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Minority Stress, Social Support, and Mental Health Among LGBQP+ Religious Disaffiliates

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Minority Stress, Social Support, and Mental Health Among LGBQP+ Religious Disaffiliates

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PsyD Clinical Dissertation Signature Page

This Clinical Dissertation, written under the direction of the student's Clinical Dissertation Chair and Committee and approved by Members of the Committee, has been presented to and accepted by the faculty of the Clinical Psychology PsyD Program in partial fulfillment of the requirements for the degree of Doctor of Psychology. The content and research methodologies presented in this work represent the work of the student alone.

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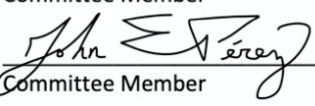
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Dedications and Acknowledgments

This project is dedicated to my longtime friend Andrew "Truji" Trujillo. Andrew and I became friends in college, roommates as young adult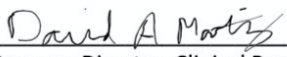s, and we are now inextricably intertwined as queer family. Thank you, Truji, for your boundless love and support, and for your selflessness in sharing your experience of navigating the challenges of growing up as a gay boy in a non-affirming religious environment. Thank you to my dissertation chair and committee members for guiding and supporting me throughout this process. Thank you to my partner Michael Druskin for your understanding and encouragement throughout this journey. Thank you to my classmates, especially Lindsey Rogers, for motivational support when we needed to meet those ever-encroaching dissertation deadlines. Thank you to my family for always believing that I could achieve my goals. Thank you to the many Reddit users who took valuable time out of their days to complete this survey.

Abstract

The present study investigated the association between four minority stress processes (victimization, internalized heterosexism, rejection sensitivity, and disclosure of sexual orientation identity) and symptoms of depression and anxiety among lesbian, gay, bisexual, queer, pansexual, or otherwise non-heterosexual (LGBQP+) disaffiliates from non-affirming religions, and whether social support mediated these relationships. A nonexperimental, cross-sectional, correlational design was used. Participants were recruited through Reddit, a popular social-networking site, and completed an online survey that assessed experiences of minority stress, perceptions of social support, and symptoms of depression and anxiety. Participants were 161 non-religious, US-born, cisgender, LGBQP+ Reddit-users who identified as having disaffiliated from a religion that held rejecting views of same-sex sexuality. Path analysis was used to test the hypotheses. The final model was found to be a good fit for the data: $\chi^2(12) = 11.19$, $p = .512$, comparative fit index = .994, root-mean-square-error of approximation = .028, Tucker-Lewis index = .966. Internalized heterosexism and rejection sensitivity were independently associated with higher levels of anxious symptomatology. Family social support was associated with lower levels of depressive symptomatology. Female gender identity, fewer years of education, and a past or current diagnosed mental health disability or impairment were associated with higher depressive and anxious symptomatology. When working with LGBQP+ disaffiliates and their families, mental health professionals should employ LGB-affirmative treatment, consider minority stress processes when developing interventions to target symptoms of anxiety, and encourage social support from family members if clinically appropriate to help address depressive symptoms.

Minority Stress, Social Support, and Mental Health Among LGBQP+ Religious

Disaffiliates

Attempting to alleviate psychological distress by reducing cognitive dissonance, which is the tension that occurs when a person holds two psychologically inconsistent ideas, drives much of human behavior (Festinger, 1962). One group of individuals who may be especially prone to experiencing dissonance are lesbian, gay, bisexual, queer, pansexual, or otherwise non-heterosexual (LGBQP+) individuals raised in religious environments that convey non-affirming messages regarding LGBQP+ attractions, behaviors, and identities (Anderton et al., 2011). Research has identified several ways in which LGBQP+ individuals may deal with conflict between religious and sexual orientation identities, one of which is disaffiliating from their religion of origin (Anderton et al., 2011; Dehlin et al., 2015). Whereas disaffiliation may alleviate internal conflict between religious and sexual identities (Kashubeck-West et al., 2017), the negative psychological consequences of growing up in a non-affirming religious environment may persist even after exiting the religious institution (Sowe et al., 2014). Furthermore, disaffiliation may involve loss of social and familial support (Fisher, 2016; Kashubeck-West et al., 2017). The loss of a supportive network may be particularly challenging for LGBQP+ individuals who disaffiliate, as social support has been identified as a protective factor against mental health problems amongst LGBQP+ individuals (Sattler et al., 2016). Research suggests that disaffiliation from religious institutions may be related to poor mental and physical health outcomes regardless of sexual orientation identity, and also mediated by social support (Fenelon & Danielson, 2016; Scheitle & Adamczyk, 2010).

LGBQP+ individuals have been identified in the research as more likely to experience mental health problems than heterosexual counterparts (King et al., 2008; Meyer, 2003; Plöderl

& Tremblay, 2015; Ross et al., 2018). Although the reason for this health disparity is not fully known, Meyer (2003) posits that it rises from minority stressors experienced by LGBQP+ individuals, including incidents of discrimination and victimization, expectations of the occurrence of these incidents, concealment of sexual orientation identity, and internalized heterosexism.

Although minority stressors likely affect LGBQP+ individuals regardless of their religious upbringing, some or all of the aforementioned stress processes may be more pronounced among individuals raised in non-affirming religious environments (Anderton et al., 2011). Over the past several decades, Christian religions have generally been adopting more accepting attitudes toward LGBQP+ sexual orientations, yet many denominations and communities still espouse rejecting stances toward homosexuality (Whicker et al., 2017). LGBQP+ individuals growing up in these contexts may internalize anti-LGBQP+ messages, contributing to internalized heterosexism and conflict between religious and sexual orientation identities (Anderton et al., 2011; Sowe et al., 2014; Yakushko, 2005). LGBQP+ individuals raised in religious environments that reject homosexuality may also be exposed to more outright prejudice and be more likely to conceal their sexual orientation identities than LGBQP+ individuals raised secularly or in faith communities that accept LGBQP+ orientations (Cragun & Sumerau, 2015; Wilkerson et al., 2012).

Minority stress theory has helped guide researchers to better understand the cognitive, emotional and behavioral mechanisms that may explain the heightened symptomatology of mental illness among LGBQP+ individuals (Meyer, 2003). When considering minority stress from a clinical perspective, it is additionally important to identify sociocultural contexts that may be more likely to contribute to minority stress (and associated negative health outcomes) in order

to more properly tailor individual interventions, address clinician biases, and create appropriate population-based interventions (Blosnich & Anderson, 2015). The present study used data collected from a large community sample to help inform recommendations for clinical practice with nonreligious LGBQP+ individuals.

Significance of the Present Study

Conducting mental health research among the LGBQP+ population is critical: in a meta-analysis of population-based studies, King et al. (2008) found that LGB individuals were twice as likely as heterosexual counterparts to attempt suicide, and were 1.5 times more likely to receive diagnoses of depression, anxiety, and substance use disorders. Despite noted health disparities between LGBQP+ individuals and heterosexual counterparts, only recently has the research community begun scientific inquiries to better understand the determinants of LGBQP+ mental health. Online communities may be one forum through which LGBQP+ individuals expand their social networks (Etengoff & Daiute, 2015; Miller, 2016), and thus these virtual communities are a potentially promising avenue through which to gather data. Similarly, individuals in the process of disaffiliation have also been found to engage in building support networks online (Avance, 2013).

The present study surveyed a community sample of nonreligious LGBQP+ individuals online to assess their current depressive and anxious symptoms, experiences of minority stress, and perceptions of social support in an effort to further understand the presence of mental health problems among the LGBQP+ population at large. By assessing an anonymous community sample, the present study sought to gather data about mental health symptomatology of LGBQP+ individuals who may not be engaged in clinical care despite experiencing high levels of distress or who may experience symptoms that do not meet thresholds established by clinical

measures. Improving understanding of this population's needs at the community level is essential to the overall goal of reducing health disparities.

Definition of Terms

Sexual Orientation Identity

Sexual orientation is often conceptualized as consisting of three dimensions: identity, behavior, and attraction (Bostwick et al., 2010). Operationalizing these dimensions has posed a challenge for researchers who seek to understand how different facets of sexual orientation may be related to various health outcomes. For instance, same-sex sexual behaviors may increase some health risks while same-sex attraction alone may not (Bostwick et al., 2010). Because sexual orientation refers to a person's sexual preferences and behavior that are not necessarily accounted for by their chosen "label," Worthington (2004) suggested that the term "sexual orientation identity" (SOI) be used to refer to a person's acceptance and recognition of their sexual orientation. As the present study will use self-reported data, I will use SOI to refer to an individual's acceptance and recognition of their sexual orientation, which is operationalized by participant self-identification on the demographics questionnaire.

LGBQP+

Many terms are used to describe SOIs that involve same-sex attraction and behaviors, including "gay," "lesbian," "bisexual," "queer," "pansexual," "men who have sex with men" (MSM), and "women who have sex with women" (WSW). Literature often uses the term "sexual minority" as a catchall to refer to individuals who identify with any of the above-mentioned SOIs, or otherwise endorse same-sex attractions and behaviors. The term "sexual minority" is, however, not widely used among LGBQP+ individuals outside of an academic context. In a description of LGBT terminology in public health fields, Ferris (2006) writes: "the [LGBT]

community is composed of people who feel their gender and sexuality are different from that of mainstream society… The LGBT community has no clear boundaries and is being refined every day. Terms are changing and definitions are constantly evolving," (p. 9). The present study included as participants individuals who identify as lesbian, gay, bisexual, queer, pansexual or otherwise non-heterosexual, and will use the initialism "LGBQP+" to refer to the entire participant group. Whereas the experiences of transgender and other gender-nonconforming individuals are indeed worthy of empirical investigation, only cisgender-identified individuals were included in the present study to maintain a more homogenous sample.

Religious Identity

In this study, "religious identity" (RI) refers to a person's particular religious group affiliation and respective beliefs (Anderton et al., 2011). This is distinct from an individual's spiritual identity, as a spiritual identity may exist in absence of a religious affiliation (Wright & Stern, 2015).

Christian Religions

In this study, "Christian religions" will be defined based on the Pew Research Center Religious Landscape Study (2015). Pew Research Center (2015) identifies the following broad categories of Christian religions: Evangelical Protestant, Mainline Protestant, Historically Black Protestant, Catholic, Mormon, Orthodox Christian, Jehovah's Witness, and "Other Christian."

Affirming and Non-affirming Religions

In the present study, religions that convey negative messages about same-sex attractions, behaviors, and identities will be referred to as "non-affirming", whereas institutions that have adopted more tolerant stances of same-sex attractions, behaviors, and identities will be referred

to as "affirming." In this study, non-affirming religions will be operationalized based on participant perception of the religious institution in which they were raised.

Nonreligious

In this study, the term "nonreligious" will be used to be describe individuals who are not currently affiliated with any organized religion. Sometimes referred to as religious "nones" (as this is the box they check when asked about their religion), nonreligious individuals may identify as "atheist," "agnostic," or "nothing in particular" (Sahker, 2016). Individuals who select "none" when asked to identify their religion may believe in God and may retain some attachment to religion, but those attachments are not salient enough to allow them to identify with that religion at the time (Lim et al., 2010). "Nonreligious" in this study will also include individuals who identify as "spiritual but not religious."

Consistently Unaffiliated

In this study, the term "consistently unaffiliated" will refer to individuals who were raised without religious affiliation and remain unaffiliated with any organized religion.

Disaffiliation

In this study, the term "disaffiliation" will refer to the act of leaving a religion. As disaffiliation can be a lengthy process (Sahker, 2016), I will use the terms "disaffiliated" and "disaffiliate" to describe a person who has completed the process of disaffiliation and currently identifies as nonreligious.

Literature Review

Theoretical Framework

The present study is an investigation into the environmental, interpersonal, and intrapsychic variables associated with depressive and anxious symptomatology among

nonreligious LGBQP+ individuals. I first apply cognitive dissonance theory to conceptualize the internal conflict that LGBQP+ individuals may experience when growing up in non-affirming religious environments. I present research supporting the hypothesis that being raised in non-affirming religious environments may be associated with greater exposure to minority stressors, and disaffiliation may be associated with low levels of social support. Accordingly, I also incorporate minority stress theory in the present study in order to conceptualize specific internal and interpersonal processes that may affect all LGBQP+ individuals and relate to depressive and anxious symptomatology.

Cognitive Dissonance Theory

According to cognitive dissonance theory, the majority of individuals are motivated to achieve consistency and/or congruency within themselves (Festinger, 1962). A state of psychological tension, or dissonance, can result when an individual holds two cognitions that are inconsistent (Aronson, 2012). In order to reduce dissonance, individuals strive to change one or more of the elements that do not fit together (Festinger, 1962). Dissonance can be temporary, for instance, when a person is exposed to information that conflicts with a previously held belief. Dissonance can also be enduring and of a more severe magnitude if there is a conflict between two firmly held beliefs about oneself (Anderton et al., 2011). Festinger (1962) explains that the more important the conflicting elements are to the individual, the more severe the dissonance will be, and the more likely the individual will be to engage in behaviors to reduce the dissonance.

Religious Identity/Sexual Orientation Identity Conflict as Cognitive Dissonance. As of 2014, 70.6% of the U.S. population identifies as Christian, and 52% of Christian Americans say that homosexuality should be accepted by society, compared to 83% of unaffiliated

Americans (Pew Research Center, 2015). Many Christian and non-Christian religious institutions

express explicit negative attitudes and beliefs regarding LGBQP+ attractions, behaviors and

identities, characterizing them as "immoral, unnatural and sinful," (Kashubeck-West et al., 2017,

p. 215). Moreover, many institutions act on these beliefs in discriminatory ways by prohibiting

LGBQP+ individuals from holding leadership positions and refusing to sanction same-sex unions

(Barnes & Meyer, 2012).

RI/SOI conflict occurs when there exists a conflict or dissonance between an individual's

RI and their present or emerging SOI (Anderton et al., 2011). Cognitive dissonance generally

manifests when a person's RI is tied to non-affirming beliefs about same-sex attraction, while

that person is experiencing same-sex attraction in the context of their SOI (Anderton et al.,

2011). The conflict between RI and SOI is likely of critical importance in identity formation, as

steps in RI development temporally correspond to steps in formation of SOI (Bradshaw et al.,

2015). Kashubeck-West et al. (2017) explain that for LGBQP+ youth, participation in non-

affirming religious communities may lead to feelings of guilt and shame about SOI, making it

difficult for them to develop a positive sexual identity. Given the conflicting messages that

LGBQP+ individuals raised in non-affirming environments may internalize about same-sex

sexual attractions, it is understandable that many LGBQP+ individuals seek to alleviate internal

dissonance by leaving the religions in which they were raised.

Dissonance Reduction Through Disaffiliation. In a review of literature regarding

RI/SOI conflict, Anderton et al. (2011) reported that individuals experiencing RI/SOI conflict

may engage in a number of strategies to minimize dissonance, including changing their religious

environment, expanding or changing their religious beliefs, attempting to change their sexual

behaviors, and compartmentalizing their SOI and RI. Changing one's religious environment was

the most frequently reported strategy, which includes disaffiliation from non-affirming religions, seeking out new, affirming religious or spiritual organizations, focusing on spiritual (rather than religious) identity, and abandoning religion and spirituality altogether (Anderton et al., 2011).

In his review of the relevant literature regarding disaffiliation and spiritual struggle, Sahker (2016) notes that individuals who reject religion or experience spiritual struggle may experience prejudice and discrimination, ruptures in their family and romantic relationships, and decreased community and organizational support. Fenelon and Danielson (2015) liken disaffiliation to marital dissolution, and explain that disaffiliation may impact health and well-being through loss of social support and reduced resources for emotional coping.

Minority Stress Theory

Stress has been described as "any condition having the potential to arouse the adaptive machinery" (Pearlin, 1999, p. 163). Stressors have been identified as "events and conditions… that cause change and that require that the individual to adapt to the new situation or life circumstance" (Meyer, 2003, p. 675). Social stress theory proposes that conditions of the social environment can be sources of stress that may contribute to poor mental and physical health (Meyer, 2003). Stemming from social stress theory, *minority stress theory* suggests that individuals from socially stigmatized groups are likely exposed to excess stress as a result of their position in society (Meyer, 2003). Individuals living with a stigmatized social identity may experience stress related to institutional and interpersonal discrimination and due to inequality of power and privilege (Katz-Wise & Hyde, 2012).

Minority Stress and Mental Health: Depression and Anxiety. Minority stress theory identifies specific interpersonal and intrapsychic processes that may underlie the mental health disparities between LGBQP+ individuals and heterosexual counterparts (Bostwick, et al. 2010;

Cochran, et al., 2003; Meyer, 2003; King et al., 2008; Plöderl & Tremblay, 2015). Plöderl and

Tremblay (2015) conducted a systemic review of 199 studies comparing mental health problems

of LGBQP+ individuals to heterosexual counterparts. Included in this review were studies that

sampled the general population, were representative of heterosexual and LGBQP+ population

distributions, and used qualitative and quantitative methods. Of those studies, 89% indicated

elevated rates/levels of depression in LGBQP+ adults and 97% reported elevated levels of

depression in LGBQP+ adolescents, with the majority of studies reporting small to medium

effect sizes. Similarly, 83% of the included studies reported elevated levels of anxiety disorders

among LGBQP+ adults, and 100% of the relevant studies reported elevated levels of anxiety

among LGBQP+ youth, with the majority reporting small to medium effect sizes. Minority stress

theory proposes three distinct minority stress processes that may help explain the above-noted

health disparities.

        Minority Stress Processes Among LGBQP+ Individuals. Meyer (2003) describes three

processes of minority stress related to LGBQP+ individuals, ranging from distal to proximal: a)

external, objectively stressful events (e.g. incidents of victimization), b) expectations of

aforementioned stressful events, and vigilance associated with those expectations (frequently

conceptualized as rejection sensitivity), and c) internalization of negative societal attitudes,

which includes internalized heterosexism and concealment of SOI. Meyer (2003) also suggests

that social support and group-level coping can ameliorate the negative effects of minority stress

in LGBQP+ individuals. Recently, Sattler et al. (2016) sought empirical support for an

adaptation of Meyer's (2003) theory of minority stress in an online survey of 1,188 gay German

men. Sattler et al. (2016) found that internalized homonegativity, victimization, and rejection

sensitivity were all positively associated with mental health problems. In accordance with

Meyer's theory, the present study included examination of the three stress processes described above, social support, and symptoms of depression and anxiety, in order to better understand how mental health symptomatology is affected among nonreligious LGBQP+ individuals.

  Heterosexist Victimization. Experiences of heterosexist victimization are categorized within the first process of minority stress described by Meyer (2003): external stressful events. *Victimization* has been defined as "harms that occur to individuals because of other human actors behaving in ways that violate social norms" (Finkelhor & Kendall-Tacket, 1997, p. 2). Victimization can take many forms, including discrimination, threats, verbal harassment, property damage, physical and sexual assault, and stalking (Berrill, 1992). Victimization has been found to be more prevalent among LGBQP+ populations. Katz-Wise and Hyde (2012) conducted a meta-analysis of 138 studies that included self-reports of discrimination and victimization among LGB and heterosexual individuals. The authors found substantial victimization rates reported within the LGB populations, with 56% reporting experiences of verbal harassment and 28% reporting physical assault. Katz-Wise and Hyde (2012) also found a difference between the two groups, with all studies included in the meta-analysis reporting small to moderate effect sizes in the direction of LGB individuals reporting greater rates of victimization than heterosexual counterparts.

  Heterosexist victimization has been found to be correlated with a variety of negative mental health outcomes. In a survey of 2,259 LGB individuals, Herek et al. (1999) found that individuals who had experienced a sexual-orientation hate crime within the past five years reported more anger, anxiety, depression and post-traumatic stress than did survivors of non-bias related crimes and those with no experiences of crime victimization. In a nationally-representative sample of 2,917 LGB and heterosexual adults, Mays and Cochran (2001) found

that the relationship between mental health indicators (12-month prevalence of major depressive disorder, generalized anxiety disorder, and panic disorder as determined by clinical interviews, and participant self-reported mental health and distress) and sexual orientation was moderated by lifetime and day-to-day experiences of discrimination, such that the odds of having any psychiatric disorder significantly decreased when individuals reported fewer experiences of discrimination.

Rejection Sensitivity. Rejection sensitivity (RS) has been used in research as a way to conceptualize the second minority stress process described by Meyer (2003): the expectation of stressful events and vigilance associated with that expectation. RS among LGBQP+ individuals refers to "the tendency to anxiously expect to be rejected because of one's sexual orientation" (Feinstein et al., 2012, p. 918), and is referred to as SOI-RS in the present study. Researchers theorize that previous experiences of discrimination lead LGBQP+ individuals to expect similar rejection in the future, contributing to internalizing symptomatology (Dyar, et al., 2016).

A few research studies have identified relationships between SOI-RS, other minority stress processes, and mental health outcomes. In their survey of 1,118 gay German men, Sattler et al. (2016) used moderated multiple regression and found that SOI-RS was correlated with mental health problems, and that social support provided by other gay men moderated the effect of RS on mental health outcomes. In their development of a SOI-RS measure specific to sexual minority women, Dyar et al. (2016) used exploratory factor analysis and found that SOI-RS was associated with anxiety symptoms, concerns about acceptance of SOI, and difficulty developing a positive sexual identity, as measured by the Lesbian, Gay and Bisexual Identity Scale (LGBIS).

In a survey of 467 lesbians and gay men, Feinstein et al. (2012) found that SOI-RS was positively associated with frequency of discrimination, internalized heterosexism, and severity of

symptoms of depression and social anxiety. Additionally, the authors found that SOI-RS and IH

partially mediated the relationship between experiences of discrimination and psychological

distress. Specifically, in a path-analysis testing a hypothesized model exploring the associations

between experiences of discrimination and mental health symptoms, Feinstein et al. (2012) found

that the model accounted for 28% of the variance in depressive symptoms and 11% of the

variance in social anxiety symptoms, suggesting that participants' negative thoughts about their

SOIs and future interactions may partially account for higher symptoms of depression and

anxiety.

     Internalized Heterosexism. Internalized heterosexism (IH) is defined as "the

internalization by gay, lesbian, and bisexual individuals of negative attitudes and assumptions

about homosexuality that are prevalent in society," (Szymanski et al., 2008, p. 510). Throughout

the past several decades, the terms internalized homophobia, internalized homonegativity, and

internalized stigma have been used mostly interchangeably to describe the concept of

internalized heterosexism. The present study uses the term "internalized heterosexism", as it was

developed within the LGB rights movement, allows for consideration of a broad range of

negative emotions and attitudes toward LGBQP+ individuals, and it situates prejudice within the

sociocultural environment (Szymanski et al., 2008). From the minority stress theoretical

conceptualization, IH is part of the third stress process described by Meyer (2003), in which

LGBQP+ individuals internalize negative messages about same-sex attraction from their wider

social contexts (Mayfield, 2001).

     Researchers have found many connections between IH and mental and behavioral health

outcomes, including depression and anxiety (Herek, et al. 1998; Rosser, et al., 2008; Szymanski,

2005). In a survey of 422 predominantly White Midwestern homosexual men recruited through a

randomized-controlled sample of men who attended a men's health seminar, Rosser et al. (2008) found that internalized homonegativity (measured using the 26-item Reactions to Homosexuality scale), was associated with self-reported depressive symptoms over the past year and throughout the lifespan. In a meta-analysis including 31 studies primarily of community-based samples, Newcomb and Mustanski (2010) found a small to moderate overall effect size of .26 for the relationship between IH and symptoms of depression and anxiety. In particular, the included studies indicated that the relationship between IH and depressive symptomatology was stronger than the relationship between IH and symptoms of anxiety. To explain this finding, the authors suggest that IH may be related to cognitive processes that negatively affect an individual's view of themselves, whereas other minority stress processes, like SOI-RS, may be more related to anxiety through chronic hyperarousal processes like hypervigilance.

Disclosure of Sexual Orientation Identity. Meyer (2003) includes concealment of one's SOI as a proximal stressor (along with IH) as it involves internal psychological processes. Concealment of SOI and disclosure of SOI are two interrelated constructs that have been frequently used interchangeably in the literature (Meidlinger & Hope, 2014). Although conceptually distinct, both have been found to have similar relationships with minority stress processes, including correlations with IH and RS (Meidlinger & Hope, 2014). Whereas concealment of SOI may occur when a person chooses to hide their identity due to internalized shame or safety concerns, disclosure of SOI often occurs as a form of recognizing and accepting one's SOI, but may come at the cost of exposing an individual to higher levels of victimization and discrimination (Riggle et al., 2017). In their study directly comparing measures of concealment and disclosure among 373 LGB adults, Riggle et al. (2017) found that concealment

and disclosure were highly negatively correlated, lending support to the interrelated nature of the two constructs.

Disclosure of SOI, or "outness" is a psychosocial phenomenon that involves complex decision-making and consideration of emotional, social, and pragmatic consequences of revealing one's SOI (van Dam, 2014). LGBQP+ individuals are regularly faced with the choice of whether or not to disclose their SOI and may do so in some contexts and to some people but not others. Consider some of the many social situations in which a LGBQP+ individual may or may not disclose their SOI: to intimate partners, immediate family, extended family, friends, coworkers, healthcare professionals, teachers, churches, and the legal system (van Dam, 2014). Each decision could have positive or negative effects and may be critically evaluated by each LGBQP+ individual (van Dam, 2014).

The research regarding the relationship between disclosure of one's SOI and mental health outcomes has produced mixed results. Juster et al. (2013) found that more disclosure was associated with fewer symptoms of anxiety, depression, and burnout in a study that surveyed 46 Canadian LGB individuals. Kosciw et al. (2012) analyzed data from the 2011 National School Climate Survey and found that higher levels of outness were associated with higher self-esteem and lower depression rates among a sample of 7,816 LGBT-identified secondary school students. In contrast, Sattler et al. (2016) found that disclosure of SOI among gay German men was associated with a higher degree of mental health problems, but did not provide an explanation for this finding. In a sample of 156 LGB youth in Indiana, Wright and Perry (2006) found that the extent to which an individual disclosed their sexual orientation to members of their social network attenuated the severity of SOI-related distress, as measured by the seven-item Sexual Identity Distress Scale, which is a measure of IH. Riggle et al. (2017) found that higher levels of

both outness and concealment were significantly associated with more depressive symptoms among their sample of 373 LGB adults. Given the interconnected relationship between concealment and disclosure, both concepts will be discussed in the literature review. In the present study, however, disclosure was investigated as a minority stress process rather than concealment, in an attempt to further explore the complex relationship between disclosure and mental health symptoms.

In sum, research regarding minority stress among LGBQP+ individuals has found that the three processes described by Meyer (2003) are likely interrelated in a variety of ways (Feinstein et al., 2012; Pachankis et al., 2008; Wilkerson et al., 2012). More specifically, studies indicate that IH may mediate the effects of other minority stress processes on psychological distress. This is especially important in the context of the present study, as IH has been found to be associated with affiliation with non-affirming religions (Barnes & Meyer, 2012).

Minority Stress Processes, Mental Health, and Non-Affirming Religions. Because many Christian religions have historically held non-affirming stances towards LGBQP+ attractions, behaviors, and identities, LGBQP+ individuals growing up in these environments may be exposed to more minority stressors than consistently unaffiliated individuals or those raised in affirming religious contexts (Kashubeck-West et al., 2017; Sowe et al., 2014; Wilkerson, et al. 2012). To date, there have been a few studies investigating minority stress processes and their relationship to mental health among LGBQP+ individuals in the context of affiliation with non-affirming religions. In an early contribution to the literature regarding RI/SOI identity conflict, Schuck and Liddle (2001) conducted a qualitative study of 66 LGB individuals, finding that two-thirds of respondents reported experiencing a conflict between religion and SOI while they were coming out, and that this conflict was associated with guilt,

shame, and depression regarding their sexual orientation. These findings have been supported by more recent quantitative investigations that incorporated examinations of specific minority stress processes (Barnes & Meyer, 2012; Crowell et al., 2015; Sherry et al., 2010; Wilkerson et al., 2012).

Both Barnes and Meyer (2012) and Sherry et al. (2010) found higher levels of IH among individuals affiliated with non-affirming faiths when compared to nonreligious individuals. Specifically, Barnes and Meyer (2012) investigated the relationships between ethnicity, IH, religious affiliation, religious exposure, self-esteem, psychological well-being, and depression among a diverse community-based sample of 355 religious and nonreligious LGB individuals in New York City. Barnes and Meyer (2012) asked religious participants if the religious services they attended were specifically directed towards gay and lesbian communities and offered three choices. Affiliation was classified as affirming if participants responded with either "yes" or "no, but gay-friendly" and non-affirming if participants responded with "no." Measuring IH using a 10-item internalized homophobia scale developed by Meyer et al. (2002) and depression using the 20-item Center for Epidemiologic Studies Depression Scale (CES-D), Barnes and Meyer (2012) found that affiliation with non-affirming religious settings was associated with greater IH when compared to affiliation with affirming religions or no religious affiliation, and that IH was correlated with depressive symptomatology. In a similar inquiry investigating differences between religious and non-religious individuals, Sherry et al. (2010) conducted a mixed-methods study of 422 LGB religious and nonreligious individuals, using the Harder Personal Feels Questionnaire to assess shame and guilt, and the Internalized Homophobia Scale to assess internalized homophobia. Higher levels of shame, guilt, and IH were associated with a history of perceived conservatism in one's childhood religion, based on a single-item asking participants to

rate how conservative they thought their childhood religion was. In line with theories of cognitive dissonance, qualitative results indicated that the majority of participants believed that their sexuality was the catalyst for questioning their religious identities and making religious shifts (Sherry et al., 2010).

Wilkerson et al. (2012) and Crowell et al. (2015) both narrowed their inquiries of minority stress processes to current and former members of specific Christian denominations known for holding non-affirming stances regarding LGBQP+ SOIs. In a study of a community sample of 1,165 Christian MSM, Wilkerson et al. (2012) investigated relationships between religiosity, IH (measured by the Revised Reactions to Homosexuality Scale) and outness (measured by a single item asking participants to indicate on a 5-point Likert-item how generally open they are about being attracted to other men). Wilkerson et al. (2012) found that religiosity was not associated with IH or outness among Catholics and Mainline Protestants, but that increased religiosity among Evangelical Protestants was associated with higher IH, which corresponded to participants stating that they were less likely to be out. Focusing specifically on current and former members of Latter-Day Saints (LDS) religious institutions, Crowell et al. (2015) surveyed 634 participants and used the LGBIS to measure minority stress constructs, and the depression scale from the Counseling Center Assessment of Psychological Symptoms to measure depression. The authors found that from the LGBIS, the subscales measuring IH, concealment, need for acceptance, identity confusion, and difficulty coming to terms with sexual orientation were all correlated with depression for both current and former members. This finding supports the notion that negative psychological effects of being raised in a non-affirming environment may persist even after LGBQP+ individuals have disaffiliated.

It should be noted that in contrast to non-affirming religious experiences, participation in

affirming religious organizations by LGBQP+ individuals has been associated with reduced

endorsement of minority stress processes. For example, Lease et al. (2005) found that affirming

faith experiences were indirectly related to psychological health through less endorsement of IH

and increased spirituality among a community sample of 583 religious LGB individuals.

Disaffiliation, Minority Stress, and Mental Health Among LGBPQ+ Individuals.

Although the process of leaving one's religion may alleviate identity conflict among LGBQP+

individuals, it may also be experienced as a profound loss of faith, culture, identity, and family

(Kashubeck-West et al., 2017). The majority of existing research regarding RI/SOI conflict and

minority stress is specific to individuals who currently identify as religious. There have,

however, been a few recent investigations of minority stress processes and mental health that

included LGBQP+ participants who had disaffiliated from non-affirming religions (Crowell et

al., 2015; Ream & Savin-Williams, 2005; Sowe et al, 2014;). In a survey of 579 LGB

Australians, Sowe et al. (2014) found that Christian respondents reported significantly more IH

than nonreligious participants, and that former Christians reported more religion-sexuality

distress than consistently unaffiliated nonreligious individuals. In their study of 395 LGBQP+

youths raised in Christian religious contexts, Ream and Savin-Williams (2005) found that

approximately two-thirds of participants reported experiencing conflict between religious and

sexual identities, and this conflict was associated with increased IH, depressive symptomatology,

and lower self-esteem. About one-quarter of participants reported that they had decided to

disaffiliate from Christianity. Interestingly, disaffiliation was associated with lower levels of IH

but also worse mental health. The authors explain that these individuals may not have

internalized negative messages about LGBQP+ attractions, behaviors, and identities, but still

suffered psychologically either within the religious context or as a result of disaffiliation.

As mentioned above, Crowell et al. (2015) found that IH, concealment, need for acceptance, identity confusion, and difficulty coming to terms with sexual orientation were all associated with depression for both current and former members. Crowell et al. (2015) also found that that depression scores were higher for current rather than former LDS members, but that IH and concealment were more strongly associated with depression for former members when compared to current members. The authors explain that this difference may have arisen because active LDS members consider their LGBQP+ identity secondary to their religious identity.

Social Support

Social support is central for psychological well-being, as humans are fundamentally social creatures (Aronson, 2012). Social support can manifest in a variety of ways, including emotional encouragement, companionship, decision-making advice, lending money, and care-giving during times of illness (Frost et al., 2016). Most people receive social support from a number of places, including families, friends, significant others, and members of social groups, including religious organizations. Cohen and Willis (1985) hypothesized two ways that social support may ameliorate the negative psychological effects of stress: by having a positive main effect on health that offsets negative effects of stress, and by an interaction process, where social support buffers the effects of stress.

Social Support Among LGBQP+ Individuals. LGBQP+ social support may differ from heterosexual support, in that some LGBQP+ individuals are rejected by their families of origin, and rely instead on "chosen families" comprised of other LGBQP+ individuals (Frost et al., 2016; Jackson, 2017). Frost et al. (2016) sought to better understand the differences between LGBQP+ and heterosexual social support by asking 524 individuals in New York City to

describe the people they relied on for everyday social support (e.g. help with decision-making, small favors, social activities, and discussion of worries) and major support (e.g. asking to borrow large sums of money and help during times of illness). The authors found that both heterosexual and LGBQP+ individuals relied more on non-familial social support for everyday social support than their families. Additionally, Frost et al. (2016) found that gay and bisexual men were more likely than LGBQP+ women and heterosexual individuals to rely on other LGB individuals for major support than their families. Given that LGBQP+ individuals may use social support differently than heterosexual counterparts, and that individuals who disaffiliate from organized religions are also at increased risk to experience a lack of social support, it is important to measure social support when investigating relationships between SOI, disaffiliation, minority stress and depressive and anxious symptomatology.

Social Support and Minority Stress. Minority stress theory posits that social support may ameliorate the effects of minority stress, making social support an especially important resource for LGBQP+ individuals. Indeed, there is empirical support for the assertion that social support mediates the relationship between minority stress and mental health problems among LGBQP+ individuals (Levahot & Simoni, 2011; Sattler et al., 2017; Szymanski & Kashubeck-West, 2008).

There has been considerable research supporting the mediating role of social support among LGBQP+ women. For instance, Szymanski and Kashubeck-West (2008) used structural equation modeling to test a minority stress model and found that self-esteem and social support (as measured by the Social Support Questionnaire - Short Form) completely mediated the relationship between internalized heterosexism and psychological distress (as measured by a global score obtained through the Hopkins Symptom Checklist). Similarly, in their survey of

1,381 sexual minority women, Levahot and Simoni (2011) found that social support, as measured by the Multidimensional Scale of Perceived Social Support (MSPSS) and spirituality mediated the impact of minority stressors (internalized homophobia, victimization, and concealment) on depression (measured by the 10-item CES-D) and anxiety (measured by the GAD-7). In an examination of the relationship between disclosure of SOI and depression among 265 lesbians, van Dam (2014) found that social support (measured by the MSPSS) was both a moderator and a mediator between disclosure of SOI and depression.

Evidence for the buffering effect of social support has been mostly consistent among GBQP+ men. For instance, Sattler et al. (2016) found that both gay and non-gay social support were negatively associated with mental health problems (operationalized as one global score on the Brief Symptom Inventory) among a large sample of gay Germen men. This result was supported by a daily diary study conducted by Fingerhut (2018), who found that, among a sample of 89 Caucasian gay men living in the United States, social support (as measured by the friend and family subscales of the MSPSS) was negatively related to daily negative affect. Interestingly, Fingerhut (2018) found that participants who reported less friend support experienced more negative affect on days that were particularly stressful, which the author explained as a demonstration of the consequence of a dearth of social support. Szymanski (2009), on the other hand, found that social support (measured by the Social Support Questionnaire-Short Form) was not a moderator between heterosexist victimization and psychological distress among a sample of 210 gay and bisexual men, indicating that there is a continued need to further examine the relationship of social support to the various minority stress processes. Notably, although there have been investigations into the relationships between social support, IH, victimization, and concealment, there has been little inquiry into the relationship

between social support and SOI-RS, which may be of interest given the relationship between RS and anxiety.

Online Social Support. In today's society, online communication is a central form of socialization that is intertwined with the process of identity formation (Morimoto & Friedland, 2011). Use of social networking sites may be especially important for LGBQP+ individuals to connect with other LGBQP+ individuals, as they are a minority within the general population (Jackson, 2017). A recent qualitative study examining the coming-out process of 23 gay emerging adults and their religious heterosexual family allies found that gay participants were more likely than heterosexual counterparts to mediate familial and religious conflicts by creating new social support networks online (Etengoff, & Daiute, 2015). For example, Etengoff and Daiute (2015) found that the majority of their gay participants described building peer support networks online and seeking advice about how to come out to their religious families from their newly acquired online friends. Consistent with the qualitative evidence gathered by Etengoff and Daiute (2015), Ybarra et al. (2015) surveyed 5,542 U.S. adolescents, and found that LGBT youth were more likely than heterosexual counterparts to have online friends, and also more likely to say that online friends were better than in-person friends at providing emotional support.

The Present Study

Whereas the relationships between some minority stress processes (IH, concealment) and involvement with non-affirming religions have been documented in the literature, others (SOI-RS, victimization) have been paid less attention. Additionally, studies regarding the relationships between RI and SOI have tended to focus on individuals who currently identify as religious (Barnes & Meyer, 2012; Lease et al., 2005; Wilkerson et al., 2012).

Several studies have tested minority stress models that incorporate multiple minority

stress processes and mental health outcomes (Feinstein et al., 2012; Levahot & Simoni, 2011;

Sattler et al., 2016; Szymanski & Kashubeck-West, 2008). These studies, however, have not

included present or past religious affiliation as a part of their models. Due to the evidence for

relationships between religious affiliation, various minority stress processes, social support, and

mental health, the present study sought to add to the literature by using a path analysis to test a

model of minority stress based on Meyer's (2003) minority stress theory specific to nonreligious

LGBQP+ individuals (see Figure 1). The hypothesized model of minority stress included

victimization, IH, SOI-RS, disclosure, social support (online and offline), and depressive and

anxious symptomatology. Although social support has been identified as both a mediator and

moderator in the relationship between minority stress processes and mental health outcomes (van

Dam, 2014), the majority of research has found that social support functions as a mediator in this

relationship (Levahot & Simoni, 2011; Sattler et al., 2017; Szymanski & Kashubeck-West,

2008). For this reason, social support was examined as a mediator in the present study.

Figure 1

Proposed Nonreligious LGBQP+ Minority Stress Model
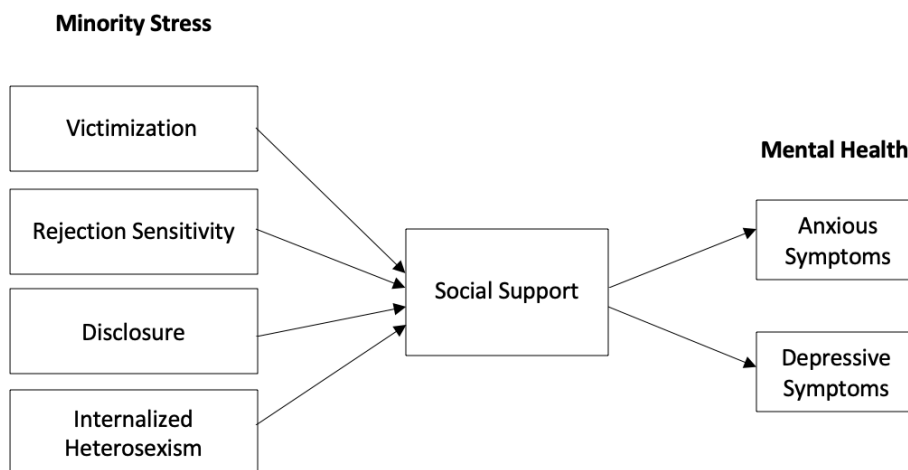
Research Questions and Hypotheses

The present study sought to answer the following questions:

1) Are there group differences in self-reported depressive and anxious symptomatology between nonreligious LGBQP+ individuals who have a) been consistently unaffiliated with organized religions, b) disaffiliated from non-affirming religions, and c) disaffiliated from affirming religions?

I hypothesized that nonreligious LGBQP+ individuals who have disaffiliated from non-affirming religions will report more depressive and anxious symptomatology than individuals who have a) been consistently unaffiliated with organized religions and b) disaffiliated from affirming religions.

2) Do minority stress processes (i.e., victimization, internalized heterosexism, rejection sensitivity, and disclosure of sexual orientation identity) predict symptoms of depression among nonreligious LGBQP+ individuals, and does social support mediate these relationships?

Based on existing research and theory, I hypothesized that victimization, internalized heterosexism, rejection sensitivity, and disclosure of sexual orientation identity will predict symptoms of depression among nonreligious LGBQP+ individuals, and that social support will mediate these relationships.

3) Do minority stress processes (i.e., victimization, internalized heterosexism, rejection sensitivity, and disclosure of sexual orientation identity) predict symptoms of anxiety among nonreligious LGBQP+ individuals, and does social support mediate these relationships?

Based on existing research and theory, I hypothesized that victimization, internalized heterosexism, rejection sensitivity, and disclosure of sexual orientation identity will predict symptoms of anxiety among nonreligious LGBQP+ individuals, and that social support will mediate these relationships.

Method

Study Design

This study employed a nonexperimental, cross-sectional, correlational design by gathering quantitative data using self-reported, online questionnaires generated using Qualtrics.

Participants

Inclusion and Exclusion Criteria.

Participants were eligible to participate in the study if they met all of the following criteria:

a) over the age of 18

b) born in the United States

c) identify as nonreligious

d) identify as LGBPQ+

e) identify as cisgender (as captured by the demographic questionnaire)

The Sample

A flow chart showing how the final sample was selected is included as Figure 2. A total of 938 participants initiated the questionnaire. Of these, 265 were excluded for finishing the survey prior to completing all questionnaires. A large number of participants did not meet inclusion criteria: 154 were excluded for indicating that they were born outside the U.S., 183 were excluded for non-binary and/or transgender identification; 11 were excluded for

heterosexual and/or asexual identification; and 24 were excluded for identifying as currently religious.

Of the remaining 301 participants, 42 identified as being raised without religion. Of those who identified as religious disaffiliates, 15 rated the religious environment in which they were raised as affirming of issues of same-sex sexuality. As a result, there was insufficient power to run the proposed ANOVA comparing the self-reported symptoms of depression and anxiety between three distinct groups: individuals who have a) been consistently unaffiliated with organized religions, b) disaffiliated from non-affirming religions, and c) disaffiliated from affirming religions. These 57 participants were excluded from the final sample for the path analysis in order to limit the investigation to a more homogenous group: only those who identified as disaffiliates from religions perceived to hold rejecting attitudes towards issues of same-sex sexuality.

An additional 57 participants who identified as currently nonreligious indicated that they were raised religious, but they did not identify as disaffiliates. As a result, they did not answer questions related to their childhood religious environmental attitude towards issues of same-sex sexuality, and they were thus excluded from the analysis. This left 187 participants who met inclusion criteria, identified as disaffiliates from religions perceived to hold rejecting attitudes towards issues of same-sex sexuality, and completed the survey in its entirety. Twenty-six of these participants had missing data points and were excluded using listwise deletion after it was verified that this group of participants did not differ significantly on several key variables from the group without missing data. Of note, 14 of the 26 reached the end of the survey, but opted not to complete the final questionnaire (victimization) after being presented with an option to end the survey prior to answering questions about experiences of victimization. This left a final sample

of 161 participants. One participant who identified as not currently in a romantic relationship did not select "N/A" on the subsequent demographic question asking about the type of romantic relationship, if any. Given that this individual indicated that they were not in a relationship, their response to question asking about the type of romantic relationship was entered by the researcher as "N/A" and they were included in the sample.

Figure 2

Flow Chart of Participant Inclusion
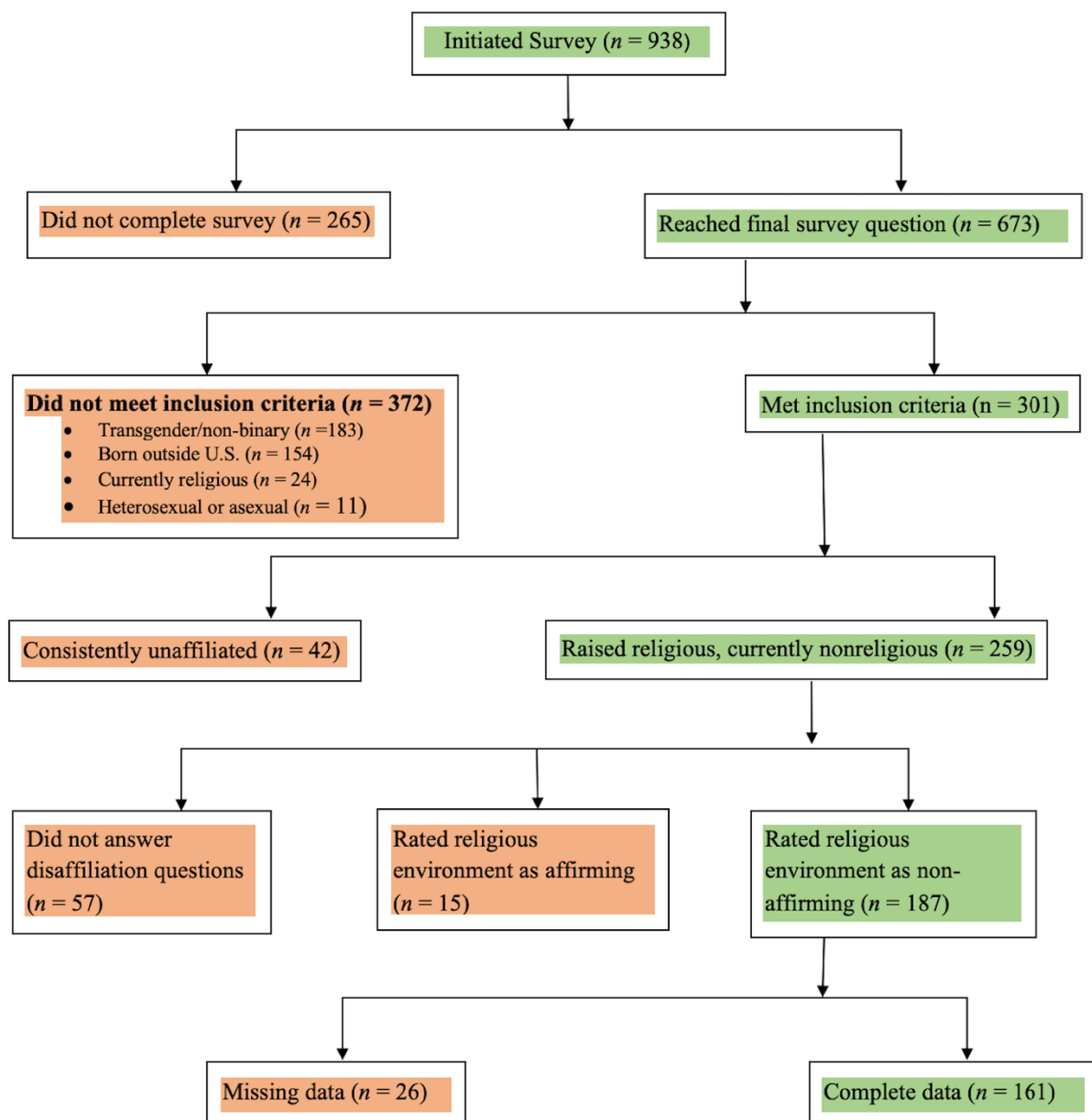
Institutional Review Board Approval

This study was approved by the Institutional Review Board (IRB) of the University of San Francisco. See Appendix A for the approval documentation.

Procedure

Recruitment

Participants for this study were recruited through postings on the popular social media website Reddit (www.reddit.com). Reddit is an international online community where users post content and vote on posts to increase their visibility. It is comprised of an interlinked community of subforums called "subreddits" which allow users to share content related to special interests. As of November 2017, Reddit was the third most visited website in the United States, averaged 330 million monthly users, and has over 138 thousand active communities (Reddit, 2017). Shatz (2017) recently advocated for the validity of using Reddit for research purposes, as researchers can potentially recruit large samples in a short amount of time for little or no cost, and can target special interest groups by posting directly to specific subreddits. For instance, without offering compensation, Shatz (2015) collected complete data from 669 participants by posting an experiment regarding language learning that took participants an average of seven minutes to complete to a subreddit consisting of approximately 130,000 subscribers.

For the current study, participants were recruited from May 2019 through November 2019 by posting in population-specific subreddits and one subreddit specifically for researchers collecting data. The recruitment posting is included as Appendix B. The specific subreddits and dates of posting are shown in Table 1. The number of times posted in specific subreddits was determined based on subreddit rules (e.g. r/atheism only allowed one posting) and visibility (i.e. number of active users in each subreddit).

Table 1

Recruitment Posting Schedule

Subreddit	Date(s) Posted
r/agnostic	7/25/2019; 11/3/2019
r/atheism	6/2/2019
r/bisexual	6/2/2019; 6/18/2019
r/exchristian	6/23/2019
r/exmormon	5/27/2019
r/lgbt	5/27/2019; 6/18/2019; 6/23/2019; 7/25/2020; 11/3/2019
r/radicalqueers	11/3/2019
r/samplesize	6/2/2019; 6/23/2019; 7/25/2020; 11/3/2019

Participation was voluntary and participants were not compensated. Participants electronically signed an informed consent before beginning the survey, and they were given the option to withdraw participation at any time.

Measures

Demographic Information

The following demographic data were collected: gender identity, race/ethnicity, age, sexual orientation identity, relationship status, number of children, education level, income, national origin, disability status and geographic location (see Appendix C). Participants had the option to omit demographic information from their survey data, although incomplete data resulted in exclusion from the analysis.

Disaffiliation

A disaffiliation measure was created specifically for this study by adapting single-item measures from Sowe et al. (2014) that address issues related to RI and disaffiliation and ask about the perception of acceptance or rejection of LGBQP+ identities by one's religious and family environments (see Appendix D).

Depressive Symptomatology

The Center for Epidemiologic Studies Depression Scale - Modified (CES-D-M; Hochstetler et al., 2014) was used to measure depressive symptoms. Hochstetler et al. (2014) adapted the original CES-D (Radloff, 1977) for brevity and to maintain the theoretical factor structure of the original scale by selecting items in four separate parcels: mood, positive outlook, somatic responses, and interpersonal relations. This 11-item measure asks participants to indicate how often they experienced symptoms of depression over the past week on a 3-point ordinal scale ranging from "Hardly ever or never," which corresponds to a score of one, to "Much or most of the time," which corresponds to a score of three. A total score is derived by summing all items, with items 5 and 8 reverse-scored. Total scores range from 11 to 33, with high scores indicating more depressive symptomatology. The CES-D-M has been shown to have strong psychometric properties, including a Cronbach's alpha of .78, and factor structures and scoring comparable with the original 20-item measure (Hochstetler, et al., 2014). Although neither CES-D nor the CES-D-M have not been normed on an LGBQP+ population, the CES-D has been used effectively as a measure of depression in several studies of LGB populations (Herek, et al., 1998; Sanders & Chalk, 2016). `

Because this version of the CES-D has not been widely used, a confirmatory factor analysis (CFA) was run using a 1.25 eigenvalue parameter and varimax rotation. The CFA

showed that all of the questions loaded on a single factor and that the factor accounted for 43%

of the variance. Thus, this scale loaded cleanly across all questions, indicating that the individual

items addressed the underlying construct of depressive symptomatology. The measure was also

found to have good internal consistency with a Cronbach's alpha = .86.

Anxious Symptomatology

Anxiety was measured by the Generalized Anxiety Disorder 7-item scale (GAD-7;

Spitzer et al., 2006). The GAD-7 was developed for use in primary care settings to screen for

presence of generalized anxiety disorders and symptom severity in the general population, and

has been found to have excellent internal consistency with Cronbach's alpha = .92 (Spitzer et al.,

2006). Participants indicate on a 4-point ordinal scale how often they were bothered by

symptoms of anxiety over the past two weeks. Response options are "not at all," "several days,"

"more than half the days," and "nearly every day" and are scored as 0, 1, 2, and 3 respectively.

A total score is derived by summing all items, and cut points of 5, 10, and 15 can be interpreted

as representing mild, moderate, and severe levels of anxiety (Spitzer et al., 2006). Although not

normed on an LGBQP+ population, this widely used measure was found to have strong

psychometric properties with members of LGB communities in at least one study with a large

population (Dyar, et al., 2016). In the present study, the GAD-7 was found to have excellent

internal consistency based on a Cronbach's alpha = .91.

Victimization

The victimization measure used in this study was the adapted version of a victimization

scale created by Herek and Berrill (1992). This scale asks participants to indicate how often they

have experienced incidences of violence and victimization based on sexual identity since the age

of 16. Sattler et al. (2016) shortened the original 12-item measure to five items and expanded the

original 3-point response format to 4 choices to increase variability. Sattler et al. (2017) further

adapted this five-item measure for use with different sexual identities and genders (the original

scale was designed for use with gay men). A total score is calculated by summing all items and

higher scores indicate more instances of violence and victimization. This version developed by

Sattler et al. (2017) had acceptable internal consistency (α = .75). In the present study, the

victimization scale was also found to have acceptable internal consistency based on a Cronbach's

alpha = .75.

Rejection Sensitivity

Rejection sensitivity was measured using a modified version of the Gay-Related

Rejection Sensitivity Scale (GRRSS; Pachankis et al., 2008). The original GRRSS contains 14

items, each of which describe a situation that may be interpreted as homonegative. For each

situation, participants rate how anxious they would be about being rejected because of their

sexual orientation on a 6-point scale (1 = "very unconcerned," 6 = "very concerned"), and the

degree to which they would expect such rejection (1 = "very unlikely," 6 = "very likely"). For

each item, participant response on the anxiety scale is multiplied by their response on the

expectation scale. A total score is then derived by summing the multiplied results and diving by

seven, where higher scores indicate more rejection sensitivity.

Sattler et al. (2017) modified the GRRSS for brevity by shortening it to four items, and

for use with different sexual identities and genders. Sattler et al. (2017) report an acceptable

internal consistency for this modified version (α = .82). Sattler et al. (2017) only reported three

of the four items used for their study, and so a fourth item from the original GRRSS was selected

by this author and adapted for use with different sexual identities and genders. The fourth item,

"You notice your relatives looking at you and your same-sex partner at a family reunion, but

they don't come over to talk to you," was selected based on the presence of a similar item on the

Sexual Minority Women Rejection Sensitivity Scale (Dyar, et al., 2016). In the present study, the

RS measure was found to have good internal consistency based on a Cronbach's alpha = .84.

Internalized Heterosexism

The Internalized Homonegativity subscale of the Lesbian Gay and Bisexual Identity

Scale was used to assess internalized heterosexism (LGBIS; Mohr & Kendra, 2011). The LGBIS

consists of 27 statements related to participant attitudes towards their sexual orientation.

Participants rate each item on a scale from 1 "disagree strongly" to 6 "agree strongly". The

LGBIS consists of eight subscales: Acceptance Concerns (items 5, 9, and 16), Concealment

Motivation (items 1, 4, and 19), Internalized Homonegativity (items 2, 20 and 27), Difficult

Process (12, 17, and 23), Identity Uncertainty (items 3, 8, 14, and 22) Identity Superiority (7, 10

and 18), Identity Affirmation (6, 13, and 26), and Identity Centrality (items 11, 15, 21, 24, and

25). Only the Internalized Homonegativity items will be used in the present study, and scores for

this scale are calculated by averaging the scores of the three items, with higher scores indicating

a higher degree of that subscale. Mohr and Kendra (2011) estimated internal consistency for all

subscales in the acceptable range (α = .77 - .89). In the present study, the IH scale was found to

have good internal consistency based on a Cronbach's alpha = .88.

Disclosure

Disclosure of participant SOI was measured using a 3-item adaptation of a disclosure

scale initially developed by Herek and Berrill (1992). The 3-item adaptation created by Sattler et

al. (2016) asks participants to indicate on a 5-point scale (1 = "not out at all," 5 = "completely

out") how "out" they are to various groups of people. All items are summed and a higher score

indicates a higher level of disclosure. Sattler et al. (2016) report a satisfactory internal

consistency (α = .83). In the present study, the disclosure measure was also found to have good internal consistency based on a Cronbach's alpha = .80.

In-Person Social Support

The Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988) was used to assess participant perception of offline social support. The MSPSS is a 12-item measure where participants indicate on a 7-point Likert scale the extent to which they agree or disagree with statements like "I can talk about problems with my family" and "my friends really try to help me." The MSPSS is composed of three subscales that ask about perceived social support from family (items 3, 4, 8 and 11), friends (items 6, 7, 9, and 12), and a significant other (items 1, 2, 5 and 10). Mean scores for each subscale are calculated by summing all four items of each scale and dividing by 4. For each subscale, mean scores can be categorized as low support (score of 1 – 2.9), moderate support (score of 3 – 5) or high support (score of 5.1 to 7) (Zimet et al., 1988).

The MSPSS has been found to have strong internal validity and facture structure among several diverse populations, including pregnant women (Zimet et al., 1990) and a predominantly African-American sample of U.S. adolescents (Canty-Mitchell & Zimet, 2000). Although the MSPSS has not been normed on an exclusively LGB population, its subscales of family and friend support have been used successfully with LGB samples in previous research (Fingerhut, 2018; Ybarra et al., 2015). In the present study, the MSPSS-Total was found to have good internal consistency with a Cronbach's alpha = .88.

Online Social Support

To measure online social support, the MSPSS-Revised developed by Frison and Eggermont (2016) was used (see Appendix E). Frison and Eggermont (2016) adapted the family

subscale of the MSPSS to ask participants on a 5-point Likert scale the extent to which they

agree or disagree with four statements starting with "When you are feeling down or in a difficult

situation…" Items include "I can find the emotional help and support that I need on Facebook,"

and "I can find someone on Facebook that helps me make decisions." The average of the four

items is calculated for a score of perceived online social support, with higher scores indicating

more perceived online social support. For the purposes of this study, "Facebook" will be

replaced with "Reddit," and the rest of the measure will remain as developed by Frison and

Eggermont (2016). Frison and Eggermont (2016) reported high internal consistency (α = .95)

based on their sample of 910 Belgian adolescents. In the present study, the Online Social Support

measure was found to have good internal consistency with a Cronbach's alpha = .88. Because

this measure has not been widely used, a CFA was run using a 1.25 eigenvalue parameter and

varimax rotation. The CFA showed that all of the questions loaded on a single factor and that the

factor accounted for 72% of the variance. Thus, this scale loaded cleanly across all questions,

indicating that the individual items addressed the underlying construct of online social support.

Use of Abbreviated Scales

For this study, the majority of the measures were abbreviated and/or modified versions of

original scales, all of which have demonstrated acceptable psychometric properties in previous

research, as noted above. Although the use of full measures generally produces more robust data

sets, brief versions have been selected for the present study because participant attrition is a

concern when collecting data through Reddit. For instance, Shatz (2015) found that only 69.5%

of participants recruited through Reddit completed a survey that took an average of seven

minutes to complete. In spite of this substantial rate of attrition, Shatz (2015) still collected

complete data from a large participant sample (669 participants) without offering any incentives.

Following the successful design of Shatz (2015), participants in the present study were similarly

not offered incentives. Accordingly, ensuring that the survey was not overly burdensome in

terms of time was paramount in order to collect data from enough participants to be able to run

statistical analyses.

<div align="center">

Data Analysis Plan
</div>

Data Cleaning

Upon completion of data collection, the data were cleaned based on guidelines

recommended by Tabachnick and Fidell (2007). The data were first organized using Google

Sheets and screened for inclusion criteria and noncompletion of the surveys, which led to a

sample of 187 participants. The data were then transferred to SPSS (Version 25) and 26

participants with missing data were identified. To determine whether there were significant

group differences between the 161 participants with complete data and the 26 participants who

did had instances of missing data, chi-squares and t-tests were run on the two dependent

variables (depressive and anxious symptomatology) and four demographic variables (age,

gender, income, and mental health diagnosis). No significant differences were found. As noted

earlier, 14 of these participants opted not to complete the victimization questionnaire, and the

remaining 12 participants missed a total of 12 responses throughout the questionnaires. Little's

test to determine whether the data were missing completely at random (MCAR) was not run, as

the 12 participants comprised only 6.9% of the data set. Tabachnick and Fidell (2007) explain

that if only a few data points are missing (i.e. 5% or less) "almost any procedure for handling

missing values yields similar results" (p. 63). The decision was made to exclude the participants

with missing data due to the small number of cases and the requirement of SPSS to run the

AMOS package with complete data. As a result, the 26 participants with missing data were excluded using listwise deletion, leaving a final sample of 161 participants.

Data Analysis

Subscale and total scores of measures were calculated for the final sample of 161 participants. As described above, two confirmatory factor analyses (CFAs) were run to test the validity of the CES-D-M and the Online Social Support measure per reasons described in Flora & Flake, 2017. Following the recommendations of Tabachnick and Fidell (2007), analyses were then run to examine score distribution, identify outliers, and check skewness and kurtosis. As noted earlier, there was insufficient power to run the proposed ANOVA that would have answered the first research question in this study.

To answer the research questions 2 and 3 seeking to identify whether minority stress processes predict depressive and anxious symptomatology and whether social support mediates those relationships, path analysis was used to evaluate the fit of the proposed model (see Figure 1). Path analysis is an extension of multiple regression that allows a researcher a direct way of modeling mediation and indirect effects among variables (Lei & Wu, 2007). Path analysis was identified as the appropriate statistical technique to answer the research questions because all variables in this study were considered separate manifest variables, and it allows for a test of a model that includes mediation. Prior to running the path analysis, a series of bivariate correlations and regressions were run to determine which variables would be included as covariates in the model. Heteroscedasticity, multicollinearity, and autocorrelation were all evaluated prior to running the regression analysis. SPSS AMOS statistical modeling software was used.

Results

Demographics

All demographics of the sample are shown in Table 2. The mean age was 28.40 (SD =

9.61) with a range from 18 to 70 years old in the sample. The majority of the sample identified as

childless (n = 145, 90.1%), White (n = 139, 86.3%), female (n = 98, 60.9%), and in a romantic

relationship (n = 94, 58.8%). Half the sample (n = 82, 50.1%) reported having earned at least a

bachelor's degree, and an additional 48 participants (29.8%) reported completing at least some

college. This is interesting considering that the most commonly reported income category was

below $20K ($n$ = 63, 39.1%), followed by $20-39K ($n$ = 40, 24.8%), while only 14 participants

reported making above $100K (8.7%). Also of note, approximately one quarter of the sample,

25.5% (n = 41), reported having been diagnosed with a mental health disability or impairment at

some point in their lives.

Table 2

Descriptive Statistics for Demographic Variables

Variable		Frequency	Percent
Gender	Female	98	60.9
	Male	63	39.1
Ethnicity	White	139	86.3
	Other/Mixed Race	14	8.7
	Asian	4	2.5
	Black	2	1.2
	Latinx	2	1.2
Income	Below $20,000	63	39.1
	$20,000–$39,999	40	24.8
	$40,000–$59,999	23	14.3
	$60,000–$79,999	15	9.3
	$80,000–$99,999	6	3.7
	$100,000 and above	14	8.7

Variable		Frequency	Percent
Currently Live in the US	Yes	155	96.3
	No	6	3.7
Education	Bachelor of Arts/Science	53	32.9
	Some College	48	29.8
	Master of Arts/Science	20	12.4
	Associate of Arts	14	8.7
	High School Diploma	12	7.5
	Some post-grad work	6	3.7
	Ph.D.	3	1.9
	Vocational training	2	1.2
Mental Health Diagnosis	No	120	74.5
	Yes	41	25.5
Sexual Orientation	Bisexual	70	43.5
Identity	Gay	40	24.8
	Lesbian	25	15.5
	Pansexual	16	9.9
	Queer	7	4.3
	Other	3	1.9
Type of relationship	Single	67	41.6
	Married	40	24.8
	Relationship, living together	35	21.7
	Relationship, living apart	19	11.8
Number of partners	One partner	91	56.5
	N/A or single	65	40.4
	Multiple partners	5	3.1
Number of kids	0	145	90.1
	1	8	5.0
	2	5	3.1
	3	2	1.2
	6	1	0.6

Note. $N = 161$

Religion Descriptive Statistics

The sample was mostly split between those who identified as atheists ($n = 71$, 44.1%) and

agnostic ($n = 61$, 37.9%), with a few participants identifying as spiritual but not religious

(SBNR, n = 12, 7.5%) and some selecting "none" as their current religion (n = 17, 10.6%).

When describing the religion of their family of origin, most participants reported that they were

raised in Christian religious environments (Catholics n = 43, 26.7%, Evangelicals n = 41, 25.5%,

Protestants n = 34, 21.1%). The descriptive statistics pertaining to current and past religious

identification of the sample are shown in Table 3.

Table 3

Descriptive Statistics for Religion

Variable		Frequency	Percent
Current Faith	Atheist	71	44.1
	Agnostic	61	37.9
	None	12	7.5
	Spiritual but not religious	17	10.6
Family of Origin Faith	Catholic	43	26.7
	Evangelical Protestant	41	25.5
	Main Protestant	34	21.1
	Mormon/Latter-day Saints	20	12.4
	Orthodox Christian	9	5.6
	Jewish	3	1.9
	Jehovah's Witness	2	1.2
	Hindu	1	0.6
	Other	8	5.0

Note. N = 161

      The average age at which participants disaffiliated from the religion in which they were

raised was 17.64 years old (SD = 6.00), with a range of 10 (or younger) to 50. The mean number

of years since disaffiliation was 10.76 (SD = 8.62) ranging from 1 year to 48 years.

      The majority of participants stated that the religious environment in which they were

raised held "rejecting" views of same-sex sexuality (n = 115, 71.4%), whereas 19.9% and 8.7%

of participants reported environments that were "somewhat rejecting" (n = 32) and "a little bit

rejecting" (n = 14) respectively. Many participants noted that their family of origin's current

religious environment has changed from the past, with more than one-quarter of the sample stating that their family's religious environment is now at least "a little bit affirming" of issues of same-sex sexuality ($n = 43$, 26.6%). Additionally, only 36.6% ($n = 59$) rated their family of origin's current religious environment as "rejecting."

Participants were also asked to rate how important religion was to their family of origin during their childhood and at present. There was a slight trend in which participants indicated that religion is currently less important to their family of origin than it was when they were children. For instance, only 5.0% ($n = 8$) of participants rated religion as "not at all important" to their family during childhood, while 13.7% ($n = 22$) rated religion as "not at all important" to their family at present. The frequency of reported perceptions of the importance of religion are shown in Table 4.

Table 4

Frequency of Perceived Importance of Religion

	Extremely important	Very important	Moderately important	Slightly important	Not at all important
	While Growing Up				
Frequency	52	38	45	18	8
Percent	32.3	23.6	28.0	11.2	5.0
	Currently				
Frequency	47	29	32	31	22
Percent	29.2	18.0	19.9	19.3	13.7

Note. $N = 161$

Means, Standard Deviations, and Reliability

Means, standard deviations, skewness and kurtosis for all continuous variables assessed in this study are shown in Table 5. There were no outliers and the skewness and kurtosis were

within range to be normally distributed for all scales. All of the scales except for the

victimization measure showed good internal consistencies ($\alpha \geq .80$) as shown in Table 6. The

Cronbach's alpha for the victimization scale ($\alpha = .75$) was still in the acceptable range.

Table 5

Descriptive Statistics for Measures

Measure	Mean	SD	Skewness		Kurtosis	
			Statistic	SE	Statistic	SE
GAD-7	8.23	5.85	0.39	0.19	-0.82	0.38
CES-D-M	19.98	5.01	0.09	0.19	-0.79	0.38
IH	1.82	1.09	1.39	0.19	1.26	0.38
Disclosure	9.40	3.71	0.04	0.19	-1.14	0.38
RS	17.30	9.78	0.28	0.19	-0.93	0.38
Victimization	7.58	3.27	1.74	0.19	2.83	0.38
MSPSS Family	4.17	1.60	-0.18	0.19	-0.84	0.38
MSPSS Friend	5.42	1.43	-1.24	0.19	1.02	0.38
MSPSS Sig Other	5.77	1.44	-1.49	0.19	1.45	0.38
MSPSS Total	5.13	1.49	-0.72	0.19	0.16	0.38
Online SS	3.21	0.99	-0.54	0.19	-0.27	0.38

Note. N = 161

Table 6

Reliability of Measures

Measure	Alpha	# of Items
GAD-7	0.91	7
CES-D-M	0.86	11
IH	0.88	3
Disclosure	0.80	3
Rejection Sensitivity	0.84	8
Victimization	0.75	5
MSPSS Family	0.89	4
MSPSS Friends	0.94	4
MSPSS Significant Other	0.96	4
MSPSS Total	0.88	12
Online Support	0.88	4

Note. $N = 161$

Variable Reduction

In order to determine which demographic and independent variables were significant predictors of depressive and anxious symptomatology, bivariate correlations were run between each demographic and independent variable, and mean scores on the GAD-7 and CES-D-M. Variables that were found to be significantly correlated ($p < .05$) with depressive and/or anxious symptomatology were considered as covariates to be used in the model.

Prior to running the correlations, dichotomous variables were created for the categorical demographic variables with more than two levels. Ethnicity was categorized as White ($n = 139$) and Participants of Color ($n = 22$). For relationship status, a dichotomous variable consisting of Single ($n = 67$) and In a Relationship ($n = 94$) was created. For sexual orientation identity, "Gay" was treated as a contrast category, and three separate dichotomous variables were created for: a) Lesbian ($n = 25$) compared to all others ($n = 136$), b) Bisexual ($n = 70$) compared to all others ($n = 91$), and c) Pansexual + Queer + Other ($n = 26$) compared to all others ($n = 135$). Additionally,

the MSPSS Total Score variable was excluded from analysis at this level, in favor of including the three subscales (MSPSS Family, MSPSS Friends, and MSPSS Significant Other) to discriminate whether a specific type of social support relates to depressive and anxious symptoms.

For current nonreligious identification, rather than dichotomizing the variable to complete a bivariate correlation, a MANCOVA was run to determine whether any of the four levels had significant relationships with depressive and anxious symptomatology. The MANCOVA showed that a current nonreligious identification was not significantly correlated with either depressive or anxious symptomatology ($F = 0.77$, $p = .512$, $df = 3$).

The following demographic variables were found to be significantly correlated ($p < .05$) with depressive and/or anxious symptomatology: Bisexual SOI, Age, Gender, Education, Income, Mental Health Diagnosis, and Years Since Disaffiliation. The following independent variables measured in this study were found to be significantly correlated with depressive and/or anxious symptomatology: IH, MSPSS Family, MSPSS Friend, MSPSS Significant Other, and RS. The results of all bivariate correlations are shown in Table 7.

Table 7

Bivariate Correlations

Variable	Anxiety	Depression
Internalized Heterosexism	.26**	.21**
Disclosure	-.15	-.14
MSPSS Family	-.22**	-.26**
MSPSS Friend	-.20*	-.23**
MSPSS Significant Other	-.06	-.16*
Online SS	.13	.05
Rejection Sensitivity	.32***	.26**

Variable	Anxiety	Depression
Victimization	.03	.12
Single	.03	.03
Number of Children	-.02	.05
Lesbian	.01	.09
Bisexual	.16*	.05
Pansexual, Queer and Other	-.02	.03
White	-.15	-.09
Age	-.28***	-.20*
Gender	-.27**	-.30***
Education	-.22**	-.30***
Income	-.20*	-.29**
Mental Health Diagnosis	.23**	.27***
Years Since Disaffiliation	-.21**	-.15
Evangelical	.07	.11
Protestant	-.08	-.09
Catholic	.03	-.06
Mormon	-.15	-.01
Age of Disaffiliation	-.13	-.08
Religion Raised (Rejecting to Accepting)	.09	.02
Religion Current (Rejecting to Accepting)	-.02	-.09
Importance of Religion (Raised)	-.04	.03
Importance of Religion (Current)	-.06	-.04

Note. $N = 161$

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

Standard Multiple Regressions

Two standard multiple regressions were run, one for depressive symptomatology and one for anxious symptomatology. Included in each regression were all seven demographic variables

that were significant at the bivariate level and all eight of the independent scales measured in this study. The regressions were run to determine which of the 15 variables were significant when controlling for all the variables that were significant at the bivariate level. It also allowed for the tests of the assumptions including multicollinearity, normality, and autocorrelation.

Regression on Anxious Symptomatology

There were no issues of multicollinearity, as the variance of inflation values were all under 4. The Durbin Watson was 2.34, which indicates no issues with autocorrelation. The residuals appeared to be normally distributed based on a visual inspection of the histogram and the P-P Plot. A visual inspection of the scatterplot showed a lack of heteroscedasticity. Thus, all assumptions necessary to run the regression were met. The histogram, P-P Plot, and scatterplot are included in Appendix F.

The model was found to be significant (F (14, 145) = 4.45, $p < .001$). The R^2 shows the model accounted for 31.5% of the variance of anxious symptomatology. Four variables were significant: IH, RS, MSPSS Family, and Mental Health Diagnosis. IH score significantly predicted anxious symptomatology ($\beta = .93$, $t(160) = 2.38$, $p < .05$). Score on the RS measure significantly predicted anxious symptomatology ($\beta = .11$, $t(160) = 2.38$, $p < .05$). MSPSS Family score significantly predicted score on the GAD-7 ($\beta = -0.14$, $t(160) = -2.00$, $p < .05$). Those who indicated that they have been diagnosed with a mental health disability or impairment had higher GAD-7 scores than those who did not endorse a mental health diagnosis ($\beta = 1.97$, $t(160) = 1.99$, $p < .05$). The full results of the regression on anxiety are shown in Table 8.

Table 8

Regression on Anxious Symptomatology

Variable	B	SE	Beta	Sig.	Partial Correlation
(Constant)	18.88	3.58		0.000	
Internalized Heterosexism	0.93	0.39	.17	0.02	0.19
Disclosure	0.10	0.14	.06	0.49	0.06
MSPSS Family	-0.56	0.28	-.15	.048	0.06
MSPSS Friends	-0.60	0.33	-.15	.070	-0.16
MSPSS Significant Other	0.37	0.32	.10	.249	-0.15
Online SS	0.15	0.44	.03	.731	0.10
Victimization	0.10	0.14	.05	.484	0.03
Rejection Sensitivity	0.11	0.05	.19	.019	0.06
Bisexual	1.50	0.95	.13	.117	0.19
Age	-0.11	0.08	-.18	.163	0.13
Gender	-1.66	0.91	-.14	.070	-0.12
Education	-0.36	0.26	-.12	.164	-0.15
Income	-0.08	0.32	-.02	.813	-0.12
Mental Health Diagnosis	1.97	0.99	.15	.048	-0.02
Years Since Disaffiliation	0.03	0.08	.04	.710	-0.13
F				4.45	.000
df				15, 145	
R^2				.315	

Note. N = 161

Regression on Depressive Symptomatology

There were no issues of multicollinearity, as the variance of inflation values were all

under 4. The Durbin Watson was 2.07, which shows no issues with autocorrelation. The

residuals appeared to be normally distributed using a visual inspection of the histogram and the

P-P Plot. A visual inspection of the scatterplot showed a lack of heteroscedasticity. Thus, all assumptions necessary to run the regression were met. The histogram, P-P Plot, and scatterplot are included in Appendix G.

The model was found to be significant (F (14, 145) = 5.17, $p < .001$). The R^2 shows the model accounted for 34.8% of the variance of depressive symptomatology. Four variables were found to be significant: MSPSS Family, Mental Health Diagnosis, Gender, and Education. Score on the MSPSS Family Subscale was associated with lower depressive symptomatology ($\beta = -.13$, $t(160) = -2.14$, $p < .05$). Participants who had been diagnosed with a mental health disability or impairment had higher scores on the CES-D-M than those who did not endorse a lifetime mental health diagnosis ($\beta = 2.34$, $t(160) = 2.83$, $p < .01$). Gender significantly predicted depressive symptomatology ($\beta = -2.26$, $t(160) = -2.98$, $p < .01$); females' scores on the CES-D-M were higher than males. Finally, higher education levels predicted lower scores on the CES-D-M ($\beta = -0.63$, $t(160) = -2.94$ $p = .004$). The full results of the regression on depressive symptomatology are shown in Table 9.

Table 9

Regression on Depressive Symptomatology

Variable	B	SE	Beta	Sig.	Partial Correlation
(Constant)	26.82	2.99		0.000	
IH	0.59	0.33	.13	.073	-0.06
Disclosure	0.02	0.11	.01	.887	-0.21
MSPSS Family	-0.50	0.23	-.16	.034	-0.24
MSPSS Friends	-0.32	0.28	-.09	.242	-0.22
MSPSS Significant Other	-0.08	0.27	-.03	.756	-0.15
Online SS	-0.03	0.36	-.01	.938	-0.75
Victimization	0.27	0.11	.14	.064	-0.01

Variable	B	SE	Beta	Sig.	Partial Correlation
Rejection Sensitivity	0.06	0.04	.11	.151	-0.02
Bisexual	0.07	0.80	.01	.931	-1.50
Age	0.01	0.06	.03	.841	-0.11
Gender	-2.26	0.76	-.22	.003	-3.75
Education	-0.63	0.21	-.24	.004	-1.05
Income	-0.24	0.27	-.08	.360	-0.77
Mental Health Diagnosis	2.34	0.83	.20	.005	0.71
Years Since Disaffiliation	-0.02	0.07	-.04	.735	-0.15
F			5.169	.000	
df			15, 145		
R^2			.348		

Note. $N = 161$

Path Analysis

The present study hypothesized that minority stress processes (victimization, internalized heterosexism, rejection sensitivity and disclosure of sexual orientation identity) would predict symptoms of depression and anxiety among nonreligious LGBQP+ individuals, and that social support would mediate these relationships. The theoretical model suggested direct relationships between each of the four minority stress processes measured in this study and depressive and anxious symptomatology, with social support defined as a mediator. Path analysis was identified as the appropriate statistical analysis to address this hypothesis, as it is a statistical technique that tests the relationships between many variables and underlying constructs simultaneously (Lei & Wu, 2007). Path analysis can be considered a special type of structural equation modeling (SEM) to be used when all variables are observed, as opposed to latent constructs (Lei & Wu, 2007). Accordingly, SPSS Amos 21 package was used to run the path analysis. Based on the results of the multiple regressions, three demographic variables were added to the proposed theoretical

model as having direct relationships with depressive and anxious symptomatology: Mental Health Diagnosis, Gender, and Education.

In regard to recommended sample size to run SEM, Khine et al. (2013) note that, "no consensus has been reached among researchers at present" (p. 10). Loehlin (2004) recommends a sample size of 100 or more to run an SEM when the data are normally distributed. Khine et al. (2013) recommend 100-150 participants to run SEM. Although larger samples will provide more precise results and accuracy, a sample of 161 is theoretically sufficient to complete the analysis, depending on the number of parameters to be estimated. A post-hoc power analysis was conducted using G*Power 3.1.9.2 to verify that power was sufficient to run the path analysis. Given a significance level of $\alpha = .05$, results showed an F statistic = 1.74 and power = .877, indicating that the sample size yielded sufficient power to run the path analysis.

In SEM, an estimated population covariance matrix is produced based on parameters estimated from the sample data, and this matrix is then is compared to the sample covariance matrix (Tabachnick & Fidell, 2007). Tabachnick and Fidell (2007) explain that parameter estimates are essential prior to completing SEM, as they are used to generate the estimated population covariance matrix for the model. The Bentler-Weeks method was used to estimate parameters based on the multiple regressions, and the SPSS AMOS program supplied the initial start values to run the analysis.

The hypothesized model (the theoretical model with the three significant demographic variables included) was evaluated against four criteria: the chi-square (χ^2) likelihood ratio statistic, the comparative fit index (CFI), the Tucker-Lewis index (TLI), and the root mean square error of estimation (RMSEA). The first run produced results indicating that the model was not a good fit for the data. The chi-square was statistically significant ($\chi^2(19) = 157.78$, p <

.001) indicating that the proposed model was not a good fit for the data. The comparative fit

index also indicated a poor fit (CFI = .529). Similarly, the RMSEA and TLI indicated poor fit

(RMSEA = .214, TLI = -.935). Accordingly, the model was modified to attempt to produce a

better fit.

In order to produce a better fit, the SPSS modification indices recommended first trying

to connect two error terms. Brito and Pearl (2002) explain that connecting error terms in SEM is

acceptable as long as the error terms are not connected between variables that have a direct effect

on one another. Accordingly, the error terms for depressive and anxious symptomatology were

connected. When this modification did not create a better model, SPSS modification indices

recommended removing the MSPSS Significant Other subscale from the model. This variable

was removed from the model, as it was not a significant predictor of either dependent variable

and thus did not mediate any relationships. Other variables, including Online Social Support and

Friend Social Support, were left in the model in spite of not having significant relationships with

the dependent variables, as the modification indices did not recommend their exclusion.

After this final modification, the hypothesized model (with modifications) was then

evaluated against the above-mentioned four criteria. This model, which connected the error terms

for depressive and anxious symptomatology and removed the MSPSS Significant Other subscale,

was found to be a good fit for the data. The chi-square was not statistically significant ($\chi^2(12)$ =

11.19, p = .512) indicating that the proposed model was a good fit for the data. The comparative

fit index indicated a good fit (CFI = .994). Similarly, the RMSEA and TLI indicated good fit

(RMSEA = .028, TLI = .966). Hu and Bentler (1999) suggest that a TLI greater than .95

indicates a good fit, and that a RMSEA below .06 indicates a good fit for the data. The final

model with significant relationships is shown in Figure 3, and the direct results of the SEM are

reported in Table 10.

Figure 3

Path Analysis Model of Significant Relationships Based on the Theoretical Model
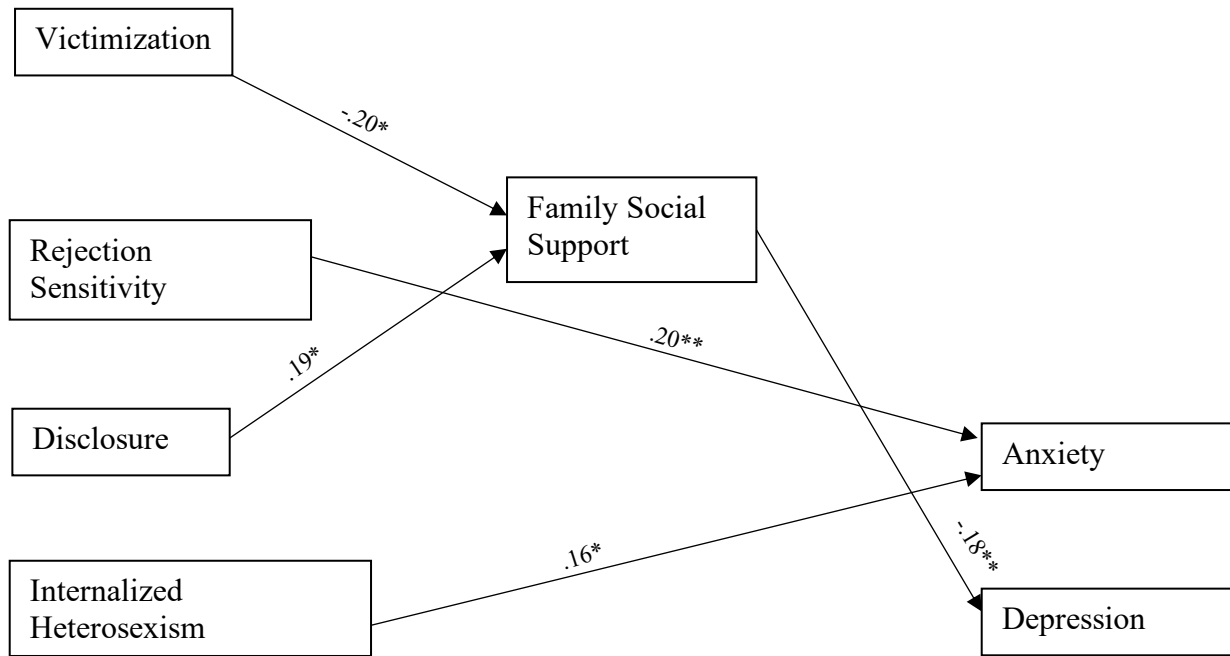
Note. The path analysis shows the relationships between minority stress processes and mental

health outcomes (symptoms of depression and anxiety), with the indirect effect of family social

support. Statistics are standardized regression coefficients (ß).

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

Table 10

Direct Results for Path Analysis

Dependent Variable		Independent Variable	B	S.E.	Beta	p
Depression	<---	Gender	-2.20	0.68	-0.22	0.001
Depression	<---	Mental Health Dx	2.44	0.75	0.21	0.001
Depression	<---	MSPSS Family	-0.55	0.21	-0.18	0.009
Depression	<---	RS	0.07	0.04	0.13	0.067

Dependent Variable		Independent Variable	B	S.E.	Beta	p
Depression	<---	IH	0.57	0.31	0.12	0.067
Depression	<---	Victimization	0.18	0.11	0.12	0.082
Depression	<---	MSPSS Friend	-0.34	0.23	-0.01	0.131
Depression	<---	Disclosure	0.01	0.10	0.01	0.947
Depression	<---	Online SS	-0.02	0.33	0.00	0.959
Depression	<---	Education	-0.70	0.18	-0.27	***
Anxiety	<---	RS	0.12	0.04	0.20	0.005
Anxiety	<---	Gender	-2.14	0.83	-0.18	0.011
Anxiety	<---	Mental Health Dx	2.23	0.92	0.17	0.015
Anxiety	<---	IH	0.90	0.38	0.17	0.018
Anxiety	<---	Education	-0.50	0.29	-0.16	0.023
Anxiety	<---	MSPSS Family	-0.47	0.26	-0.13	0.063
Anxiety	<---	Online SS	0.45	0.41	0.08	0.264
Anxiety	<---	MSPSS Friend	-0.29	0.28	-0.07	0.291
Anxiety	<---	Victimization	0.06	0.13	0.04	0.621
Anxiety	<---	Disclosure	0.00	0.12	0.00	0.988

Note. $N = 161$

***$p < .001$

Individual Variable Results in the Final Model

Internalized Heterosexism. There was a significant relationship between IH and anxious symptomatology. Higher IH scores corresponded to higher scores on GAD-7 ($ß = .17$, $p < .05$).

Rejection Sensitivity. There was a significant relationship between IH and anxious symptomatology; higher scores on the RS measure were associated with higher scores on the GAD-7 ($ß = .20$, $p < .01$).

Gender. There was a significant relationship between gender and both anxious and depressive symptomatology. Female participants reported significantly more anxious symptomatology than males ($ß = -.18$, $p < .05$). Females participants reported higher CES-D-M scores than males ($ß = -.22$, $p < .01$).

Education. There was a significant relationship between education and both anxious and depressive symptomatology. Individuals with higher education levels reported lower levels of

anxious symptomatology ($ß = -.16$, $p < .05$). Higher levels of education predicted lower reports of depressive symptomatology ($ß = -.27$, $p < .001$).

Mental Health Diagnosis. There was a significant relationship between mental health diagnosis and both anxious and depressive symptomatology. Participants who reported having been diagnosed with a mental health disability or impairment reported more anxious symptomatology than those without historical diagnoses ($ß = .17$, $p < .05$). Those who reported having been diagnosed with a mental health disability or impairment reported more depressive symptomatology than those who did not ($ß = .21$, $p < .05$).

Family Social Support. There was a significant relationship between family support and depression ($ß = -.18$, $p < .01$). Higher scores on the MSPSS Family Subscale predicted lower scores on the CES-D-M.

Disclosure. There was a significant relationship between disclosure and family support, where higher scores on the disclosure measure corresponded to higher scores on MSPSS – Family ($ß = .18$, $p < .05$).

Victimization. There was a significant relationship between victimization and family support ($ß = -.19$, $p < .05$), where higher scores on the victimization measure predicted lower scores on the MSPSS – Family measure.

Indirect effects. There were two indirect effects on depression, and none on anxious symptomatology. When MSPSS - Family was included as a mediator, indirect effects were found on both the relationship between disclosure and depressive symptomatology ($ß = -.04$), and the relationship between victimization and depressive symptomatology ($ß = .03$). The SPSS AMOS package does not allow specific indirect effects to be specified, and so no p-values were produced (MacKinnon, 2008). Baron and Kenny (1986) explain that in order for a variable to

function as a mediator, several conditions need be met. Importantly, they note that when the potential mediator is included in a path, "a previously significant relation between the independent and dependent variable is no longer significant" (p. 1176). Because neither victimization nor disclosure were found to have significant relationships with depressive symptomatology, family social support cannot be considered a mediator in either of these relationships.

Discussion

The present study sought to identify whether four minority stress processes (victimization, internalized heterosexism (IH), rejection sensitivity (RS), and disclosure of sexual orientation identity (SOI)) predicted symptoms of depression and anxiety among LGBQP+ disaffiliates, and whether social support mediated these relationships. The final sample consisted of 161 non-religious, US-born, cisgender, LGBQP+ reddit-users who identified as having disaffiliated from a religion that held rejecting views of same-sex sexuality. The data were analyzed using path analysis to determine whether the hypothesized model was a good fit for the data.

Results of the path analysis found that the hypothesized model was a good fit for the data, although not all of the proposed measured variables were significantly associated with depressive and anxious symptomatology. In this model, IH and RS were significantly associated with anxious symptomatology. None of the minority stress processes measured in this study were found to independently predict depressive symptomatology. This is interesting considering the fact that all of the minority stress processes measured in this study have been previously found to have direct relationships with depression (Herek et al., 1999; Feinstein et al., 2012; Mays & Cochran, 2001; Newcomb & Mustanski, 2010). The study also found that gender, education, and

having a mental health disability were all independently associated with both depressive and anxious symptomatology. Additionally, family social support was found to be independently correlated with depressive symptoms. Higher levels of disclosure were associated with more family social support, while reports of more victimization was associated with lower family social support. Social support was not established as a true mediator in this study. More detailed discussion regarding findings of the path analysis respective to each significant study variable is provided below.

Internalized Heterosexism

The present study found that higher self-reported IH was associated with higher anxious symptomatology among the sample. This is consistent with previous research indicating that IH is associated with psychological distress among LGBQP+ populations (Newcomb & Mustanski, 2010; Rosser, et al., 2008; Szymanski, 2005). That there was a significant relationship between IH and anxious symptomatology but not depressive symptomatology in this sample is somewhat inconsistent with previous studies; in their meta-analysis Newcomb and Mustanski (2010) found a stronger relationship between IH and depressive symptomatology than anxious symptomatology. Hatzenbuehler et al. (2009) posited that IH may relate to mental health outcomes through two separate emotion regulation strategies: rumination and suppression. Self-stigmatizing rumination likely leads individuals to expect rejection and increase hypervigilance for threat cues. On the other hand, suppression is associated with internalized negative views of the self, leading to concealment of SOI (Hatzenbuehler et al., 2009). Using this framework, rumination may align more with anxious symptomatology, while suppression is more consistent with negative self-image experienced as a depressive symptom. The IH measure in this study contained items assessing cognitions related to the desire to be straight: cognitions that may fall

more in line with rumination than suppression. For example, the survey assessed how much the participant agreed with the following statement, "I believe it is unfair that I am attracted to people of the same sex." More robust IH measures, like the Nungesser Homosexuality Attitudes Inventory (NHAI), contain items that may better assess suppression, such as "if it were made public that I am homosexual, I would be extremely unhappy" (Szymanski et al., 2008). This may explain why IH was found to be associated with anxious symptomatology and not depressive symptomatology in this study. It is also possible that the anxiety measure was more robust overall in comparison to the depressive symptom measure in this study.

Given that this sample consisted entirely of disaffiliates from non-affirming religions, the predictive relationship between IH and anxious symptomatology suggests that the psychological effects of rejecting messages regarding same-sex sexuality may persist even after an individual has left the religion in which they were raised. On average, participants reported that they had disaffiliated from the religions in which they were raised just over 10 years prior to filling out the survey. This indicates that addressing IH in clinical encounters with disaffiliates reporting anxious symptomatology may be an important focus of treatment. Moreover, clinicians may want to consider IH when working with LGBQP+ individuals who may be affiliated with a non-affirming religion and contemplating disaffiliation, as the present finding indicates that disaffiliation alone may not be sufficient to alleviate experiences of IH leading to symptoms of anxiety.

Alessi (2014) has suggested a framework for incorporating minority stress theory into treatment with LGB individuals that includes a two-part assessment and reliance on LGB-affirmative therapy. LGB-affirmative therapy is not a stand-alone treatment modality, but rather a therapeutic stance seeking to augment any orientation (Alessi, 2014). LGB-affirmative therapy

includes a positive and celebratory attitude toward LGBQP+ SOIs, careful avoidance of prejudice, recognition of both IH and the existence of external biases, and awareness of LGBQP+ identity development, lifestyle, and culture (King, 2007).

Rejection Sensitivity

Higher self-reported RS was significantly associated with anxious symptomatology. This finding is consistent with previous research and is unsurprising, given that anxious expectation of rejection is essentially the definition of RS (Dyar, et al., 2016; Feinstein et al, 2012). The individuals in this study all perceived the religious environments in which they were raised as rejecting of same-sex sexuality. This may have led them to be sensitive to SOI rejection as adults, even after having disaffiliated from the religions in which they were raised. Clinically, RS may be an important focus of treatment when working with LGBQP+ disaffiliates, and LGB-affirmative therapeutic techniques are recommended (Alessi, 2014). It may also be important to consider this relationship when working with LGBQP+ individuals who are considering disaffiliation as an avenue to reduce cognitive dissonance, as disaffiliation alone is unlikely to eliminate the effects of minority stress.

Family Social Support

Direct Effect on Depressive Symptomatology

The present study found that higher family social support was associated with lower reports of depressive symptomatology among the sample. This finding is consistent with previous research that has found familial social support to be associated with lower self-reported depressive symptomatology among LGBQP+ individuals (Feinstein et al., 2014). This finding actually goes beyond the hypothesis of the present study, which predicted that social support may only act a mediator between minority stress processes and depressive symptomatology. This

result suggests that individuals who disaffiliate from non-affirming religions but still maintain supportive relationships with family members may be less likely to experience symptoms of depression than those who feel they cannot rely on family for social support.

The direct effect of family social support on depression is especially interesting given that loss of social support has been identified as a possible cost of disaffiliation (Fenelon & Danielson, 2015; Frost et al., 2016; Sahker, 2016). The finding in the present study suggests that losing family social support is not a necessary outcome of disaffiliation; the average participant in this study reported a level of perceived family support that fell in the moderate range. In fact, the perception of family support may be a particularly powerful protective factor for individuals who have disaffiliated from childhood religions. Perceived social support was measured in this study, rather than a more tangible measure of instrumental support, suggesting that even the belief that family members are supportive is enough to impact the level of depressive symptoms that a person may experience. Further research may seek to compare whether perceived and instrumental support differ in how they interact with depressive symptoms. Further research based on this finding may also include investigations into the specific types of family support that are salient for LGBQP+ disaffiliates (e.g., support specific to LGBQP+ SOI) and which family members have the most impact (e.g., parents, siblings, extended family).

The direct relationship between family social support and depressive symptomatology among LGBPQ+ disaffiliates has important clinical implications. While on the one hand it may be important for practitioners to educate LGBQP+ disaffiliates on the relationship between family support and depressive symptomatology, care should be taken consider the individual's family context and whether it would be safe and healthy for that particular individual to seek support from family members. This may vary based on an individual and their family's

intersecting identities. In a recent qualitative needs assessment surveying the experiences of 180 racially and ethnically diverse LGBT high schoolers, Craig at el. (2018) reported that many participants recalled instances where either they or their LGBT-identified friends had to leave home due to family rejection of their SOI. Solomon et al. (2018) conducted expert interviews of adult LGBQ therapy clients in an attempt to identify therapeutic techniques to facilitate individuals in the coming out process. Solomon et al. (2018) found that assessing client fears and barriers to coming out, and especially an exploration of the client's expectations of loved ones' reactions, could have important clinical implications. The authors offer the example of a college student who fears that their parents may stop paying for educational expenses, and how planning for this contingency may be a part of treatment. These examples primarily relate to the coming out experience; when considering whether or not family support would benefit a client, mental health practitioners may wish to assess the client's expectations of their family's reactions, and past experiences seeking support from family members.

The relationship between family social support and depressive symptoms found in this study may have additional implications when it comes to working with family members of LGBQP+ disaffiliates who may be dealing with issues related to acceptance of the LGBQP+ individual. Among their sample of 180 racially and ethnically diverse high schoolers, Craig et al. (2018) identified a qualitative theme of "someone for my family," noting that participants explicitly articulated a desire for "culturally sensitive services to help facilitate acceptance by family members who may have less understanding of LGBT youth issues" (p. 236). Therapists employing an LGB-affirmative stance may wish to provide education family members on the nature of the relationship between family social support and depression among LGBQP+

individuals. Additionally, support groups led through an LGB-affirmative framework may be a helpful intervention for family members struggling to accept a relative's LGBQP+ identity.

Of note, the present study investigated the relationship between general social support and depressive symptomatology. The matching theory of social support posits that social support will have the most impact when it aligns with the specific type of stress experienced (Doty et al., 2010). Doty et al. (2010) found that sexuality-related social support, but not general social support, had a buffering effect on sexuality-related emotional distress among LGB youth. Although a significant effect of general social support on depressive symptomatology was found in the present study, further research may continue to explore the relative weight of domain-specific social support among LGBQP+ disaffiliates.

Investigations into the relationships between family social support and family acceptance of LGBQP+ SOI may further elucidate the nature of the relationship between family social support and depression. Considerable research has shown the negative relationship between family rejection and depression among LGBQP+ adolescents and young adults (Hall, 2018). Interestingly, Feinstein et al. (2014) found that parental acceptance of lesbian or gay SOI, but not general family support, moderated both the relationship between internalized homonegativity and depressive symptoms, and the relationship between rejection sensitivity and depressive symptomatology. Feinstein et al. (2014) explain that while general family support is associated with lower depressive symptomatology, parental acceptance of lesbian or gay SOI may be an even more important protective factor for lesbian and gay individuals. This distinction between support and acceptance has significant clinical implications. Although expressing acceptance of a family member's LGBQP+ SOI may be difficult based on a variety of cultural factors, expressing acceptance may be more powerful than providing general social support. Given the

importance of family social support during adolescence (Hall, 2018) inquiries into the timing of

coming out and family social support and acceptance may be particularly noteworthy for

LGBQP+ disaffiliates.

Family Social Support and Disclosure

Disclosure was found to be associated with family social support, where a higher level of

disclosure was correlated with more perceived family support. Family support was not found to

function as a mediator between disclosure and depression in this study, inconsistent with

previous research where social support has mediated the relationship between disclosure and

depression among LGBQP+ populations (van Dam, 2014). A possible interpretation of this

finding is that as individuals disclose their sexual orientation, their social support from family

increases, but not enough to affect the level of depressive symptoms that people experience. One

difference between this and previous studies is that this study included only disaffiliates from

non-affirming religions, whereas religious affiliation was not assessed in the other studies.

Perhaps the buffering effect of family social support is less prevalent in this specific sub-

population. If so, this may be due to noted challenges that can arise between disaffiliates and

their families (Frost et al., 2016; Jackson, 2017). This study only assessed for perceived general

social support; given the findings regarding SOI-specific social support, future investigations

including disaffiliates may wish to include a comparison between different types of social

support, and whether disaffiliates are equally likely to receive SOI-related support from family

members (Doty et al., 2010).

Family Social Support and Victimization

Victimization was found to be negatively associated with family social support, where

higher levels of victimization were correlated with less perceived family support among the

participants. This finding is inconsistent with some previous research where social support has been found to mediate the relationship between victimization and depression among LGBQP+ populations (Levahot & Simoni 2011). The present finding is not, however, entirely inconsistent with previous research. In a study of the relationship between peer victimization and negative outcomes (e.g. academic performance, substance use, and suicide attempts), Button (2016) found that parental social support did not mediate the relationship among LGBQ youth, and in fact was associated with increased likelihood of some negative outcomes. Several studies among general populations have also found higher reports of victimization to be associated with lower levels of perceived social support (Golding et al., 2002; Scarpa, 2006; Ullman, 1999). A possible interpretation of this finding is that, when an individual seeks social support after experiencing victimization, if they perceive the support as negative or unhelpful, they may be less likely to seek support in the future. This may be especially true for the population in the present study, as they may have had negative experiences with family members related to either SOI or religious beliefs in the past (Frost et al., 2016; Kashubeck-West, 2017). Future research could include qualitative inquiries into how LGBQP+ individuals who experience victimization use social support in their recoveries. Clinically, this finding suggests that clinicians should fully assess for experiences of victimization among LGBQP+ disaffiliates and how those experiences may impact their experiences of social support.

Gender

Women reported significantly higher depressive and anxious symptomatology than men. This finding is consistent with previous research finding a higher prevalence of depressive and anxious symptomatology among women than men in the general population (Salk et al., 2017) and among LGBQP+ populations (Dürrbaum & Sattler, 2020; Strutz et al, 2015). This gender

gap in depressive and anxious symptomatology may also be explained by minority stress theory, as women may be prone to minority stress processes related to gender in addition to sexual orientation. Indeed, Szymanski and Kashubeck-West (2008) found that IH and internalized sexism were independently related to psychological distress among lesbians and bisexual women. The present finding is especially interesting given the sample consisted entirely of disaffiliates from non-affirming religions, as previous researchers have found a link between ambivalent sexism and religiosity (Burn & Brusso, 2005; Maltby et al. 2010). Ambivalent sexism is a term that encapsulates two components of sexism: hostile (characterizing women as inferior to men) and benevolent (characterizing women as pure, and needing to be protected, supported, and adored by men) (Maltby et al. 2010). It is possible that religions promoting rejecting messages regarding LGBQP+ SOIs may also convey ambivalently sexist messages regarding women. If this is the case, female LGBQP+ disaffiliates may be at risk to internalize sexist messages in addition to heterosexist ideas. Further inquiry into the relationship between multiple types of minority stress experienced by female LGBPQ+ disaffiliates is warranted.

Clinically, mental health practitioners should be aware of and sensitive to the possibility that female LGBPQ+ disaffiliates may be at higher risk to experience symptoms of depression and anxiety than male counterparts. When working with female LGBPQ+ disaffiliates, clinicians should complete a thorough assessment of minority stress processes that may contribute to depression and anxiety. A combination of feminist theory, which stresses the importance of considering social context when working with members of historically marginalized groups (Button, 2016) and LGB-affirmative therapy may be a particularly helpful approach when working with female LGBQP+ disaffiliates.

Education

Higher education was associated with less depressive and anxious symptomatology. This finding supports previous research that depressive and anxious symptomatology decrease with higher education among population-based samples (Chazelle et al., 2011; Murcia et al., 2015; Reynold & Ross, 1998). Researchers have hypothesized a variety of theories to help explain this disparity, noting that material, psychosocial, and behavioral factors may explain the relationship between education and mental health symptoms (Chazelle et al., 2011). For instance, Chazelle et al. (2011) found that material factors, including lack of private health insurance, unemployment, no car, food insecurity, and unfavorable housing all helped explain the relationship between lower education and depression and anxiety. Chazelle et al. (2011) found that social support was also an explanatory factor in the relationship between education and mental health, but to a lesser extent than the material factors mentioned previously.

The role of higher education's impact on depressive and anxious symptomatology through psychosocial factors may be of particular interest when considering LGBQP+ disaffiliates. College environments often expose young adults to a diverse array of peers, opportunities, and ideologies. These environments may be particularly conducive to identity development and increased social support for LGBQP+ disaffiliates. In a qualitative study, Schmitz (2017) found that LGBTQ+ college students reported the college context to be conducive to sexual orientation identity development. In a qualitative study examining the phenomenon of gay men coming out while in college, Carter (2016) found that lack of LGB social support and faith-based concerns inhibited gay men from coming out before college, whereas a welcoming campus environment, public examples of gay relationships, increased use of technology, and a believed change in public perception of coming out all supported the

decision for gay men to come out while in college. If LGBQP+ peer relationships formed in

college persist beyond college, this may be another benefit of higher education among LGBQP+

individuals, as Moran et al. (2018) found that peer support mediated the relationship between

victimization and depression for lesbian, gay and bisexual college students. In regard to

disaffiliation, Sepulvado et al. (2015) found that status as a religious disaffiliate may be a

powerful basis for relationship formation on a predominantly Catholic college campus. These

findings taken together suggest that the college environment may be a protective factor for

LGBQP+ disaffiliates for a number of reasons. Further investigation into the specific

mechanisms underlying the relationship between higher education and mental health symptoms

among LGBQP+ disaffiliates is certainly warranted.

Mental Health Diagnosis

Understandably, individuals who reported having previously been diagnosed with a

mental health disability or impairment reported more anxious and depressive symptomatology

than those who did not. The present study found that 25.5% of respondents endorsed having been

diagnosed with a mental health disability or impairment. This finding is actually lower than

previously reported lifetime prevalence of mental health diagnoses among LGBQP+ populations

(Bostwick et al., 2010). When analyzing data from the National Epidemiologic Survey on

Alcohol and Related Conditions (NESARC) Bostwick et al. (2010) found that 44.4% of lesbians

and 58.7% of bisexual women reported lifetime prevalence of any mood disorder, compared to

30.5% of heterosexual counterparts. Bostwick et al. (2010) additionally reported that 42.3% of

gay men and 36.9% of bisexual men reported lifetime prevalence of any mood disorder,

compared to 19.8% of heterosexual counterparts. The lower prevalence found in the present

study may be due to the specific language of the question, which asked whether participants had

"ever been diagnosed with a disability or impairment" and subsequently asked them to specify

whether that disability or impairment was a mental health disorder. It is quite possible that

participants who had been diagnosed with a mental health disorder but did not consider it "a

disability or impairment" were not captured by the question in the present study.

Nonsignificant Findings that did Not Support Theoretical Assumptions

Of note, there were no direct relationships between any of the minority stress processes

and depressive symptomatology in the present study. This is interesting considering the fact that

all of the minority stress processes measured in this study have been previously found to have

direct relationships with depression among LGBQP+ populations (Herek et al., 1999; Feinstein

et al., 2012; Mays & Cochran, 2001; Newcomb & Mustanski, 2010). One possible explanation

for the absence of these relationships in the present study could be that the depression measure

was not robust enough to capture the depressive symptoms among the sample. Another possible

explanation is that, in this highly specific subpopulation of disaffiliates from non-affirming

religions, individuals may be less likely to experience depressive symptoms than the general

LGBQP+ population. This could be due to the fact that LGBQP+ individuals who have

disaffiliated from the non-affirming religions in which they were raised experience a reduction in

cognitive dissonance between their religious identity and their SOI, leading to fewer depressive

symptoms. There have been however, two studies that did find a relationship between IH and

depressive symptoms among religious disaffiliates (Crowell et al., 2015; Ream & Savin-

Williams, 2005). Because there was no comparison group in the present study, the claim that

LGBQP+ disaffiliates from non-affirming religions experience fewer depressive symptoms than

the general LGBQP+ population cannot be supported, only speculated. Future research directly

comparing the two groups would be a valuable addition to the literature.

There were also no relationships found between online social support and any of the other variables measured in this study. This finding was somewhat unexpected, given recent inquiries noting the presence and importance of online social networks for both LGBQP+ and religious disaffiliates (Avance, 2013; Etengoff, & Daiute, 2015; Jackson, 2017; Miller, 2016; Ybarra et al., 2015). A nonsignificant finding may indicate that although LGBQP+ disaffiliates seek support online, the effect of the support is not enough to impact depressive or anxious symptomatology. Another explanation for the lack of findings could be that the novel social support measure used in this study only assessed for social support occurring through Reddit. Individuals in this study could have been receiving social support through a variety of online platforms (e.g. Facebook, Twitter, Instagram, etc.). Future research into the role of online social support among LGBQP+ populations may benefit from including measures that assess for social support through all online avenues.

Limitations

Due to a lack of sufficient data, the present study was unable to answer the first research question, which sought to compare group differences in self-reported depressive and anxious symptomatology between nonreligious LGBQP+ individuals who have a) been consistently unaffiliated with organized religions, b) disaffiliated from non-affirming religions, and c) disaffiliated from affirming religions. This is unfortunate because a comparison between these different groups would have been a valuable addition to the literature. Notably, only 15 participants who completed the survey rated the religious environment in which they were raised as affirming of same-sex sexuality. One possible explanation for this low number is that individuals who are raised in affirming religious environments may be less likely to disaffiliate from those religions (Wilkinson & Johnson, 2020). Since nonreligious identification was an

inclusion criterion for this study, currently religious individuals were not recruited for the study and would not have been included in analysis. There were also only 42 participants who identified as being raised without religion. This low number likely reflects the national climate, where only 22.8% of the population identifies as non-religious (Pew Research Center, 2015).

This study is further limited in a number of ways. It was a non-random convenience sample, so there was self-selection bias. The final sample consisted only of LGBQP+ disaffiliates from non-affirming religions, limiting the generalizability of the results to this specific sub-population. The individuals who responded to the survey were likely already connected to online social support for either disaffiliation, nonreligious identity, or LGBQP+ identification. Additionally, the final sample was a highly educated, U.S.-born, young, English-speaking, childless, and predominantly White sample which may not be generalizable to the experiences of the general LGBQP+ population. That the sample is younger and predominantly White is likely reflective of the general Reddit usership. It is also possible that younger people are more likely than older adults to disaffiliate from religion in general, as there is a general societal trend toward nonreligiosity (Fisher, 2016). Additionally, the experiences of the present U.S.-born sample may differ significantly from experiences of LGBQP+ individuals born and raised in other countries where religion is valued differently within the culture. Moreover, the questionnaire was only available in English, so it limited participation from people who would have otherwise met criteria but were not fluent enough in English to participate.

Additional research should focus on the experiences of LGBQP+ disaffiliates of color, who may be at even higher risk of depression and anxiety given that they likely experience minority stress based on both ethnic and sexual orientation minority status. Inquiries into the relationship between minority stress processes and depressive and anxious symptomatology

should also be further investigated among LGBQP+ disaffiliates who have lower levels of education, as these individuals may be at higher risk for depression and anxiety based on the findings of the present study.

The study's correlational and cross-sectional design did not allow for an examination of the directionality of the relationships. It is possible that relationships between demographic variables, minority stress processes, family social support, and anxious and depressive symptomatology are bidirectional. Future research may seek to explore the directionality of these relationships by employing a longitudinal design. The study may also be limited due to its use of abbreviated measures that largely relied on self-report, retrospective data to assess minority stress processes. Abbreviated measures were used rather than full measures to circumvent participant attrition, a reasonable concern when conducting uncompensated online research. One instance where this may have affected the outcome of the study is in the noted lack of relationship between IH and depressive symptomatology, a finding that has been consistent in the literature. Longer measures of IH contain items that may assess domains of IH that were not captured in this study (Shidlo, 1994).

Although the collection of anonymous data through self-reported data may also be viewed as a limitation, individuals who identify as LGBQP+ and who are disaffiliates may be less likely to feel comfortable participating in a study of this nature due to historical experiences of discrimination and rejection. Thus, although the data may not be as accurate as may be found in a prospective study that included objective measures, the use of anonymous self-report measures likely allowed for the recruitment of more participants than would have been possible if it were a study where participants needed to provide their name/identity.

Conclusions

The present study found that for LGBQP+ individuals who disaffiliated from non-affirming religions, higher levels of internalized heterosexism and rejection sensitivity are associated with more anxious symptomatology, and more family social support is associated with less depressive symptomatology. Among the sample, more disclosure of SOI was associated with more perceived family social support, while more experiences of victimization were associated with lower perceived family social support. Additionally, identifying as female, having lower educational achievement, and a diagnosed mental health disability or impairment were all found to be associated with higher depressive and anxious symptomatology. Previous research regarding the relationships between minority stress processes, social support, and mental health symptoms among LGBQP+ populations has found higher levels of minority stress processes to be associated with more mental health symptoms, with social support identified as both a mediator and a moderator. Researchers may wish to further investigate the role of family social support among LGBQP+ disaffiliates from non-affirming religions. The findings of this study suggest that when working with LGBQP+ disaffiliates, mental health professionals should assess thoroughly for identity factors, minority stressors, and coping resources, as these factors may have a significant impact on depressive and anxious symptomatology among this population.

References

Alessi, E. J. (2014). A framework for incorporating minority stress theory into treatment with

  sexual minority clients. *Journal of Gay & Lesbian Mental Health, 18*(1), 47–66.

  https://doi.org/10.1080/19359705.2013.789811

Anderton, C. L., Pender, D. A., & Asner-Self, K. K. (2011). A review of the religious

  identity/sexual orientation identity conflict literature: Revisiting Festinger's cognitive

  dissonance theory. *Journal of LGBT Issues in Counseling, 5*(3-4), 259-281.

  https://doi.org/10.1080/15538605.2011.632745

Aronson, E. (2012). *The Social Animal* (11th ed.). New York, NY. Worth Publishers.

Avance, R. (2013). Seeing the light: Mormon conversion and deconversion narratives in off- and

  online worlds. *Journal of Media and Religion, 12*(1), 16-24.

  https://doi.org/10.1080/15348423.2013.760386

Barnes, D. M., & Meyer, I. H. (2012). Religious affiliation, internalized homophobia, and mental

  health in lesbians, gay men, and bisexuals. *American Journal of Orthopsychiatry, 82*,

  505–515. https://doi.org/10.1111/j.1939- 0025.2012.01185

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social

  psychological research: Conceptual, strategic, and statistical considerations. *Journal of

  Personality and Social Psychology, 51*(6), 1173–1182. https://doi.org/10.1037/0022-

  3514.51.6.1173

Berrill, K. T. (1992). Anti-gay violence and victimization in the United States: An overview. In

  G. M. Herek, K. T. Berrill, G. M. Herek, K. T. Berrill (Eds.), *Hate crimes: Confronting

  violence against lesbians and gay men* (pp. 19-45). Thousand Oaks, CA, US: Sage

  Publications, Inc.

Blosnich, J. R., & Andersen, J. P. (2015). Thursday's child: The role of adverse childhood

    experiences in explaining mental health disparities among lesbian, gay, and bisexual US

    adults. *Social Psychiatry and Psychiatric Epidemiology, 50*(2), 335-338.

    https://doi.org/10.1007/s00127-014-0955-4

Bostwick, W. B., Boyd, C. J., Hughes, T. L., & McCabe, S. E. (2010). Dimensions of sexual

    orientation and the prevalence of mood and anxiety disorders in the United

    States. *American Journal of Public Health, 100*(3), 468-475.

    https://doi.org/10.2105/AJPH.2008.152942

Bradshaw, W. S., Dehlin, J. P., Heaton, T. B., Galliher, R. V., Decoo, E., & Crowell, K. A.

    (2015). Religious experiences of GBTQ Mormon males. *Journal for the Scientific Study*

    of Religion, 54(2), 311-329. https://doi.org/10.1111/jssr.12181

Brito, C., & Pearl, J. (2002). A new identification condition for recursive models with correlated

    errors. *Structural Equation Modeling, 9*(4), 459–474.

    https://doi.org/10.1207/S15328007SEM0904_1

Burn, S. M., & Busso, J. (2005). Ambivalent sexism, scriptural literalism, and religiosity.

    Psychology of Women Quarterly, 29(4), 412–418. https://doi.org/10.1111/j.1471-

    6402.2005.00241.x

Button, D. M. (2016). Understanding the effects of victimization: Applying general strain theory

    to the experiences of LGBQ youth. *Deviant Behavior, 37*(5), 537–556.

    https://doi.org/10.1080/01639625.2015.1060787

Canty-Mitchell, J., & Zimet, G. D. (2000). Psychometric properties of the Multidimensional

    Scale of Perceived Social Support in urban adolescents. *American Journal of Community*

    Psychology, 28(3), 391-400. doi:10.1023/A:1005109522457

Carter, A. W. (2016). A phenomenological study of gay men coming out while in college [ProQuest Information & Learning]. In *Dissertation Abstracts International Section A: Humanities and Social Sciences* (Vol. 77, Issue 1–A(E)).

Chazelle, E., Lemogne, C., Morgan, K., Kelleher, C. C., Chastang, J.-F., & Niedhammer, I. (2011). Explanations of educational differences in major depression and generalised anxiety disorder in the Irish population. *Journal of Affective Disorders, 134*(1–3), 304–314. https://doi.org/10.1016/j.jad.2011.05.049

Cochran, S. D., Sullivan, J. G., & Mays, V. M. (2003). Prevalence of mental disorders, psychological distress, and mental health services use among lesbian, gay, and bisexual adults in the United States. *Journal of Consulting and Clinical Psychology*, *71*(1), 53-61. https://doi.org/10.1037/0022-006X.71.1.53

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98,* 310–357. http://dx.doi.org/10 .1037/0033-2909.98.2.310

Coleman, T. I., Hood, R. J., & Streib, H. (2018). An introduction to atheism, agnosticism, and nonreligious worldviews. *Psychology of Religion and Spirituality, 10*(3), 203-206. https://doi.org/10.1037/rel0000213

Cragun, R. T., & Sumerau, J. E. (2015). The last bastion of sexual and gender prejudice? Sexualities, race, gender, religiosity, and spirituality in the examination of prejudice toward sexual and gender minorities. *Journal of Sex Research,* 52(7), 821-834. https://doi.org/10.1080/00224499.2014.925534

Craig, S. L., McInroy, L. B., & Austin, A. (2018). "Someone to have my back": Exploring the needs of racially and ethnically diverse lesbian, gay, bisexual, and transgender high school students. *Children & Schools, 40*(4), 231–239. https://doi.org/10.1093/cs/cdy016

Crowell, K. A., Galliher, R. V., Dehlin, J., & Bradshaw, W. S. (2015). Specific aspects of

    minority stress associated with depression among LDS affiliated non-heterosexual

    adults. *Journal of Homosexuality, 62*(2), 242-267.

    https://doi.org/10.1080/00918369.2014.969611

Dehlin, J. P., Galliher, R. V., Bradshaw, W. S., & Crowell, K. A. (2015). Navigating sexual and

    religious identity conflict: A Mormon perspective. *Identity: An International Journal of*

    Theory and Research, 15(1), 1-22. https://doi.org/10.1080/15283488.2014.989440

Doty, N. D., Willoughby, B. B., Lindahl, K. M., & Malik, N. M. (2010). Sexuality related social

    support among lesbian, gay, and bisexual youth. *Journal of Youth and Adolescence, 39*,

    1134–1147. https://doi.org/10.1007/s10964- 010-9566-x

Dürrbaum, Tina, and Frank A. Sattler. 2020. "Minority Stress and Mental Health in Lesbian, Gay

    Male, and Bisexual Youths: A Meta-Analysis." *Journal of LGBT Youth, 17*(3): 298–314.

    https://doi.org/10.1080/19361653.2019.1586615.

Dyar, C., Feinstein, B. A., Eaton, N. R., & London, B. (2016). Development and initial

    validation of the Sexual Minority Women Rejection Sensitivity Scale. *Psychology of*

    Women Quarterly, 40(1), 120-137. https://doi.org/10.1177/0361684315608843

Etengoff, C., & Daiute, C. (2015). Online coming-out communications between gay men and

    their religious family allies: A family of choice and origin perspective. *Journal of GLBT*

    Family Studies, 11(3), 278-304. https://doi.org/10.1080/1550428X.2014.964442

Fenelon, A. & Danielson, S. (2016). Leaving my religions: Understanding the relationships

    between religious disaffiliation, health, and well-being. *Social Science Research 57*, 49-

    62. https://doi.org/10.1016/j.ssresearch.2016.01.007

Feinstein, B. A., Goldfried, M. R., & Davila, J. (2012). The relationship between experiences of

discrimination and mental health among lesbians and gay men: An examination of internalized homonegativity and rejection sensitivity as potential mechanisms. *Journal of Consulting and Clinical Psychology, 80*, 917–927. https://doi.org/10.1037/a0029425

Ferris, J. L. (2006). The Nomenclature of the Community: An Activist's Perspective. In M. D. Shankle, M. D. Shankle (Eds.), *The handbook of lesbian, gay, bisexual, and transgender public health: A practitioner's guide to service* (pp. 3-10). Binghamton, NY, US: Harrington Park Press/The Haworth Press.

Festinger, L. (1962). *A theory of cognitive dissonance*. Stanford, CA: Stanford University Press.

Fingerhut, A. W. (2018). The role of social support and gay identity in the stress processes of a sample of Caucasian gay men. *Psychology of Sexual Orientation and Gender Diversity*, https://doi.org/10.1037/sgd0000271

Fingerhut, A.W., Peplau, L.A. & Gable, S.L. (2010). Identity, minority stress, and psychological well-being among gay men and lesbians. *Psychology and Sexuality, 1*, 101-114. https://doi.org/10.1080/19419899.2010.484592

Finkelhor, D., & Kendall-Tackett, K. (1997). A developmental perspective on the childhood impact of crime, abuse, and violent victimization. In D. Cicchetti & S. L. Toth (Eds.), *Developmental perspectives on trauma: Theory, research and intervention. Rochester Symposium on Developmental Psychology* (Vol. 8, pp. 1–32). Rochester, NY: University of Rochester Press.

Fisher, A. R. (2016). A Review and Conceptual Model of the Research on Doubt, Disaffiliation, and Related Religious Changes. *Psychology of Religion and Spirituality*. Advance online publication. http://dx.doi.org/10.1037/rel0000088

Flora, D. B., & Flake, J. K. (2017). The purpose and practice of exploratory and confirmatory

factor analysis in psychological research: Decisions for scale development and validation. *Canadian Journal of Behavioural Science / Revue Canadienne Des Sciences Du Comportement, 49*(2), 78–88. https://doi.org/10.1037/cbs0000069

Frison, E., & Eggermont, S. (2016). Exploring the relationships between different types of Facebook use, perceived online social support, and adolescents' depressed mood. *Social Science Computer Review, 34*(2), 153-171. https://doi.org/10.1177/0894439314567449

Frost, D. M., Meyer, I. H., & Schwartz, S. (2016). Social support networks among diverse sexual minority populations. *American Journal of Orthopsychiatry, 86*(1), 91-102. https://doi.org/10.1037/ort0000117

Golding, J. M., Wilsnack, S. C., & Cooper, M. L. (2002). Sexual assault history and social support: Six general population studies. *Journal of Traumatic Stress, 15*(3), 187–197. https://doi.org/10.1023/A:1015247110020

Hall, W. J. (2018). Psychosocial risk and protective factors for depression among lesbian, gay, bisexual, and queer youth: A systematic review. *Journal of Homosexuality, 65*(3), 263–316. https://doi.org/10.1080/00918369.2017.1317467

Hatzenbuehler, M. L., Dovidio, J. F., Nolen-Hoeksema, S., & Phills, C. E. (2009). An implicit measure of anti-gay attitudes: Prospective associations with emotion regulation strategies and psychological distress. *Journal of Experimental Social Psychology, 45*(6), 1316–1320. https://doi.org/10.1016/j.jesp.2009.08.005

Herek, G. M., & Berrill, K. T. (1992). Documenting the victimization of lesbians and gay men: Methodological issues. In G. M. Herek, K. T. Berrill (Eds.), *Hate crimes: Confronting violence against lesbians and gay men* (pp. 270-286). Thousand Oaks, CA: Sage Publications, Inc.

Herek, G. M., Cogan, J. C., Gillis, J. R., & Glunt, E. K. (1998). Correlates of internalized

homophobia in a community sample of lesbians and gay men. *Journal of the Gay &*

Lesbian Medical Assn, 2(1), 17–25.

Herek, G. M., Gillis, J. R., & Cogan, J. C. (1999). Psychological sequelae of hate-crime

victimization among lesbian, gay, and bisexual adults. *Journal of Consulting and Clinical*

Psychology, 67(6), 945-951. https://doi.org/10.1037/0022-006X.67.6.945

Hochstetler, A., DeLisi, M., Jones-Johnson, G., & Johnson, W. R. (2014). The criminal

victimization–depression sequela: Examining the effects of violent victimization on

depression with a longitudinal propensity score design. *Crime & Delinquency, 60*(5),

785–806. https://doi.org/10.1177/0011128710382261

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis:

Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*(1), 1–55.

https://doi.org/10.1080/10705519909540118

Jackson, S. D. (2017). 'Connection is the antidote': Psychological distress, emotional processing,

and virtual community building among LGBTQ students after the Orlando

shooting. *Psychology of Sexual Orientation and Gender Diversity, 4*(2), 160-168.

https://doi.org/10.1037/sgd0000229

Juster, R.-P., Smith, N. G., Ouellet, É., Sindi, S., & Lupien, S. J. (2013). Sexual orientation and

disclosure in relation to psychiatric symptoms, diurnal cortisol, and allostatic

load. *Psychosomatic Medicine, 75*(2), 103–116.

https://doi.org/10.1097/PSY.0b013e3182826881

Katz-Wise, S. L., & Hyde, J. S. (2012). Victimization experiences of lesbian, gay, and bisexual

individuals: A meta-analysis. *Journal of Sex Research, 49*(2-3), 142-167.

https://doi.org/10.1080/00224499.2011.637247

Kashubeck-West, S., Whiteley, A. M., Vossenkemper, T., Robinson, C., & Deitz, C. (2017).

Conflicting identities: Sexual minority, transgender, and gender nonconforming

individuals navigating between religion and gender–sexual orientation identity. In K. A.

DeBord, A. R. Fischer, K. J. Bieschke, R. M. Perez, K. A. DeBord, A. R. Fischer, ... R.

M. Perez (Eds.)*, Handbook of sexual orientation and gender diversity in counseling and

psychotherapy* (pp. 213-238). Washington, DC, US: American Psychological

Association. https://doi.org/10.1037/15959-009

Khine, M., Ping, L., & Cunningham, D. (2013). (Eds.). *Application of structural equation

modeling in educational research and practice*. Rotterdam, The Netherlands: Sense

Publishers.

King, M., Semlyn, J., Killaspy, H., Nazareth, I., & Osborn, D. (2007). A systematic review of

research on counselling and psychotherapy for lesbian, gay, bisexual, and transgender

people. *British Association for Counselling and Psychotherapy*. Retrieved from

http://www.nitherapy.net/assets/images/2012/0 5/BACP_LGBTreview.pdf

King, M., Semlyen, J., Tai, S. S., Killaspy, H., Osborn, D., Popelyuk, D., & Nazareth, I. (2008).

A systematic review of mental disorder, suicide, and deliberate self harm in lesbian, gay

and bisexual people. *BMC Psychiatry, 8*(70). https://doi.org/10.1186/1471-244X-8-70

Kosciw, J. G., Greytak, E. A., Bartkiewicz, M. J., Boesen, M. J., & Palmer, N. A. (2012). *The

2011 National School Climate Survey: The experiences of lesbian, gay, bisexual and

transgender youth in our nation's schools*. New York, NY: Gay, Lesbian and Straight

Education Network.

Lease, S. H., Horne, S. G., & Noffsinger-Frazier, N. (2005). Affirming Faith Experiences and

Psychological Health for Caucasian Lesbian, Gay, and Bisexual Individuals. *Journal of*

Counseling Psychology, 52(3), 378-388. https://doi.org/10.1037/0022-0167.52.3.378

Lehavot, K., & Simoni, J. M. (2011). The impact of minority stress on mental health and

substance use among sexual minority women. *Journal of Consulting and Clinical*

Psychology, 79(2), 159-170. https://doi.org/10.1037/a0022839

Lei, P.-W., & Wu, Q. (2007). Introduction to structural equation modeling: Issues and practical

considerations. *Educational Measurement: Issues and Practice, 26*(3), 33–43.

https://doi.org/10.1111/j.1745-3992.2007.00099.x

Lim, C., MacGregor, C. A., & Putnam, R. D. (2010). Secular and liminal: Discovering

heterogeneity among religious nones. *Journal for the Scientific Study of Religion, 49*(4),

596–618. https://doi.org/10.1111/j.1468-5906.2010.01533.x

Little, T. D. (2013). *Methodology in the social sciences. Longitudinal structural equation*

modeling. Guilford Press.

Loehlin, J. (2004). *Latent variable models: An introduction to factor, path, and structural*

equation analysis (4th ed). Mahwah, NJ: Lawrence Erlbaum Associates.

MacKinnon, D. P. (2008). *Introduction to statistical mediation analysis*. Taylor & Francis

Group/Lawrence Erlbaum Associates.

Maltby, L. E., Hall, M. E. L., Anderson, T. L., & Edwards, K. (2010). Religion and sexism: The

moderating role of participant gender. *Sex Roles: A Journal of Research, 62*(9–10), 615–

622. https://doi.org/10.1007/s11199-010-9754-x

Mays, V. M., & Cochran, S. D. (2001). Mental health correlates of perceived discrimination

among lesbian, gay, and bisexual adults in the United States. *American Journal of Public Health,* 91, 1869–1876. http://dx.doi.org/10.2105/AJPH.91.11.1869

Mayfield, W. (2001). The development of an internalized homonegativity inventory for gay men. *Journal of Homosexuality, 41*(2), 53-76. doi:10.1300/J082v41n03_05

Meidlinger, P. C., & Hope, D. A. (2014). Differentiating disclosure and concealment in measurement of outness for sexual minorities: The Nebraska Outness Scale. *Psychology of Sexual Orientation and Gender Diversity, 1*(4), 489–497. https://doi.org/10.1037/sgd0000080

Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychological Bulletin, 129*(5), 674-697. https://doi.org/10.1037/0033-2909.129.5.674

Meyer, I. H., Rossano, L., Ellis, J. M., & Bradford, J. (2002). A brief telephone interview to identify lesbian and bisexual women in random digit dialing sampling. *Journal of Sex Research*, 39, 139–144. https://doi.org/10.1080/00224490209552133

Miller, B. (2016). A computer-mediated escape from the closet: Exploring identity, community, and disinhibited discussion on an internet coming out advice forum. *Sexuality & Culture: An Interdisciplinary Quarterly, 20*(3), 602-625. https://doi.org/10.1007/s12119-016-9343-4

Mohr, J. J., & Kendra, M. S. (2011). Revision and extension of a multidimensional measure of sexual minority identity: The Lesbian, Gay, and Bisexual Identity Scale. *Journal of Counseling Psychology, 58(*2), 234-245. https://doi.org/10.1037/a0022858

Moran, T. E., Chen, C. Y., & Tryon, G. S. (2018). Bully victimization, depression, and the role

of protective factors among college LGBTQ students. *Journal of Community Psychology, 46*(7), 871–884. https://doi.org/10.1002/jcop.21978

Morimoto, S. A., & Friedland, L. A. (2011). The lifeworld of youth in the information society. *Youth & Society, 43*(2), 549-567. https://doi.org/10.1177/0044118X10383655

Murcia, M., Chastang, J.-F., & Niedhammer, I. (2015). Educational inequalities in major depressive and generalized anxiety disorders: Results from the French national SIP study. Social Psychiatry and Psychiatric Epidemiology: *The International Journal for Research in Social and Genetic Epidemiology and Mental Health Services, 50*(6), 919–928. https://doi.org/10.1007/s00127-015-1010-9

Newcomb, M. E., & Mustanski, B. (2010). Internalized homophobia and internalizing mental health problems: A meta-analytic review. *Clinical Psychology Review, 30*, 1019–1029. https://doi.org/10.1016/j.cpr.2010.07.003

Pachankis, J.E., Goldfried, M. R., Ramrattan, M. E., (2008). Extension of the rejection sensitivity construct to the interpersonal functioning of gay men. *Journal of Consulting and Clinical Psychology 76*(2):306-17. https://doi.org/10.1037/0022-006X.76.2.306.

Pearlin, L. I. (1999). Stress and mental health: A conceptual overview. In A. V. Horwitz & T. L. Scheid (Eds.), *A handbook for the study of mental health* (pp. 161–175). New York: Cambridge University Press.

Pew Research Center. (2015). U.S. Public Becoming Less Religious. Retrieved from http://www.pewforum.org/2015/11/03/u-s-public-becoming-less-religious/

Plöderl, M., & Tremblay, P. (2015). Mental health of sexual minorities. A systematic review. *International Review of Psychiatry, 27*(5), 367-385. https://doi.org/10.3109/09540261. 2015.1083949

Radloff, L. S. (1977). The CES-D Scale: A self-report depression scale for research in the

general population. *Applied Psychological Measurement, 1*(3), 385-401.

https://doi.org/10.1177/014662167700100306

Ream, G. L., & Savin-Williams, R. C. (2005). Reconciling Christianity and positive non-

heterosexual identity in adolescence, with implication for psychological well-being.

Journal of Gay & Lesbian Issues in Education, 2(3), 19–36.

http://dx.doi.org/10.1300/J367v02n03_03

Reddit. (2017). About Reddit. Retrieved June 27, 2018, from https://www.redditinc.com/

Riggle, E. D. B., Rostosky, S. S., Black, W. W., & Rosenkrantz, D. E. (2017). Outness,

concealment, and authenticity: Associations with LGB individuals' psychological distress

and well-being. *Psychology of Sexual Orientation and Gender Diversity, 4*(1), 54–62.

https://doi.org/10.1037/sgd0000202

Ross, L. E., Salway, T., Tarasoff, L. A., MacKay, J. M., Hawkins, B. W., & Fehr, C. P. (2018).

Prevalence of depression and anxiety among bisexual people compared to gay, lesbian,

and heterosexual individuals: A systematic review and meta-analysis. *Journal of Sex

Research, 55*(4–5), 435–456. https://doi.org/10.1080/00224499.2017.1387755

Rosser, B. S., Bockting, W. O., Ross, M. W., Miner, M. H., & Coleman, E. (2008). The

relationship between homosexuality, internalized homo-negativity, and mental health in

men who have sex with men. *Journal of Homosexuality, 55*(2), 185-203.

https://doi.org/10.1080/00918360802129394

Sahker, E. (2016). Therapy with the nonreligious: Ethical and clinical considerations.

Professional Psychology: Research and Practice, 47(4), 295-302.

https://doi.org/10.1037/pro0000087

Salk, R. H., Hyde, J. S., & Abramson, L. Y. (2017). Gender differences in depression in

representative national samples: Meta-analyses of diagnoses and symptoms.

Psychological Bulletin, 143(8), 783–822. https://doi.org/10.1037/bul0000102.supp

(Supplemental)

Sanders, E. K., & Chalk, H. M. (2016). Predictors of psychological outcomes in nonheterosexual

individuals. *Psi Chi Journal of Psychological Research, 21*(2), 100-110.

https://doi.org/10.24839/2164-8204.JN21.2.100

Sattler, F. A., Zeyen, J., & Christiansen, H. (2017). Does sexual identity stress mediate the

association between sexual identity and mental health? *Psychology of Sexual Orientation

and Gender Diversity, 4*(3), 296-303. https://doi.org/10.1037/sgd0000232

Sattler, F. A., Wagner, U., & Christiansen, H. (2016). Effects of minority stress, group-level

coping, and social support on mental health of German gay men. *PLoS ONE 11*(3):

e0150562. https://doi.org/10.137/journal.pone.0150562.

Scarpa, A., Haden, S. C., & Hurley, J. (2006). Community Violence Victimization and

Symptoms of Posttraumatic Stress Disorder: The Moderating Effects of Coping and

Social Support. *Journal of Interpersonal Violence, 21*(4), 446–469.

https://doi.org/10.1177/0886260505285726

Scheitle, C. P., & Adamczyk, A. (2010). High-cost religion, religious switching, and

health. *Journal of Health and Social Behavior, 51*(3), 325-342.

https://doi.org/10.1177/0022146510378236

Schmitz, R. M. (2017). On the street and on campus: A comparison of life course trajectories

among homeless and college lesbian, gay, bisexual, transgender and queer young adults

[ProQuest Information & Learning]. In *Dissertation Abstracts International Section A:*

Humanities and Social Sciences (Vol. 77, Issue 9–A(E)).

Schuck, K. D., & Liddle, B. J. (2001). Religious conflicts experienced by lesbian, gay, and

bisexual individuals. *Journal of Gay & Lesbian Psychotherapy, 5*(2), 63-82.

https://doi.org/10.1300/J236v05n02_07

Sepulvado, B., Hachen, D., Penta, M., & Lizardo, O. (2015). Social affiliation from religious

disaffiliation: Evidence of selective mixing among youth with no religious preference

during the transition to college. *Journal for the Scientific Study of Religion, 54*(4), 833–

841. https://doi.org/10.1111/jssr.12227

Shatz, I. (2017). Fast, free, and targeted: Reddit as a source for recruiting participants

online. *Social Science Computer Review, 35*(4), 537-549. https://doi.org/10.1177/

0894439316650163

Shatz, I. (2015). The negative impact of goal-oriented instructions. Educational Studies, 41(5),

476–480. https://doi.org/10.1080/03055698.2015.1043982

Shidlo, A. (1994). Internalized homophobia: Conceptual and empirical issues in measurement. In

B. Greene & G. M. Herek (Eds.), *Lesbian and gay psychology: Theory, research, and*

clinical applications (pp. 176–205). Thousand Oaks, CA: Sage.

Sherry, A., Adelman, A., Whilde, M. R., & Quick, D. (2010). Competing selves: Negotiating the

intersection of spiritual and sexual identities. *Professional Psychology: Research and*

Practice, 41, 112–119. https://doi.org/10.1037/a0017471

Solomon, D. T., Reed, O. M., Sevecke, J. R., O'Shaughnessy, T., & Acevedo-Polakovich, I. D.

(2018). Expert consensus on facilitating the coming-out process in sexual minority clients: A Delphi study. *Journal of Gay & Lesbian Mental Health, 22*(4), 348–371. https://doi.org/10.1080/19359705.2018.1476279

Sowe, B. J., Brown, J., & Taylor, A. J. (2014). Sex and the sinner: Comparing religious and nonreligious same-sex attracted adults on internalized homonegativity and distress. *American Journal of Orthopsychiatry, 84*(5), 530-544. https://doi.org/10.1037/ort0000021

Spitzer, R. L., Kroenke, K., Williams, J. W., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: The GAD-7. *Archives of Internal Medicine, 166*(10), 1092-1097. https://doi.org/10.1001/archinte.166.10.1092

Strutz, K. L., Herring, A. H., & Halpern, C. T. (2015). Health disparities among young adult sexual minorities in the US. *American Journal of Preventive Medicine, 48*(1), 76–88. https://doi.org/10.1016/j.amepre.2014.07.038

Szymanski, D. M. (2005). Heterosexism and Sexism as Correlates of Psychological Distress in Lesbians. *Journal of Counseling & Development, 83*(3), 355-360. https://doi.org/10.1002/j.1556-6678.2005.tb00355.x

Szymanski, D. M. (2009). Examining potential moderators of the link between heterosexist events and gay and bisexual men's psychological distress. *Journal of Counseling Psychology, 56*(1), 142-151. https://doi.org/10.1037/0022-0167.56.1.142

Szymanski, D. M., & Kashubeck-West, S. (2008). Mediators of the relationship between internalized oppressions and lesbian and bisexual women's psychological distress. *The Counseling Psychologist, 36*(4), 575-594. https://doi.org/10.1177/0011000007309490

Szymanski, D. M., Kashubeck-West, S., & Meyer, J. (2008). Internalized heterosexism: A

historical and theoretical overview. *The Counseling Psychologist, 36*(4), 510-524. https://doi.org/10.1177/0011000007309488

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics*. Boston: Pearson/Allyn & Bacon.

Ullman, S. E. (1999). Social support and recovery from sexual assault: A review. *Aggression and Violent Behavior, 4*(3), 343–358. https://doi.org/10.1016/S1359-1789(98)00006-8

van Dam, M. A. (2014). Associations among lesbian disclosure, social support, depression and demographic variables. *Journal of Gay & Lesbian Mental Health, 18*(4), 375-392. https://doi.org/10.1080/19359705.2014.883584

Whicker, D., de St. Aubin, E., & Skerven, K. (2017). The role of internalized homonegativity in the faith and psychological health of lesbians. *Journal of Lesbian Studies, 21*(4), 478-494. https://doi.org/10.1080/10894160.2017.1350795

Wilkinson, D. J., & Johnson, A. (2020). A systematic review of qualitative studies capturing the subjective experiences of gay and lesbian individuals' of faith or religious affiliation. *Mental Health, Religion & Culture*. https://doi.org/10.1080/13674676.2020.1724919

Wilkerson, J. M., Smolenski, D. J., Brady, S. S., & Rosser, B. S. (2012). Religiosity, internalized homonegativity and outness in Christian men who have sex with men. *Sexual & Relationship Therapy, 27*(2), 122-132. https://doi.org/10.1080/14681994.2012.698259

Worthington, R. L. (2004). Sexual identity, sexual orientation, religious identity, and change: Is it possible to depolarize the debate?. *The Counseling Psychologist, 32*(5), 741-749. https://doi.org/10.1177/0011000004267566

Wright, A. J., & Stern, S. (2016). The role of spirituality in sexual minority identity. *Psychology

of Sexual Orientation and Gender Diversity, 3(1), 71-79.

https://doi.org/10.1037/sgd0000139

Wright, E. R., & Perry, B. L. (2006). Sexual Identity Distress, Social Support, and the Health of

Gay, Lesbian, and Bisexual Youth. *Journal of Homosexuality, 51*(1), 81-110.

https://doi.org/10.1300/J082v51n01_05

Yakushko, O. (2005). Influence of Social Support, Existential Well-Being, and Stress Over

Sexual Orientation on Self Esteem of Gay, Lesbian, and Bisexual

Individuals. *International Journal for the Advancement of Counselling, 27*(1), 131-143.

https://doi.org/10.1007/s10447-005-2259-6

Ybarra, M. L., Mitchell, K. J., Palmer, N. A., & Reisner, S. L. (2015). Online social support as a

buffer against online and offline peer and sexual victimization among US LGBT and

non-LGBT youth. *Child Abuse & Neglect, 39*, 123–136.

https://doi.org/10.1016/j.chiabu.2014.08.006

Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The Multidimensional Scale

of Perceived Social Support. *Journal of Personality Assessment, 52*(1), 30-41.

https://doi.org/10.1207/s15327752jpa5201_2

Zimet, G. D., Powell, S. S., Farley, G. K., Werkman, S., & Berkoff, K. (1990). Psychometric

characteristics of the Multidimensional Scale of Perceived Social Support. *Journal of

Personality Assessment, 55*(3-4), 610-617.

https://doi.org/10.1207/s15327752jpa5503&4_17

Appendix A

Survey Posting

Title: Research study looking for nonreligious LGBPQ+ participants

Hello! My name is Kate Jablonski, I am a doctoral student in the PsyD Program at the University of San Francisco. I'm recruiting participants for an online survey as a part of my dissertation research. The purpose of this study is to examine the relationships between religious upbringing (or lack thereof), minority stress, mental health, and social support of nonreligious LGBQP+ individuals. The data generated by this study will help therapists, counselors, and social workers better understand the mental health needs of nonreligious LGBQP+ individuals.

Participation involves responding to several questionnaires that measure symptoms of depression and anxiety, experiences of minority stress, and perceptions of social support; as well as providing non-identifying demographic information and information about your religious upbringing, if you were raised religiously. Completing all the surveys should take approximately 15 minutes.

If you are:

_ 18 years or older

_ identify as lesbian, gay, bisexual, queer, pansexual or otherwise not heterosexual

_ currently identify as nonreligious

_ are interested in participating

either click on the link below or copy and paste it into a web browser. Please also feel free to share the link to this study.

<link>

This study has been approved by the Institutional Review Board at the University of San Francisco. You may contact the IRB at <phone number>. If you have any questions or concerns about this study, please contact me at kgjablonski@usfca.edu. Thank you for your consideration and participation in this study!

Appendix B

IRB Approval Letters

IRBPHS - Approval Notification

To: Kate Jablonski
From: Terence Patterson, IRB Chair
Subject: Protocol #1128
Date: 12/14/2018

The Institutional Review Board for the Protection of Human Subjects (IRBPHS) at the University of San Francisco (USF) has reviewed your request for human subjects approval regarding your study.

Your research (IRB Protocol **#1128**) with the project title **Religious Disaffiliation, Minority Stress, Social Support and Mental Health Among Nonreligious LGBQP+ Individuals** has been approved by the IRB Chair under the rules for expedited review on **12/14/2018**.

Any modifications, adverse reactions or complications must be reported using a modification application to the IRBPHS within ten (10) working days.

If you have any questions, please contact the IRBPHS via email at IRBPHS@usfca.edu. Please include the Protocol number assigned to your application in your correspondence.

On behalf of the IRBPHS committee, I wish you much success in your research.

Sincerely,

Terence Patterson, EdD, ABPP

Professor & Chair, Institutional Review Board for the Protection of Human Subjects

University of San Francisco

irbphs@usfca.edu

USF IRBPHS Website

Amendment Approved

To: Kate Jablonski
From: Richard Johnson, IRB Chair
Subject: Protocol #1128
Date: 04/11/2019

Dear Kate Jablonski:

Your Amendment for research (IRB Protocol **#1128**) with the project title **Religious Disaffiliation, Minority Stress, Social Support and Mental Health Among Nonreligious LGBQP+ Individuals** has been approved by the IRB Chair on **04/11/2019**.

Any modifications, adverse reactions or complications must be reported using a modification application to the IRBPHS within ten (10) working days.

If you have any questions, please contact the IRBPHS via email at IRBPHS@usfca.edu. Please include the Protocol number assigned to your application in your correspondence.

On behalf of the IRBPHS committee, I wish you much success in your research.

Sincerely,

Dr. Richard Greggory Johnson III
Professor & Chair, Institutional Review Board for the Protection of Human Subjects
University of San Francisco
irbphs@usfca.edu
IRBPHS Website

UNIVERSITY OF SAN FRANCISCO

Annual Report Approval Notification

To: Kate Jablonski
From: Richard Greggory Johnson III, IRB Chair
Subject: Protocol #1128
Date: 11/15/2019

The annual report for your research (IRB Protocol #1128) with the project title **Religious Disaffiliation, Minority Stress, Social Support and Mental Health Among Nonreligious LGBQP+ Individuals** was approved on **11/15/2019**.

This approval is good through **10/17/2020**.

If you have any questions, please contact the IRBPHS via email at IRBPHS@usfca.edu. Please include the protocol number assigned to your application in your correspondence.

On behalf of the IRBPHS committee, I wish you much success in your research.

Sincerely,

Dr. Richard Greggory Johnson III
Professor & Chair, Institutional Review Board for the Protection of Human Subjects
University of San Francisco
irbphs@usfca.edu
IRBPHS Website

Appendix C

Demographic Questionnaire

How do you currently describe your gender?
_ Male / Masculine / Man (cisgender)
_ Female / Feminine / Woman (cisgender)
_ Male / Masculine / Man (transgender)
_ Female / Feminine / Woman (transgender)
_ Gender nonconforming / Genderqueer / Nonbinary
_ (fill in the blank)
_ I prefer not to answer

What is your age in years?

Which categories describe you? Please select all that apply:
_ American Indian or Alaska Native
_ Asian
_ Black or African American
_ Hispanic, Latino or Spanish Origin
_ Middle Eastern or North African
_ Native Hawaiian or Other Pacific Islander
_ White
_ (fill in the blank)
_ I prefer not to answer

What is the highest level of education you have completed?
_Some high school
_High school diploma or equivalent
_Vocational training
_Some college
_Associate's degree
_Bachelor's degree
_Some post-graduate work
_Master's degree
_Specialist degree
_Applied professional doctorate degree
_Doctorate degree
_(fill in the blank)

Where do you currently live?
List of U.S. States & territories, Countries

What is your annual income?
_ below $20,000;

_ $20,000–$39,999;
_ $40,000–$59,999;
_ $60,000–$79,999;
_ $80,000–$99,999; and
_ $100,000 and above.

Are you currently in a romantic relationship with a partner or partners?
_ No
_ Yes, one partner
_ Yes, multiple partners
If you answered yes, are you…
_Married or in a civil union
_Not married or in a civil union and living together
_Not married or in a civil union, and living apart

In terms of sexual orientation, do you consider yourself to be:
_Gay
_Lesbian
_Bisexual and/or Pansexual
_Asexual
_Heterosexual / Straight
_(fill in the blank)

Please indicate the number of biological, adopted, foster or step-children that you have:
(pick a number)

Which best describes the religion/faith of your family of origin?
_Evangelical Protestant
_Mainline Protestant
_Historically Black Protestant
_Catholic
_Mormon or LDS
_Orthodox Christian
_Jehovah's Witness
_Jewish
_Muslim
_Buddhist
_Hindu
_Unitarian
_Atheist
_Agnostic
_Nothing in particular
_Spiritual but not religious
_Other _____

Which best describes your current religion/faith?
_Evangelical Protestant
_Mainline Protestant
_Historically Black Protestant
_Catholic
_Mormon or LDS
_Orthodox Christian
_Jehovah's Witness
_Jewish
_Muslim
_Buddhist
_Hindu
_Unitarian
_Atheist
_Agnostic
_Nothing in particular
_Spiritual but not religious

Have you ever been diagnosed with any disability or impairment?
_Yes
_No
_I prefer not to answer

If yes, which of the following have you been diagnosed?
_A sensory impairment (vision or hearing)
_A mobility impairment
_A learning disability (e.g. ADHD, dyslexia)
_A mental health disorder
_A disability or impairment not listed above

Appendix D

Disaffiliation Questions

1. For the following question, please use the definition of disaffiliation as: "the act of voluntarily terminating membership or affiliation with a religious organization."

   Did you disaffiliate from the religion in which you were raised? (Yes/No/NA)

2. How old were you (in years) when you disaffiliated from the religion in which you were raised? (Ten or younger, or numerical values through 98)

3. In years, how much time has passed since your disaffiliation? (1-82)

4. "How would you rate the religious environment in which you were raised in terms of issues of same-sex sexuality?" from 1 (rejecting) to 6 (affirming)

5. "How would you rate your current family environment generally in terms of issues of same-sex sexuality?" from 1 (rejecting) to 6 (affirming)

6. "How important was religion to your parents/family in everyday life while you were growing up?" from 1 (completely unimportant) to 5 (extremely important)

7. "How important is religion to your parents/family of origin in everyday life currently?" from 1 (completely unimportant) to 5 (extremely important)

Appendix E

Multidimensional Scale of Perceived Social Support-Revised for Online Support

When you are feeling down or in a difficult situation…

	Disagree Strongly				Agree Strongly
I can find help on Reddit.	1	2	3	4	5
I can find the emotional help and support that I need on Reddit.	1	2	3	4	5
I can talk with someone on Reddit about my problems.	1	2	3	4	5
I can find someone on Reddit that helps me make decisions.	1	2	3	4	5

Appendix F

Histogram, P-P Plot, and Scatterplot of Regression on GAD-7

Figure F1

Histogram of Residuals of GAD-7
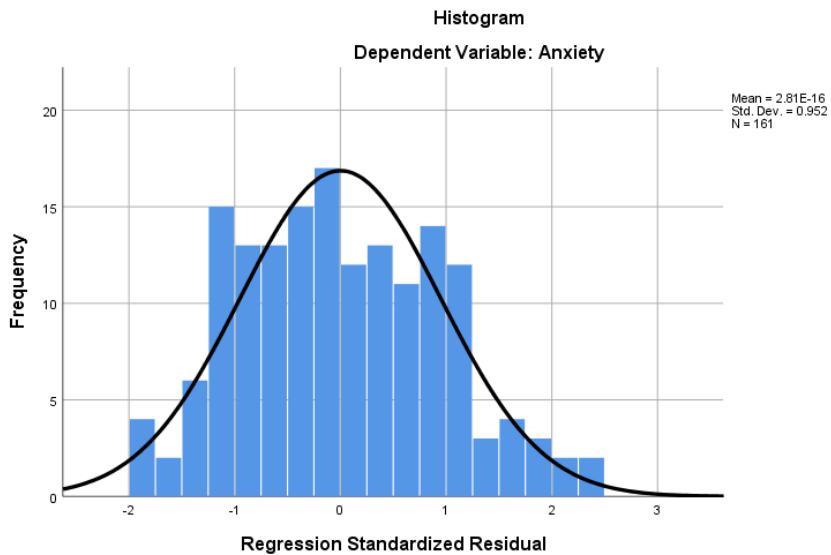
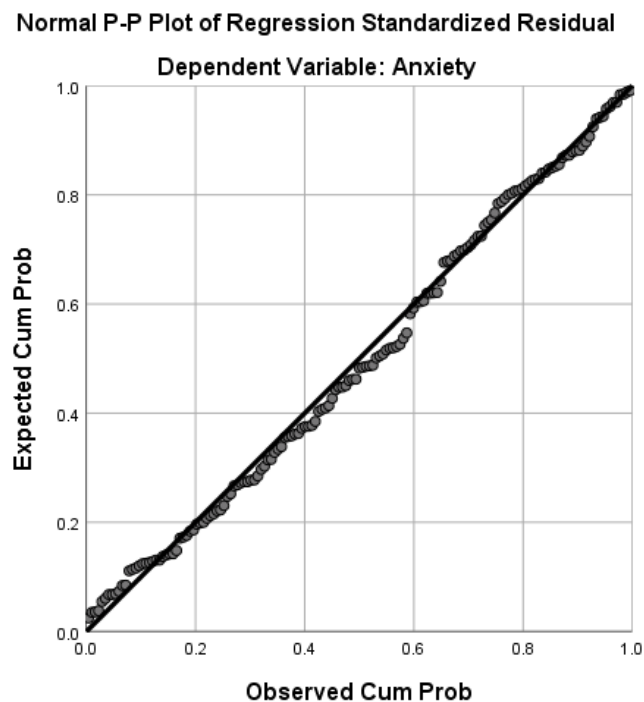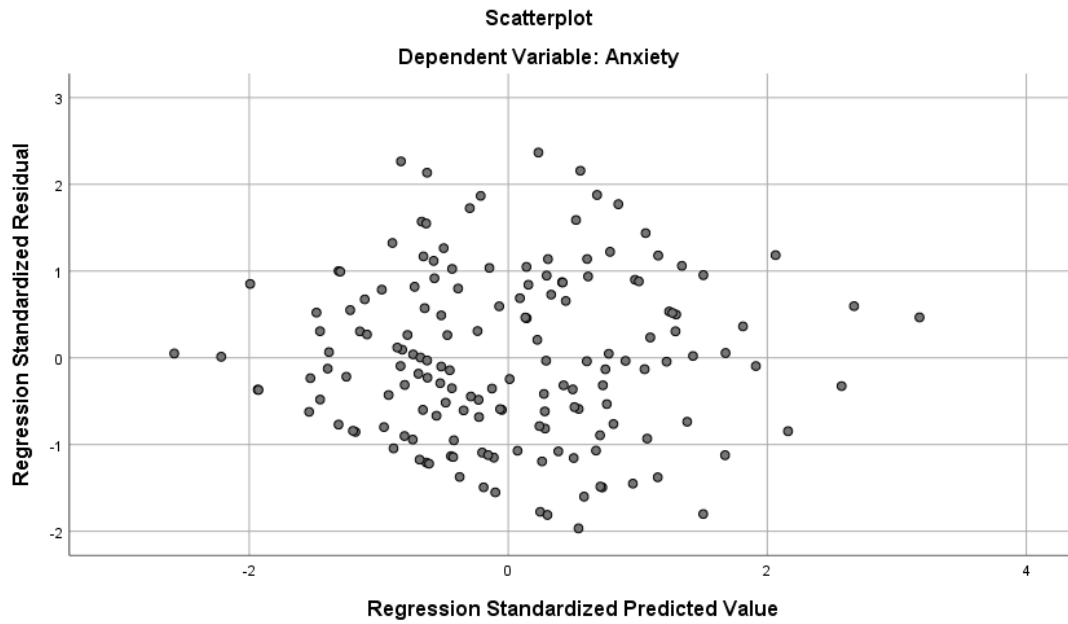**Figure F2**

P-P Plot of Standardized Residuals of GAD-7

Figure F3

Scatterplot of Standardized Residuals of GAD-7

Appendix G

Histogram, P-P Plot, and Scatterplot of Regression on CES-D-M

Figure G1
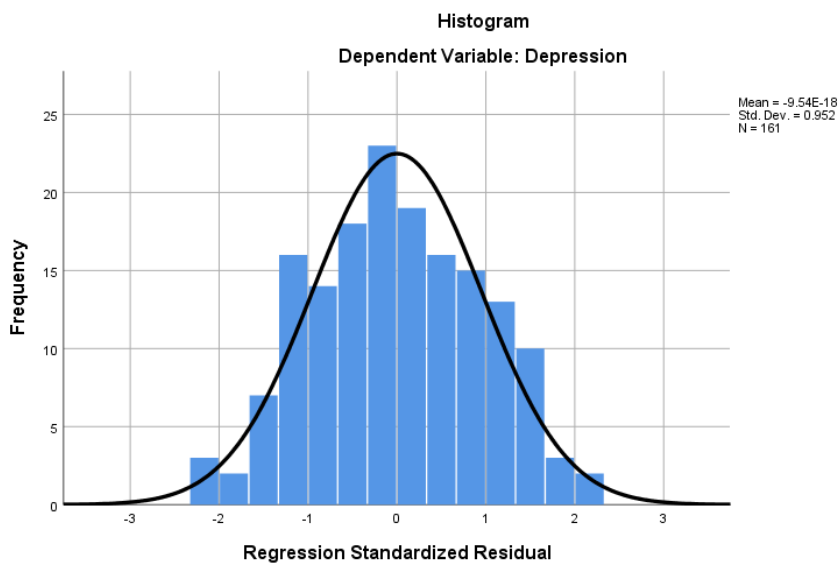
Histogram of Residuals of CES-D-M

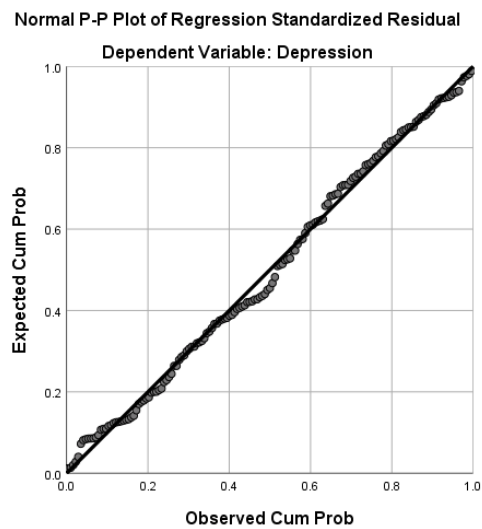**Figure G2**

P-P Plot of Standardized Residuals of CES-D-M

Figure G3

Scatterplot of Standardized Residuals of CES-D-M

Scatterplot
Dependent Variable: Depression