pain and move toward a larger social change approach (Jordan, 2004; Miller & Stiver, 1997). Within this framework, researchers and practitioners need to addresses and advocate against societal forces contributing to relational disconnections and to empower their participants and clients to do the same. As evidenced in the study’s findings demonstrating the detrimental effects of sexual minority stressors on health, psychologists need to advocate for sexual minority health policies and research. They must also intervene and combat heterosexism and sexual prejudice on all societal levels in order to create a more socially just and relationally connected society.
References


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Table 1.

*Skewness and Kurtosis Patterns of the Data.*

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*Note.* SD = standard deviation; Min = minimum actual reported value; and Max = maximum actual reported value.
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**Correlations among the Exogenous, Endogenous, and Mediation Variables**

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*Note.* Hars/Rej = harassment and rejection; Discrim = discrimination; Victim = victimization; Int. H. = internalized homophobia; R. Sen. = rejection sensitivity; Conceal = concealment; Dep = depression; Anx = anxiety; Phys. Sx = distressing physical symptoms; CVD = cardiovascular disease risk; BMI = body mass index; D. Agency = diminished sense of agency; Lonely = feelings of loneliness; connect = lack of desire for connection with others. * p < .05. ** p < .01.
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*Note.* Hars/Rej = harassment and rejection; Discrim = discrimination; Victim = victimization; Int. H. = internalized homophobia; R. Sen. = rejection sensitivity; Conceal = concealment; Dep = depression; Anx = anxiety; Phys. Sx = distressing physical symptoms; CVD = cardiovascular disease risk; BMI = body mass index; Peer = growth-fostering relationships with peers; Mentor = growth-fostering relationships with mentors; Community = growth-fostering relationships with community.

* * p < .05. ** * p < .01.
### Table 4.

*Correlations among Mediating and Moderating Variables*

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*Note. GFR = growth-fostering relationships; Peer = Growth-fostering relationships with peers; Mentor = Growth-fostering relationships with mentors; Community = Growth-fostering relationships with LGBTQ community members. *p < .05. **p < .01.*
Table 5.

**Basic Group Differences on Account of Gender**

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<td>1.94 (0.90)</td>
<td>M &lt; F and T</td>
</tr>
<tr>
<td>Victimization</td>
<td>8.95 (2, 716)***</td>
<td>.02</td>
<td>1.16 (0.35)</td>
<td>1.23 (0.46)</td>
<td>1.55 (0.62)</td>
<td>M and F &lt; T</td>
</tr>
<tr>
<td>Int. Homophobia</td>
<td>0.60 (2, 716)</td>
<td></td>
<td>1.61 (0.81)</td>
<td>1.58 (0.90)</td>
<td>1.36 (0.76)</td>
<td>---</td>
</tr>
<tr>
<td>Rejection Sensitivity</td>
<td>0.63 (2, 716)</td>
<td></td>
<td>2.82 (0.94)</td>
<td>2.86 (0.98)</td>
<td>3.04 (1.01)</td>
<td>---</td>
</tr>
<tr>
<td>Concealment</td>
<td>4.05 (2, 716)</td>
<td></td>
<td>3.68 (1.55)</td>
<td>3.50 (1.65)</td>
<td>3.25 (1.55)</td>
<td>---</td>
</tr>
<tr>
<td>Anxiety</td>
<td>6.82 (2, 716)**</td>
<td>.02</td>
<td>1.51 (0.57)</td>
<td>1.68 (0.69)</td>
<td>1.71 (0.57)</td>
<td>M &lt; F</td>
</tr>
<tr>
<td>Depression</td>
<td>4.17 (2, 716)*</td>
<td>.02</td>
<td>1.77 (0.76)</td>
<td>1.93 (0.85)</td>
<td>2.05 (0.75)</td>
<td>M &lt; F</td>
</tr>
<tr>
<td>Suicidality</td>
<td>11 (2, 716)***</td>
<td>.03</td>
<td>5.70 (2.89)</td>
<td>6.63 (3.45)</td>
<td>8.00 (3.90)</td>
<td>M &lt; F and T</td>
</tr>
<tr>
<td>Physical Symptoms</td>
<td>14.06 (2, 716)***</td>
<td>.04</td>
<td>58.27 (21.48)</td>
<td>66.76 (21.17)</td>
<td>70.71 (23.33)</td>
<td>M &lt; F and T</td>
</tr>
<tr>
<td>CVD Risk</td>
<td>5.74 (2, 716)**</td>
<td>.02</td>
<td>4.29 (2.56)</td>
<td>3.77 (2.24)</td>
<td>3.05 (2.31)</td>
<td>F &lt; M</td>
</tr>
<tr>
<td>BMI</td>
<td>1.53 (2, 716)</td>
<td></td>
<td>27.44 (5.99)</td>
<td>28.04 (7.67)</td>
<td>25.76 (5.51)</td>
<td>---</td>
</tr>
<tr>
<td>Diminished Agency</td>
<td>2.46 (2, 716)</td>
<td></td>
<td>1.95 (0.62)</td>
<td>2.03 (0.67)</td>
<td>2.19 (0.59)</td>
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</tr>
<tr>
<td>Loneliness</td>
<td>0.99 (2, 716)</td>
<td></td>
<td>2.62 (1.00)</td>
<td>2.66 (1.00)</td>
<td>2.92 (1.03)</td>
<td>---</td>
</tr>
<tr>
<td>Desire for Connection</td>
<td>0.33 (2, 716)</td>
<td></td>
<td>2.86 (1.31)</td>
<td>2.85 (1.32)</td>
<td>2.63 (1.14)</td>
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</tr>
<tr>
<td>Shame</td>
<td>5.76 (2, 716)**</td>
<td>.02</td>
<td>1.80 (0.62)</td>
<td>1.96 (0.72)</td>
<td>2.05 (0.58)</td>
<td>M &lt; F</td>
</tr>
<tr>
<td>GFR – Peers</td>
<td>2.23 (2, 716)</td>
<td></td>
<td>3.77 (0.88)</td>
<td>3.89 (0.82)</td>
<td>3.98 (0.56)</td>
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</tr>
<tr>
<td>GFR – Mentors</td>
<td>1.80 (2, 667)</td>
<td></td>
<td>3.49 (1.12)</td>
<td>3.62 (1.03)</td>
<td>3.81 (0.60)</td>
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</tr>
<tr>
<td>GFR – Community</td>
<td>1.86 (2, 716)</td>
<td></td>
<td>3.04 (0.85)</td>
<td>3.14 (0.82)</td>
<td>3.28 (0.68)</td>
<td>---</td>
</tr>
</tbody>
</table>

*Note.* Hars/Rej = harassment/rejection; Int. Homophobia = Internalized homophobia; CVD = cardiovascular disease risk; BMI = body mass index; GFR = growth fostering relationships; M = Male; F = Female; T = Transgender. Follow-up post-hoc comparisons are based on Bonferroni corrections. Standard deviations are provided in parentheses. *p < .05; **p < .01; ***p < .001
### Table 6.
**Basic Group Differences on Account of Sexual Orientation**

<table>
<thead>
<tr>
<th>Measure</th>
<th>F (df)</th>
<th>$\eta^2$</th>
<th>Lesbian ($n = 155$)</th>
<th>Gay ($n = 324$)</th>
<th>Bisexual ($n = 182$)</th>
<th>Queer ($n = 38$)</th>
<th>Other ($n = 20$)</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harassment/Rejection</td>
<td>5.38 (4, 714)***</td>
<td>.03</td>
<td>1.77 (1.06)</td>
<td>1.57 (0.79)</td>
<td>1.82 (1.04)</td>
<td>2.08 (1.03)</td>
<td>2.21 (0.88)</td>
<td>G &lt; Q &amp; O</td>
</tr>
<tr>
<td>Discrimination</td>
<td>3.06 (4, 714)*</td>
<td>.02</td>
<td>1.64 (0.94)</td>
<td>1.46 (0.74)</td>
<td>1.52 (0.86)</td>
<td>1.78 (0.64)</td>
<td>1.86 (0.88)</td>
<td>---</td>
</tr>
<tr>
<td>Victimization</td>
<td>1.78 (4, 714)</td>
<td>.01</td>
<td>1.20 (0.43)</td>
<td>1.18 (0.38)</td>
<td>1.21 (0.41)</td>
<td>1.26 (0.48)</td>
<td>1.41 (0.55)</td>
<td>---</td>
</tr>
<tr>
<td>Internalized Homophobia</td>
<td>9.54 (4, 714)***</td>
<td>.05</td>
<td>1.41 (0.81)</td>
<td>1.55 (0.78)</td>
<td>1.87 (0.98)</td>
<td>1.22 (0.53)</td>
<td>1.87 (0.84)</td>
<td>G, L, &amp; Q &lt; B</td>
</tr>
<tr>
<td>Rejection Sensitivity</td>
<td>4.05 (4, 714)**</td>
<td>.02</td>
<td>2.68 (0.95)</td>
<td>2.79 (0.93)</td>
<td>2.99 (1.00)</td>
<td>3.22 (0.93)</td>
<td>2.93 (0.95)</td>
<td>L &lt; B and Q</td>
</tr>
<tr>
<td>Concealment</td>
<td>16.23 (4, 714)***</td>
<td>.08</td>
<td>3.13 (1.55)</td>
<td>3.52 (1.50)</td>
<td>4.27 (1.61)</td>
<td>2.65 (1.27)</td>
<td>3.80 (1.44)</td>
<td>G, L, &amp; Q &lt; B; Q &lt; G</td>
</tr>
<tr>
<td>Anxiety</td>
<td>6.17 (4, 714)***</td>
<td>.03</td>
<td>1.53 (0.62)</td>
<td>1.50 (0.55)</td>
<td>1.74 (0.75)</td>
<td>1.73 (0.56)</td>
<td>1.84 (0.58)</td>
<td>G &amp; L &lt; B</td>
</tr>
<tr>
<td>Depression</td>
<td>4.89 (4, 714)**</td>
<td>.03</td>
<td>1.72 (0.79)</td>
<td>1.77 (0.75)</td>
<td>1.99 (0.88)</td>
<td>2.00 (0.79)</td>
<td>2.25 (0.85)</td>
<td>G &amp; L &lt; B</td>
</tr>
<tr>
<td>Suicidality</td>
<td>11.31 (4, 714)***</td>
<td>.06</td>
<td>5.81 (2.97)</td>
<td>5.45 (2.76)</td>
<td>6.99 (3.49)</td>
<td>7.68 (4.16)</td>
<td>8.25 (3.96)</td>
<td>G &amp; L &lt; B, Q, &amp; O</td>
</tr>
<tr>
<td>Physical Symptoms</td>
<td>5.03 (4, 714)**</td>
<td>.03</td>
<td>61.90 (21.89)</td>
<td>58.79 (21.89)</td>
<td>66.17 (23.76)</td>
<td>69.11 (23.44)</td>
<td>71.30 (21.25)</td>
<td>G &lt; B</td>
</tr>
<tr>
<td>CVD Risk</td>
<td>3.20 (4, 714)*</td>
<td>.02</td>
<td>3.64 (2.29)</td>
<td>4.27 (2.53)</td>
<td>4.16 (2.47)</td>
<td>3.29 (1.83)</td>
<td>3.40 (2.09)</td>
<td>---</td>
</tr>
<tr>
<td>BMI</td>
<td>0.87 (4, 714)</td>
<td>.01</td>
<td>27.27</td>
<td>27.35 (5.64)</td>
<td>28.21 (7.28)</td>
<td>28.31 (9.65)</td>
<td>28.96 (11.29)</td>
<td>---</td>
</tr>
<tr>
<td>Diminished Agency</td>
<td>3.71 (4, 714)***</td>
<td>.02</td>
<td>1.92 (0.67)</td>
<td>1.94 (0.61)</td>
<td>2.13 (0.64)</td>
<td>2.12 (0.56)</td>
<td>2.04 (0.76)</td>
<td>G &amp; L &lt; B</td>
</tr>
<tr>
<td>Loneliness</td>
<td>7.85 (4, 714)***</td>
<td>.04</td>
<td>2.40 (0.94)</td>
<td>2.57 (0.99)</td>
<td>2.96 (1.00)</td>
<td>2.69 (0.89)</td>
<td>2.92 (1.01)</td>
<td>G &amp; L &lt; B</td>
</tr>
<tr>
<td>Desire for Connection</td>
<td>1.75 (4, 714)</td>
<td>.01</td>
<td>2.67 (1.27)</td>
<td>2.84 (1.31)</td>
<td>3.04 (1.36)</td>
<td>2.88 (1.20)</td>
<td>2.66 (1.04)</td>
<td>---</td>
</tr>
<tr>
<td>Shame</td>
<td>5.87 (4, 714)***</td>
<td>.03</td>
<td>1.79 (0.67)</td>
<td>1.79 (0.62)</td>
<td>2.03 (0.75)</td>
<td>2.06 (0.54)</td>
<td>2.12 (0.58)</td>
<td>G &amp; L &lt; B</td>
</tr>
<tr>
<td>GFR - Peers</td>
<td>3.06 (4, 714)*</td>
<td>.02</td>
<td>3.95 (0.74)</td>
<td>3.84 (0.86)</td>
<td>3.67 (0.91)</td>
<td>4.01 (0.71)</td>
<td>3.65 (1.00)</td>
<td>B &lt; L</td>
</tr>
<tr>
<td>GFR – Mentors</td>
<td>1.78 (4, 665)*</td>
<td>.01</td>
<td>3.70 (0.90)</td>
<td>3.55 (1.07)</td>
<td>3.41 (1.20)</td>
<td>3.65 (0.87)</td>
<td>3.78 (1.17)</td>
<td>B &lt; L</td>
</tr>
<tr>
<td>GFR – Community</td>
<td>3.01 (4, 714)*</td>
<td>.02</td>
<td>3.22 (0.78)</td>
<td>3.07 (0.80)</td>
<td>2.95 (0.85)</td>
<td>3.30 (0.76)</td>
<td>3.07 (0.92)</td>
<td>B &lt; L</td>
</tr>
</tbody>
</table>

**Note.** CVD = cardiovascular disease risk; BMI = body mass index; GFR = growth fostering relationships; L = Lesbians; G = Gay men; B = Bisexual individuals; Q = Queer; O = Individuals who identified with other sexual minority identities. Follow-up post-hoc comparisons are based on Bonferroni corrections. Standard deviations are provided in parentheses. * $p < .05$; ** $p < .01$; *** $p < .001$
Table 7. Basic Group Differences on Account of Race/Ethnicity

<table>
<thead>
<tr>
<th>Measure</th>
<th>( F ) (df)</th>
<th>( \eta^2_p )</th>
<th>Afro/African/Black ( n = 46 )</th>
<th>Asian/Pacific Islander ( n = 27 )</th>
<th>Biracial/Multiracial ( n = 24 )</th>
<th>Hispanic/Latino/a ( n = 44 )</th>
<th>White ( n = 551 )</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harassment/Rejection</td>
<td>4.41 (4, 687)**</td>
<td>.03</td>
<td>2.08 (1.36)</td>
<td>1.70 (0.77)</td>
<td>1.73 (1.6)</td>
<td>2.10 (1.34)</td>
<td>1.65 (0.84)</td>
<td>W &lt; Afr &amp; H</td>
</tr>
<tr>
<td>Discrimination</td>
<td>3.99 (4, 687)**</td>
<td>.02</td>
<td>1.87 (1.31)</td>
<td>1.37 (0.57)</td>
<td>1.60 (0.63)</td>
<td>1.80 (1.04)</td>
<td>1.49 (0.75)</td>
<td>W &lt; Afr</td>
</tr>
<tr>
<td>Victimization</td>
<td>7.80 (4, 687)***</td>
<td>.04</td>
<td>1.42 (0.75)</td>
<td>1.17 (0.33)</td>
<td>1.21 (0.36)</td>
<td>1.40 (0.70)</td>
<td>1.16 (0.32)</td>
<td>W &lt; Afr &amp; H</td>
</tr>
<tr>
<td>Internalized Homophobia</td>
<td>5.42 (4, 687)***</td>
<td>.03</td>
<td>2.08 (1.14)</td>
<td>1.73 (1.02)</td>
<td>1.91 (1.13)</td>
<td>1.60 (1.00)</td>
<td>1.54 (0.79)</td>
<td>W &lt; Afr</td>
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<tr>
<td>Rejection Sensitivity</td>
<td>3.39 (4, 687)**</td>
<td>.02</td>
<td>2.61 (0.87)</td>
<td>2.94 (0.96)</td>
<td>3.28 (1.10)</td>
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<td>2.87 (0.96)</td>
<td>Afr &amp; H &lt; BM</td>
</tr>
<tr>
<td>Concealment</td>
<td>1.04 (4, 687)</td>
<td>.01</td>
<td>4.00 (1.78)</td>
<td>3.81 (1.82)</td>
<td>3.64 (1.70)</td>
<td>3.70 (1.48)</td>
<td>3.55 (1.56)</td>
<td>---</td>
</tr>
<tr>
<td>Anxiety</td>
<td>1.09 (4, 687)</td>
<td>.01</td>
<td>1.62 (0.76)</td>
<td>1.74 (0.78)</td>
<td>1.76 (0.68)</td>
<td>1.61 (0.76)</td>
<td>1.56 (0.60)</td>
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<tr>
<td>Depression</td>
<td>0.81 (4, 687)</td>
<td>.01</td>
<td>1.67 (0.81)</td>
<td>1.84 (0.78)</td>
<td>2.02 (0.95)</td>
<td>1.84 (0.95)</td>
<td>1.84 (0.78)</td>
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</tr>
<tr>
<td>Suicidality</td>
<td>0.66 (4, 687)</td>
<td>.00</td>
<td>5.61 (2.79)</td>
<td>6.00 (3.21)</td>
<td>6.3 (3.71)</td>
<td>6.11 (3.71)</td>
<td>6.12 (3.14)</td>
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</tr>
<tr>
<td>Physical Symptoms</td>
<td>1.33 (4, 687)</td>
<td>.01</td>
<td>65.48 (29.87)</td>
<td>62.04 (22.84)</td>
<td>68.58 (25.82)</td>
<td>65.80 (26.23)</td>
<td>61.09 (21.25)</td>
<td>---</td>
</tr>
<tr>
<td>CVD Risk</td>
<td>3.86 (4, 687)**</td>
<td>.02</td>
<td>3.11 (2.18)</td>
<td>3.15 (2.61)</td>
<td>3.46 (2.08)</td>
<td>3.66 (2.47)</td>
<td>4.20 (2.44)</td>
<td>Afr &lt; W</td>
</tr>
<tr>
<td>BMI</td>
<td>1.05 (4, 687)</td>
<td>.01</td>
<td>28.69 (8.21)</td>
<td>25.74 (5.01)</td>
<td>28.44 (7.46)</td>
<td>26.90 (6.72)</td>
<td>27.61 (6.57)</td>
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</tr>
<tr>
<td>Diminished Agency</td>
<td>1.67 (4, 687)</td>
<td>.01</td>
<td>1.93 (0.61)</td>
<td>1.89 (0.50)</td>
<td>2.10 (0.75)</td>
<td>1.79 (0.65)</td>
<td>2.01 (0.63)</td>
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</tr>
<tr>
<td>Loneliness</td>
<td>0.83 (4, 687)</td>
<td>.01</td>
<td>2.49 (0.91)</td>
<td>2.83 (0.95)</td>
<td>2.56 (1.07)</td>
<td>2.49 (0.92)</td>
<td>2.65 (1.00)</td>
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</tr>
<tr>
<td>Desire for Connection</td>
<td>2.10 (4, 687)</td>
<td>.01</td>
<td>2.67 (1.12)</td>
<td>2.41 (1.14)</td>
<td>3.07 (1.53)</td>
<td>3.25 (1.41)</td>
<td>2.86 (1.32)</td>
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<tr>
<td>Shame</td>
<td>1.34 (4, 687)</td>
<td>.01</td>
<td>1.92 (0.78)</td>
<td>2.06 (0.77)</td>
<td>2.03 (0.80)</td>
<td>1.87 (0.82)</td>
<td>1.85 (0.63)</td>
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</tr>
<tr>
<td>GFR – Peers</td>
<td>1.92 (4, 687)</td>
<td>.01</td>
<td>4.02 (0.77)</td>
<td>4.02 (0.87)</td>
<td>3.71 (1.04)</td>
<td>4.02 (0.73)</td>
<td>3.79 (0.85)</td>
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</tr>
<tr>
<td>GFR – Mentors*</td>
<td>2.83 (4, 642)*</td>
<td>.01</td>
<td>3.90 (0.92)</td>
<td>3.83 (0.83)</td>
<td>3.58 (1.08)</td>
<td>3.82 (0.79)</td>
<td>3.49 (1.10)</td>
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</tr>
<tr>
<td>GFR – Community*</td>
<td>2.91 (4, 687)</td>
<td>.02</td>
<td>3.39 (0.72)</td>
<td>3.33 (0.83)</td>
<td>3.18 (0.63)</td>
<td>3.22 (0.85)</td>
<td>3.05 (0.82)</td>
<td>---</td>
</tr>
</tbody>
</table>

Note. CVD = cardiovascular disease risk; BMI = body mass index; GFR = growth fostering relationships; Afr = African American/Afro-Caribbean American/Black American; BM = Biracial and Multiracial; H = Hispanic American and Latino/a American; W = White American. Follow-up post-hoc comparisons are based on Bonferonni corrections. Standard deviations are provided in parentheses. * \( p < .05 \); ** \( p < .01 \); *** \( p < .001 \)
### Goodness of Fit for the Measurement and Latent Models

<table>
<thead>
<tr>
<th>Model</th>
<th>Fit Indices</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Basic Model: Stressors and Health</strong></td>
<td></td>
</tr>
<tr>
<td>Measurement Model</td>
<td>$\chi^2 = 518.77$, df = 105</td>
</tr>
<tr>
<td>Structural Model</td>
<td>$\chi^2 = 453.61$, df = 93</td>
</tr>
<tr>
<td><strong>Mediation Model</strong></td>
<td></td>
</tr>
<tr>
<td>Measurement Model</td>
<td>$\chi^2 = 1022.19$, df = 240</td>
</tr>
<tr>
<td>Structural Mediation Model</td>
<td>$\chi^2 = 1126.87$, df = 254</td>
</tr>
<tr>
<td><strong>Peer × Distal Stress Moderated Mediation Model</strong></td>
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</tr>
<tr>
<td>Measurement Model</td>
<td>$\chi^2 = 1058.16$, df = 306</td>
</tr>
<tr>
<td>Structural Model</td>
<td>$\chi^2 = 1526.23$, df = 402</td>
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<tr>
<td><strong>Peer × Proximal Stress Moderated Mediation Model</strong></td>
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</tr>
<tr>
<td>Measurement Model</td>
<td>$\chi^2 = 1149.14$, df = 306</td>
</tr>
<tr>
<td>Structural Model</td>
<td>$\chi^2 = 1479.25$, df = 402</td>
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<td><strong>Mentor × Distal Stress Moderated Mediation Model</strong></td>
<td></td>
</tr>
<tr>
<td>Measurement Model</td>
<td>$\chi^2 = 1030.90$, df = 306</td>
</tr>
<tr>
<td>Structural Model</td>
<td>$\chi^2 = 1487.35$, df = 402</td>
</tr>
<tr>
<td><strong>Mentor × Proximal Stress Moderated Mediation Model</strong></td>
<td></td>
</tr>
<tr>
<td>Measurement Model</td>
<td>$\chi^2 = 1026.12$, df = 306</td>
</tr>
<tr>
<td>Structural Model</td>
<td>$\chi^2 = 1331.12$, df = 402</td>
</tr>
<tr>
<td><strong>Community × Distal Stress Moderated Mediation Model</strong></td>
<td></td>
</tr>
<tr>
<td>Measurement Model</td>
<td>$\chi^2 = 1187.34$, df = 306</td>
</tr>
<tr>
<td>Structural Model</td>
<td>$\chi^2 = 1692.42$, df = 402</td>
</tr>
<tr>
<td><strong>Community × Proximal Stress Moderated Mediation Model</strong></td>
<td></td>
</tr>
<tr>
<td>Measurement Model</td>
<td>$\chi^2 = 1163.22$, df = 306</td>
</tr>
<tr>
<td>Structural Model</td>
<td>$\chi^2 = 1476.31$, df = 402</td>
</tr>
</tbody>
</table>

*Note.* NNFI = non-normed fit index; IFI = incremental fit index; CFI = comparative fit index; RMSEA = root-mean-square error of approximation; 90% CI = confidence interval. Parentheses indicate upper and lower bounds of the 90% CI.
Table 9.

**Total Indirect Effects Estimates**

<table>
<thead>
<tr>
<th>Total Indirect Effects for each Health Outcome</th>
<th>Standardized Values (90% Confidence Interval)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Effect of Distal Stressors/Relational Disconnections on:</strong></td>
<td></td>
</tr>
<tr>
<td>Mental Health</td>
<td>.09 (.00, .18)*</td>
</tr>
<tr>
<td>Distressing Physical Symptoms</td>
<td>.09 (.03, .14)**</td>
</tr>
<tr>
<td>Cardiovascular Disease Risk Factors</td>
<td>-.03 (-.09, 01)</td>
</tr>
<tr>
<td>Body Mass Index</td>
<td>-.02 (-.06, 07)</td>
</tr>
<tr>
<td><strong>Effect of Proximal Stressors/Distorted Relational Images on:</strong></td>
<td></td>
</tr>
<tr>
<td>Mental Health</td>
<td>.80 (.74, .85)**</td>
</tr>
<tr>
<td>Distressing Physical Symptoms</td>
<td>.47 (.41, .53)**</td>
</tr>
<tr>
<td>Cardiovascular Disease Risk Factors</td>
<td>.11 (.02, .22)*</td>
</tr>
<tr>
<td>Body Mass Index</td>
<td>.07 (-.01, .15)</td>
</tr>
</tbody>
</table>

*Note. Bootstrapping procedures were conducted on 1,000 generated samples to test the significance of the indirect effects. The standardized bias-corrected bootstrap indirect effects and their respective confidence intervals are reported in this table. Values in parentheses are the upper and lower bounds of the 90% confidence interval. * p < .05. ** p < .01.*
Table 10.

*Moderating Effects Estimates*

<table>
<thead>
<tr>
<th>Moderated Mediation Models</th>
<th>Outcome Mediators</th>
<th>Diminished Agency</th>
<th>Loneliness</th>
<th>Shame</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer × Distal</td>
<td></td>
<td>.06</td>
<td>-.00</td>
<td>-.04</td>
</tr>
<tr>
<td>Peer Main Effect</td>
<td></td>
<td>-.18***</td>
<td>-.22***</td>
<td>.15***</td>
</tr>
<tr>
<td>Peer × Proximal</td>
<td></td>
<td>.23***</td>
<td>.15*</td>
<td>.04</td>
</tr>
<tr>
<td>Peer Main Effect</td>
<td></td>
<td>-.21***</td>
<td>-.23***</td>
<td>.14***</td>
</tr>
<tr>
<td>Mentor × Distal</td>
<td></td>
<td>.02</td>
<td>.00</td>
<td>-.02</td>
</tr>
<tr>
<td>Mentor Main Effect</td>
<td></td>
<td>-.20***</td>
<td>-.20***</td>
<td>.05</td>
</tr>
<tr>
<td>Mentor × Proximal</td>
<td></td>
<td>.05</td>
<td>.07</td>
<td>.10*</td>
</tr>
<tr>
<td>Mentor Main Effect</td>
<td></td>
<td>-.21***</td>
<td>-.20***</td>
<td>.05</td>
</tr>
<tr>
<td>Community × Distal</td>
<td></td>
<td>.04</td>
<td>.01</td>
<td>-.01</td>
</tr>
<tr>
<td>Community Main Effect</td>
<td></td>
<td>-.11**</td>
<td>-.14***</td>
<td>.03</td>
</tr>
<tr>
<td>Community × Proximal</td>
<td></td>
<td>.15**</td>
<td>.09*</td>
<td>.14**</td>
</tr>
<tr>
<td>Community Main Effect</td>
<td></td>
<td>-.11**</td>
<td>-.14***</td>
<td>.03</td>
</tr>
</tbody>
</table>

*p = .07; *p < .05. **p < .01. ***p < .001.*
Figure 1. A relational model of LGBT mental and physical health.
Figure 2. A relational mediation model of LGBT mental and physical health.
Figure 3. A relational moderated-mediation model of LGBT mental and physical health: Growth-fostering relationships.