7-7-2020

The Relative Impact of Risk and Protective Factors on the Psychological Functioning of Sexual and Gender Minority Youth

Ilayna Krysten Mehrtens

THE RELATIVE IMPACT OF RISK AND PROTECTIVE FACTORS ON THE PSYCHOLOGICAL FUNCTIONING OF SEXUAL AND GENDER MINORITY YOUTH

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

in

The Department of Psychology

by
Ilayna Krysten Mehrtens
B.S., University of New Orleans, 2013
M.A., Louisiana State University, 2018
August 2020

Table of Contents

Abstract

Research has consistently indicated that sexual and gender minority (SGM) youth are at increased risk of psychological and emotional concerns relative to their cisgender heterosexual (cis-heterosexual) peers. A large body of research has sought to identify the risk factors that may contribute to this disparity; however, fewer studies have investigated the factors that may promote resiliency, thereby reducing risk. Subsequently, very little is known about the relative influence of risk and protective factors among SGM youth. Additionally, significant methodological concerns have been identified, which may affect the interpretability, generalizability, and clinical applicability of existing research. The purpose of this study is to evaluate the relative influence of risk and protective factors that have been identified in previous literature, while taking into consideration several methodological shortcomings identified in existing literature. Participants included 158 sexual and gender minority (SGM) adolescents. Results implied increased risk of depression and anxiety among gender minority youth relative to sexual minority youth. Results also supported a direct effect of gender identity on psychological functioning; however, no direct effects were observed for sexual orientation. For risk factors, only identity-specific risk factors (i.e., orientation-based victimization) were found to mediate the relationship between gender identity and psychological functioning. For protective factors, no significant moderators emerged. However, positive, promising effects for self-esteem, school connectedness, and social support were observed. Clinical implications and future directions are discussed and include assessing identity-specific risk, tailoring services to support promotive factors such as self-esteem, and increasing attention to protective factors in the research literature. Relevant terminology as outlined by the American Psychological Association is presented in Appendix A (APA 2015a; 2015b).

Introduction

Research has shown sexual and gender minority (SGM) adolescents are at increased risk of psychological problems relative to their cis-heterosexual peers (Russel, 2005; Savin-Williams, 2014). Most concerningly, SGM adolescents have been repeatedly shown to be significantly more likely to endorse depressive symptoms, suicidal ideation, and past-year medically serious suicide attempts than cis-heterosexual adolescents (Russell & Joyner, 2001; Eisenberg et al., 2017; Kann et al., 2016; 2018). The increased risk of psychological maladjustment among SGM youth is believed to be the result of chronic exposure to greater stressors combined with less access to protective resources (Field, Behrman, & Institute of Medicine, 2011). Together, these factors exacerbate stressors associated with typical adolescent development, thereby increasing the likelihood of psychological problems among SGM youth (Meyer, 2003; 2015).

Disparities in physical and psychological health outcomes between SGM and cis-heterosexual populations have been documented in the literature since the early 1970s. However, findings from early research have contributed to a body of literature that has arguably overemphasized individual-level risk (Russell, 2005; Savin-Williams, 2014). Early studies with SGM populations were limited to small samples of white homosexual men who presented to clinical settings in crisis, yielding a stark portrait of non-heterosexual experiences that were characterized by dire suffering and high-risk behavior (Roesler & Deisher, 1972; Savin-Williams, 2014). The findings from these early studies were generalized to all non-heterosexual individuals, resulting in the perception that non-heterosexual orientations are directly predictive of negative psychological outcomes (Savin-Williams & Cohen, 2015). Contemporary research with sexual minority and more recently, gender minority, youth arguably remains dominated by risk, with far less attention paid to the factors that may promote resiliency (Russell, 2005; Field

et al., 2011). As a result, far less is known about the relative influences of risk and protective factors on mental health outcomes among SGM youth.

Previous research has made it abundantly clear that SGM youth are at greater risk of poorer psychological outcomes than youth who are within the sexual and gender majority. However, researchers have recently begun to question whether these differences are as significant as initially believed (Russell, 2005). In addition to the historical overemphasis on risk relative to resiliency, several methodological issues have been identified in existing literature with SGM youth that may reduce the generalizability and clinical applicability of previous findings. Therefore, the purpose of the proposed study is to evaluate the relative influence of risk and protective factors among SGM youth while addressing the shortcomings of the existing literature.

Disparities in Mental Health Between SGM & Cis-Heterosexual Youth

In recent years, a growing number of nationally representative studies have evaluated health outcomes and behaviors among sexual minority adolescents relative to their heterosexual peers. The National Longitudinal Study of Adolescent Health (Add Health) was among the first nationally representative studies to include items about sexual orientation. Measures of sexual orientation included self-reported same-sex romantic attractions and descriptions of recent romantic relationships (Russell & Joyner, 2001). The Center for Disease Control's (CDC) national Youth Risk Behavior Surveillance System (YRBSS) has included items purporting to measure sexual minority status since 2015. The questions include a one-item measure of sexual identity (i.e., *heterosexual (straight), gay or lesbian, bisexual,* or *unsure*) and sex of sexual contacts (Kann et al., 2016; 2018). Neither study has yet to include items assessing gender variant identities.

The results of both nationally representative studies have consistently showed that sexual minority youth are significantly more likely to endorse suicidal ideation and past-year suicide attempts than their peers (Russell & Joyner, 2001; Kann et al., 2016; 2018). For example, the 2015 and 2017 CDC YRBSS found that sexual minority youth were twice as likely as cis-heterosexual youth to report feeling sad or hopeless and more than three times as likely to report making a suicide plan, attempting suicide, or making a medically serious suicide attempt in the past year (Kann et al., 2016). The results from the 2017 YRBSS study showed a marginal decrease in risk across all indicators relative to the 2015 YRBSS, although suicidal ideation rates were not significantly different across studies (Kann et al., 2018).

In the first large-scale, population-based study of health disparities between transgender or gender nonconforming (TGNC) youth and their cisgender counterparts, Eisenberg and colleagues (2017) demonstrated that self-identified TGNC youth are significantly more likely to report current symptoms of depression, and past-year self-harm, suicidal ideation, and suicidal attempts than their cisgender peers. Among TGNC youth, birth-assigned females reported experiencing significantly greater emotional distress across all four indicators relative to birth-assigned males. Gender identity was measured by two items that assessed birth-assigned sex (i.e., male or female) and gender identity (i.e., whether or not an individual identified as gender variant; Eisenberg et al., 2017). The results of this study suggest that the disparities in mental health outcomes between TGNC youth and cisgender youth are at least as significant as those found between sexual minority youth and heterosexual youth. Although far less is known about the differences in risk between TGNC and cisgender sexual minority youth, there is emerging evidence that TGNC youth are at elevated risks for depressive symptoms and suicidal thoughts

and behavior relative to cisgender sexual minority youth (Fox, Choukas-Bradley, Salk, Marshal, & Thoma, 2020).

Collectively, the findings from large-scale epidemiological studies have consistently shown that SGM youth are at a greater risk for mental health concerns relative to their cis-heterosexual counterparts (Rusell & Joyner, 2011; Eisenberg et al., 2017; Kann et al., 2016; 2018). Most of the existing literature has focused on depression and suicidality; however, fewer have evaluated the prevalence of other psychopathologies within this population. Studies with small community samples have suggested that SGM youth are at increased risk of anxiety-related disorders (e.g., Social Anxiety Disorder, Generalized Anxiety Disorders, PTSD) and externalizing problems (e.g., conduct problems; de Vries, Doreleijers, Steensma, & Cohen-Kettenis, 2011), but inconsistencies have been noted (Mustanksi et al., 2010; Field et al., 2011; Mustanski & Fisher, 2016). Nevertheless, there remains substantial evidence that disparities in well-being exist between SGM youth and their cis-heterosexual peers. A substantial body of literature has focused on the risk factors that may be associated with this disparity; however, fewer have investigated the promotive factors that may protect against poorer outcomes among SGM youth (Field et al., 2011; Russell & Fish, 2016; Johns, Beltran, Armstrong, Jayne, & Barrios, 2018).

Risk & Protective Factors Among SGM Youth

In general, risk and protective factors are both multidimensional constructs that operate at several contextual levels (i.e., individual, interpersonal, societal; Russell, 2005). Optimal outcomes are not achieved simply through the absence of risk or the presence of protective factors. Rather, risk and protective factors reciprocally intersect with individual, social, and cultural characteristics in ways that either promote or encumber optimal development. Minority

stress, or the chronic exposure to stressors unique to one's affiliation with a stigmatized minority group, has been identified as a potential mechanism for the disparities in mental health outcomes among SGM youth. Meyer's (2015) minority stress model highlights three processes of relevance to SGM individuals. First, direct or indirect exposure to external stressful events or conditions (e.g., bullying, victimization, harassment) contributes to an expectation that these events may occur in the future. Anticipation of future events fosters vigilance for indicators of hostility or negativity. Over time, chronic exposure to direct or indirect stressors results in an internalization of negative societal attitudes, which increases the risk of negative mental health outcomes. Through this process, prejudice and stigma may result in adverse health outcomes, including mental health problems (Meyer, 2003; Meyer, 2015; Meyer & Frost, 2013).

Risk Factors

Consistent with minority stress theory (Meyer, 2003; 2015), previous research has shown that SGM youth report experiencing more stressors than their cis-heterosexual peers (Field et al., 2011). Stressors unique to SGM populations can be organized into three broad domains: victimization, social factors, and internal factors (Hall, 2018).

Victimization. Research has consistently shown that SGM persons report greater rates of victimization (e.g., physical violence, sexual assault, bullying, and harassment) than cis-heterosexuals (Wolf, Kessel, Palfrey, & DuRant, 1998; Austin et al., 2008; Mustanski, Newcomb, & Garofolo, 2011; Garofolo, McLaughlin, Hatzenbuehler, Xuan, & Conron, 2012; Kosciw, Greytak, Palmer, & Boesen, 2014; Kosciw et al., 2016). Furthermore, SGM persons are at increased risk of experiencing polyvictimization, which is defined as experiencing 15 or more different forms of victimization (Finkelhor, Omrod, & Turner, 2009). This is particularly concerning because experiencing multiple forms of victimization has been shown the be the

strongest predictor of negative outcomes, regardless of the specific type of victimization experienced (DeHart, 2009; Sterzing et al., 2017). Relative to adults, research regarding victimization among SGM adolescents is limited, due, in part, to ethical concerns (e.g., mandated reporting laws; Mustanksi, 2011). As such, peer-victimization, such as bullying and school-based harassment are among the most commonly research forms of victimization among SGM youth (Field et al., 2011).

The general bullying literature has shown that bullying victimization is associated with increased risk for psychological concerns, including depression and anxiety (Arseneault, Bowes, & Shakoor, 2010; Simone, Smith, & Blumberg, 2013; Benedict, Vivier, & Gjelsvik, 2015; Waasdorp & Bradshaw, 2015). Unsurprisingly, bullying and at-school peer victimization has also been linked to increased risk for depression and suicidality among SGM youth (Bontempo & D'Augelli, 2002; Friedman, 2006; Fischer, 2011; Heck, Flentje, & Cochran, 2011; Russell et al., 2011; 2014; Hatchel, Valido, Pedro, Huang, & Espelage, 2018). In addition to bullying, SGM youth have been shown to be at risk of experiencing identity-specific discrimination in the school environment. In turn, identity-specific victimization has been associated with reduced self-esteem and increased depressive symptoms even when victimization is accounted for (Kosciw et al., 2016; Hatchel et al., 2018). The effects of identity-specific bullying and discrimination extend beyond mental health domains, as students who are perceived to be LGBTQ+ are more likely to underachieve, miss school due to safety concerns, receive disciplinary action at school, and report less support from teachers (O'Shaughnessy, Russell, Heck, Calhoun, & Laub, 2004; Aragon, Poteat, Espelage, & Koening, 2014).

Social Factors. SGM youth have been shown to be at increased risk of rejection from their loved ones because of their sexual orientation or gender identity (Hall, 2018; Pew Research

Center, 2013). Social rejection has been shown to negatively affect psychological outcomes among SGM youth. For example, parental rejection and negative parental responses to sexual or gender identity disclosure have been associated with depression, suicidality, substance use, and risky sexual behavior (Savin-Williams, 1994; D'Augelli, Hershberger & Pilkington, 1998; D'Augelli et al., 2001; D'Augelli, 2002; Ryan, Huebner, Diaz, & Sanchez, 2009; Willoughby, Doty, & Malik, 2008; Dickenson & Huebner, 2015). The effects of parental rejection in adolescence have been shown to affect psychological functioning well into adulthood (Ryan, et al., 2009; Puckett, Woodward, Mereish, & Pantalone, 2014) and extend beyond mental health domains. For example, family conflict and parental disapproval are among the most commonly reported reason for homelessness among SGM youth (Rew, Whittaker, Taylor-Seehafer, & Smith, 2005; Durso & Gates, 2012). This is particularly problematic because of the extremely high rates of homelessness among SGM youth. Although SGM youth comprise 5-8% of the general U.S. population, nearly 40% of homeless youth are SGM (Durso & Gates, 2012).

Internal Factors. Internal factors associated with suicidality among SGM youth include identity-specific risk factors (e.g., internalized homonegativity) in addition to universal risk factors (e.g., hopelessness and impulsivity; Russell & Joyner, 2001; Hill & Petitt, 2012; Mustanski & Liu, 2013). Several studies have shown that these internal factors may play a greater role in the development and maintenance of internalizing problems among SGM youth than victimization or social factors (Hill & Pettit, 2012; Baams, Grossman, & Russell, 2016). For example, Baams and colleagues (2016) found that perceived burdensomeness and perceived thwarted belonging mediated the associated between sexual orientation victimization and depression (Baams et al., 2016). The results from this study suggest that internal factors may account for increased risk over and above other identified risk factors, such as victimization.

SGM youth may experience risk factors specific to their sexual orientation and gender identity, such as internalized homonegativity. Internalized homonegativity refers to negative feelings about one's sexual identity (Herek, 2000; Willoughby et al., 2008). This may occur as a result of developing in a gendered and heterosexist society and may be especially pronounced if homonegativity is expressed within the immediate and broader social contexts (Williamson, 2000; Meyer, 2003). Internalized homonegativity has been shown to moderate mental health outcomes, particularly depressive and anxious symptoms and suicidality (D'Augelli, Grossman, Hershberger, & O'Connell, 2001; Newcomb & Mustanski, 2010). Naturally, receiving persistent, negative messages about aspects of one's identity would be associated with negative mental health outcomes. However, internalized homonegativity is also believed to contribute to identity uncertainty and identity concealment, which have also been linked to poorer psychological outcomes (Willoughby et al., 2010; Puckett et al., 2017; Puckett & Levitt, 2015).

Protective Factors

Relative to research on risk factors for psychological problems among SGM youth, far fewer studies have investigated the factors that may protect youth from negative outcomes (Field et al., 2011; Hall, 2018; Johns et al., 2018). Although limited, existing studies have identified several promotive factors across community, interpersonal, and individual contexts (Johns et al., 2018).

Community. Supportive school environments may be especially protective for SGM youth, especially since adolescents spend much of their time at school (Russell & Fish, 2016). Gay-Straight Alliance (GSAs) groups are school-based, student-run clubs that aim to reduce prejudicial behaviors and identity-based harassment within the school environment (Goodenow, Szalacha, & Westheimer, 2006). Recent research has suggested that students who attend schools

with GSAs report greater feelings of safety and less risk of depressive symptoms, substance use, and suicidal ideation (Goodenow et al., 2006; Toomey, Ryan, Diaz, Card & Russell, 2011; Poteat et al., 2012; Russell & Fish, 2016). The benefits of GSA presence at school has been shown to extend well into adulthood. For example, Toomey and colleagues (2011) showed that the presence of a GSA during high school was negatively associated with reduced high-school drop-out risk, reduced depression and low self-esteem in young adulthood, and greater educational attainment in college. Moreover, participating in a GSA was shown to moderate the potential negative effects of identity-based victimization on depressive symptoms (Toomey et al., 2011).

Research has also shown a positive effect of anti-discrimination laws and policies that specifically address LGBTQ+ issues (Russell & Fish, 2016). For example, Kosciw and colleagues (2014) found that SGM youth who live in a state with clearly defined, LGBTQ-inclusive anti-bullying laws experience significantly less homophobic victimization than individuals who do not (Kosciw et al., 2014). Additionally, attending a school with LGBTQ-inclusive curricula has been associated with improved psychological adjustment, safety, feelings of acceptance, and reduced victimization in school (Toomey et al., 2011; GLSEN, 2011; Kosciw et al., 2012; Snapp et al., 2015). Furthermore, several studies have shown that mandating that school staff attend LGBTQ-specific trainings is associated with increased staff understanding and empathy and protections against identity-based peer victimization (Greytak, Kosciw, & Boesen, 2013; Greytak & Kosciw 2014; Russell & Fish, 2016). Collectively, these policies promote a more inclusive educational setting, which may also be associated with peripheral effects, such as increased support from peers and friends (Kosciw et al., 2012).

Interpersonal. Social support has been shown to be associated with positive mental health and well-being (Johns et al., 2018; Russell & Fish, 2016; Shilo & Savaya, 2011).

Compared to general social support, identity-specific support from family or friends has been shown to be particularly beneficial (Ryan et al., 2009; Rosario et al., 2009; Doty, Willoughby, Lindahl & Malik, 2010). Snapp and colleagues (2015) showed that family, friend, and community supports were associated with improved well-being in young adulthood. However, retrospective family support was the strongest predictor of well-being when other forms of support were held constant (Snapp, Watson, Russell, Diaz, & Ryan, 2015). Other studies have also shown that parental support has been linked to increased self-esteem, decreased depressive symptoms, and reduced risk of suicidal ideation (Ryan et al., 2009). There is some evidence that having friendships with other SGM youth may also be uniquely protective for SGM youth, as this has been shown to moderate the effects of identity-specific victimization (Urie, 2005). However, studies with TGNC youth have shown that peer support has either no or small effects on well-being (Johns et al., 2018). Although this may be due to differences between sexual minority and gender minority youth, this discrepancy is likely a reflection of the limited available research with exclusively TGNC samples (John et al., 2018).

Very few studies have investigated the factors that may be uniquely protective for TGNC youth. However, there is some evidence that the ability to use a chosen name as opposed to a birth-assigned name may improve well-being among TGNC youth. For example, Russell and colleagues (2018) showed that chosen name use was associated with reduced depression, suicidal ideation, and suicidal behavior in a community sample of TGNC youth. Youth who were able to use their chosen name across multiple contexts (i.e., school, work, with friends, and with family) were shown to be at the lowest risk; however, the ability to use a chosen name in only one context was associated with reduced risk. The positive effects of using a chosen name for TGNC

youth remained protective once demographic factors and social support were held constant (Russell, Pollitt, Li, & Grossman, 2018).

Individual. Individual factors, such as self-esteem and self-efficacy have been shown to be associated with health and well-being (Bopp, Juday, & Charters, 2004; Garofolo et al., 2006; Johns et al., 2018). For example, high self-esteem has been shown to be linked to decreased depressive symptoms, suicidality, and risky behavior (Bobb, Juday, & Charters, 2004; Garofolo et al., 2006); however, findings with SGM youth have been mixed (Grossman & D'Augelli, 2007; Grossman, D'Augelli, & Frank, 2011). Although limited, recent research has suggested that self-advocacy skills, problem-solving skills, and the ability to use the internet to identify resources, educational materials, and health information are uniquely protective for SGM youth (Goodrich, 2012; Singh, 2013; Jones & Hillier, 2013).

Research has also suggested that identity disclosure (i.e., revealing one's sexual orientation or gender identity to others) may have protective benefits for SGM youth. Studies with adult samples have shown that disclosure in adolescence is positively associated with well-being, psychosocial adjustment, and identity-specific social supports in young adulthood (Morris, Waldo, Rothblum, 2001; Luhtanen, 2002; D'Augelli, 2002). Russell and colleagues (2014) showed that coming out in adolescence was associated with positive well-being and lower depression symptoms after accounting for the association between school victimization and later adjustment. In contrast, those who attempted to conceal their identity were still vulnerable to victimization, but did not appreciate the same benefits (Russell, Toomey, Ryan, & Diaz, 2014). However, the benefits of identity disclosure may not be experienced by a number of SGM youth as many report fears of disclosing their identities to others because of assumed risk of verbal and

physical harassment (D'Augelli et al., 2002; Savin-Williams & Reams, 2003; Potoczniak et al., 2009; Kosciw et al., 2014).

Collectively, research with SGM youth to date has provided a foundation for risk and resiliency research with this population. Specifically, the work in this area has allowed for the identification of risk factors and, to a lesser extent, protective factors that may affect risk outcomes. However, a number of methodological issues within the SGM literature have been identified. These issues may limit generalizability and clinical applicability of findings.

Methodological Issues

In recent years, a small but growing number of studies have evaluated psychological functioning, risk, and resiliency with community-based samples of SGM adolescents. However, a majority of the available literature with SGM youth is derived from a small body of nationally representative surveys (e.g., Add Health; CDC YRBSS; State-level YRBS). These nationally representative studies have played a critical role in highlighting the unique mental health needs of sexual and gender minority youth. However, these studies have also been shown to have several notable methodological issues. For example, these studies typically utilize brief symptom scales to measure indicators of psychopathology (Mustanski, Garofolo, & Emerson, 2010; Field et al., 2011). Although useful in measuring self-reported distress, these scales may have low positive predictive value in estimating clinical diagnoses in nonclinical samples and minority populations (McDowell, 2006). Additionally, populations with greater exposure to stressors may report increased distress without meeting criteria for clinical diagnoses (Mustanksi et al., 2010; Herge, Landoll, & La Greca, 2013). As such, the results of these studies may overestimate the risk of psychological problems among SGM youth.

Relative to symptom scales, structured diagnostic interviews provide more reliable data with regard to clinical diagnoses. However, few studies have used diagnostic interviews to assess mental health status among SGM youth. Mustanksi and colleagues (2010) conducted diagnostic interviews with a community sample of LGBT youths aged 16 to 20 years. The researchers found that LGBT youths were more likely to meet the diagnostic criteria for psychological diagnoses than national estimates of cis-heterosexual youth. However, the authors noted that these rates, while higher than national averages, are comparable to prevalence rates among representative samples of racial and ethnic minority youths in urban settings (Mustanksi et al., 2010). Other studies that have utilized this methodological approach have yielded similar results (e.g., de Vries et al., 2011). Although limited, the findings from such studies suggest that the disparities in mental health outcomes between SGM and cis-heterosexual youth may not be as pronounced as initially believed.

Approaches for comparing SGM youth to cis-heterosexual youth may also inflate estimates of mental health risk. Most existing studies collapse subgroups of SGM into one unit, resulting in two comparison groups: cis-heterosexual youth and non-cis-heterosexual youth. This practice is problematic because it fails to consider the substantial variability in experiences across unique SGM identities. In fact, a number of studies have shown that bisexual youth are at the greatest risk of maladjustment when compared to youth who identify as lesbian/gay or heterosexual (Hershberger, Pilkington, & D'Augelli, 1997; Robin, Brener, Donahue, Hack, Hale, & Goodenow, 2002; Saewyc et al., 2007; Marshal et al., 2011; Talley et al. 2014). When these heterogeneous groups are combined, the resulting estimate of risk may disproportionately represent the experiences unique to a given subgroup (Saewyc et al., 2007). Therefore, the

discrepancy in risk between SGM-identified and cis-heterosexual youth may actually reflect the relative risk between cis-heterosexual youth and a specific SGM subgroup.

Although several studies have suggested that bisexual youth are at an increased risk relative to other SGM youth, some inconsistencies have been noted. For example, Mustanksi and colleagues (2010) did not find bisexually identified youth to be at a greater risk of meeting diagnostic criteria for a mental health disorder. In fact, they found that bisexually identified youths were actually less likely to meet criteria for any diagnoses relative to gay or lesbian youth (Mustanksi, Garofalo, & Emerson, 2010). In a secondary analysis of 9 population-based surveys, Saewyc and colleagues (2007) showed that while bisexual youth were at increased risk for suicidality and suicide attempts relative to heterosexual peers, the results compared to gay and lesbian peers were mixed. While the results from some surveys indicated that all bisexual youth were at greater risk, others found only bisexual girls to be at increased risk. Still others found this pattern to be true among both bisexual and lesbian girls, but not bisexual or gay boys. Additionally, two of the studies failed to demonstrate any difference between sexual minority youth (Saewyc et al., 2007). It is possible that variability in the metric used to define sexual orientation and gender identity may be associated with these discrepant findings.

Previous studies have demonstrated substantial inconsistency in the approaches used to define and assess sexual orientation (e.g., self-identity labels, same-sex attraction, same-sex sexual encounters, or some combination of one or more metric) and gender identity (e.g., self-identity labels, gender identity, gender expression, or a combination). For example, while the Add Health study classifies sexual orientation by attraction and previous romantic relationships, the CDC YRBSS study classifies sexual orientation through the use of orientation labels and sex of sexual contacts (Russell & Joyner, 2001; Kann et al., 2016; 2018). The use of orientation

labels has been shown to be problematic because participants' use of labels may not be congruent with researchers' definitions or interpretations (Patterson, 1995; Russell, Clarke, & Clary, 2009). Furthermore, measuring sexual orientation by same-sex sexual behaviors may artificially exclude those adolescents who may identify as SGM, but who have not yet engaged in any sexual behaviors (Russell, Clarke & Clary, 2009).

In recent years, a growing number of researchers have called for consistent use of more dimensional measures of sexuality and gender identity in place of assessing self-identified labels. For example, Vrangalova & Savin-Williams (2012) demonstrated support for a measure of sexual orientation using a 5-point Likert scale (i.e., 100% homosexual, mostly homosexual, bisexual, mostly heterosexual, 100% heterosexual). The findings from this study indicated that self-identification using this measure reflected self-reported sexual attraction, sexual behaviors, and sexual identity labels. In other words, individuals who identified as 100% typically self-reported sexual attraction and behavior exclusively to the opposite sex and identified as gay/lesbian. The findings from this study and similar studies have indicated that this approach to assessing sexual identity is a viable and reliable alternative to traditional, more dichotomous approaches (Vrangalova & Savin-Williams, 2012; Savin-Williams, Joyner, & Rieger, 2012; Loosier & Dittus, 2012). The consistent use of such measures would allow for greater interpretability and generalizability of findings across studies.

Approaches to identifying and obtaining samples for research is another significant methodological challenge and source of variability in existing research. Previous studies have noted significant difficulties identifying a sufficient number of SGM youth who are able or willing to participate in research (IOM, 201l; Johns et al., 2018). As a result, many studies draw their samples from LGBTQ-inclusive programs, such as community-based support or pride

groups or sexuality and/or gender identity clinics. This practice may artificially skew results, as participation in these groups suggest access to promotive resources (e.g., community support, family/peer support). Furthermore, such facilities are typically located in LGBTQ-inclusive communities, which has limited much of the research with SGM youth to a small number of geographic areas (Puckett et al., 2017). Lastly, much of the research regarding risk and protective factors with SGM youth is conducted separately from mainstream adolescent research, suggesting that information learned from one population is not applicable to the other (Diamond, 2003). This is problematic because this may exacerbate estimates of disparities between SGM adolescents and their cis-heterosexual peers. More concerningly, this practice may result in artificially attributing risk to simply having a non-majority sexual or gender status (Mustanski, 2011). Additionally, many ethical mandates require parental consent for adolescent participation; however, this may result in restricted samples, as many youths may be unable or unwilling to obtain their parents' permission to participate (Mustanski, 2011; Macapagal, Coventry, Arbeit, Fisher, & Mustanski, 2017). As such, the perspectives of SGM youth who may be at the greatest risk due to lack of parental support are not included in many studies due to fear of being "outed" by their participation (Macapagal et al., 2017). Although a number of adolescent health organizations have presented policies in support of waivers of parental consent in SGM youth research (e.g., Adolescent Society of Medicine, 2011; APA Council of Representatives, 2018), it remains challenging for researchers to secure waivers of parental consent through regulatory agencies (Fisher & Mustanski, 2014; Mustanski & Fisher, 2016). In fact, a number of researchers have indicated that they specifically avoid conducting research with SGM youth due to the perceived difficulties navigating their institution's IRBs (Mustanksi, 2011). Subsequently, SGM adolescents remain severely underserved within existing literature (Mascapagal et al., 2017).

Current Study

A significant body of literature has investigated the risk factors that may account for the disparities in mental health outcomes observed between SGM youth and their cis-heterosexual peers. However, fewer studies have investigated the protective factors that may minimize the risk of mental health problems among SGM youth. Far fewer studies have evaluated risk and protective factors among TGNC youth. Furthermore, a number of methodological issues have been identified in the existing literature. These issues may reduce the interpretability of findings across studies and reduce the generalizability of findings to the broader population of SGM youth, which, in turn, makes it difficult to integrate lessons learned from research into clinical practice. These methodological challenges, combined with the historical emphasis of risk, may yield overestimates of presumed risk attributable to one's sexual or gender minority status.

This study seeks to examine the relative influence of risk and protective factors among SGM youth. The aims of this study are three-fold. First, the study seeks to assess the mediating role of risk factors on psychological functioning among SGM youth. That is, this study aims to demonstrate that risk factors account for a significant portion of the variance in the relationship between sexual and gender identity and psychological functioning. Second, this study seeks to assess whether the presence of protective factors moderates the relationship between sexual and gender identity and psychological functioning. That is, this study aims to demonstrate that sexual and gender identity are only associated with worse mental health outcomes when protective factors are not present. Third, this study aimed to address several issues observed within the current body of literature. For example, the proposed study takes steps to address the barriers to research participation among SGM youth by allowing SGM youth to participate without

disclosing their SGM status to their parents or peers. Research questions and hypotheses are detailed below.

Research Question 1: To what extent do identity-specific risk factors mediate the relationship between sexual orientation and gender identity and psychological functioning?

Hypothesis 1. It is hypothesized that identity-specific risk factors will at least partially mediate the relationship between sexual orientation and gender identity and psychological functioning. That is (a) both sexual orientation and gender identity is hypothesized to significantly predict depressive and anxious symptoms; (b) identity-specific risk factors are hypothesized to be significantly associated with poorer psychological functioning; and (c) identity-specific risk factors will account for a significant portion of the covariance in the relationship between psychological functioning, sexual orientation, and gender identity. This hypothesis is consistent with previous research that has shown identity-specific risk factors (e.g., identity-specific victimization) are associated with psychological problems (e.g., depression, anxiety) among sexual minority youth and gender minority youth.

Research Question 2: To what extent do protective factors moderate the relationship between sexual orientation and gender identity and psychological functioning?

Hypothesis 2. It is hypothesized that protective factors will moderate the relationship between sexual orientation and gender identity and psychological functioning. Specifically, the interaction of sexual orientation, gender identity, and protective factors will be significantly associated with psychological functioning, such that sexual orientation and gender identity are only related to worse functioning in the absence of protective factors.

Method

Participants

Participants included 158 sexual minority and/or gender variant adolescents between the ages of 14 and 17 years (M = 15.33; SD = 1.14). Nearly all participants lived at home with their parent(s) (94.9%) and most did not qualify for free or reduced lunch (63.3%). A majority of participants' birth-assigned sex was male (76.6%) and most identified as White/Caucasian (76.6%). Most self-identified as cis-male (66.5%) and 16.4% identified as gender-variant. Using the forced-choice Likert scale for sexual orientation, most participants identified as "100% homosexual or gay or lesbian" (39.9%) or "Bisexual/Pansexual" (34.2%). Qualitatively, participants reported substantial variability in the labels used to describe both their sexual orientation (e.g., androsexual, omnisexual, queer, not straight, genderblind, transbian, panromantic) and gender identity (e.g., demigirl/demiboy, non-binary, agender, queer). Additionally, many participants indicated that they do not identify with one particular term, instead using multiple terms to describe their identities (e.g., "homoromantic asexual," "biromantic heterosexual," "queer, questioning, bisexual, pansexual, genderblind"). Several participants failed to make use of any given term, instead describing their identities qualitatively (e.g., "girl who likes girls," "romantically attracted to males, but physically attracted to some females," "strong preference for men"). Table 1 presents the demographic characteristics of the participants.

Table 1. Demographic Characteristics

	Total Sample *N = 158*
Age (in years)	
Mean (SD)	15.33 (1.14)
Range	14 – 17

(Table cont'd.)

(cont'd.)

Racial Identity	***n***	***%***
White/Caucasian	121	76.6
Multiracial	15	9.5
Asian/Pacific Islander	8	5.1
Black/African American	3	1.9
Native American	2	1.3
Other	5	3.2
Did not disclose	4	2.5
Ethnic Identity		
Hispanic/Latinx	28	17.7
Not Hispanic/Latinx	126	79.7
Did not disclose	4	2.5
Sex Assigned at Birth		
Male	121	76.6
Female	37	23.4
Gender Identity		
Cis-Male	105	66.5
Cis-Female	27	17.1
Gender Variant (Male at Birth)	16	10.1
Gender Variant (Female at Birth)	10	6.3
Sexual Orientation		
100% Heterosexual or Straight	5	3.2
Mostly Heterosexual or straight	4	2.5
Bisexual/Pansexual	54	34.2
Mostly homosexual or gay or lesbian	29	18.4
100% homosexual or gay or lesbian	63	39.9
Asexual/Aromantic	3	1.9
Home Environment		
Lives with parent(s)	150	94.9
Lives with another adult	4	2.5
Other	4	2.5
Reduced Lunch		
No	100	63.3
Yes	29	18.4
Not sure	29	16.5
Homeschooled/No School	3	1.9

Procedure

Participants between the ages of 14 and 17 were recruited through internet message boards, list servs, and online communities. Cis-heterosexual adolescents were not excluded from participating. A waiver of parental consent was obtained for this study in an effort to maximize

the opportunity for SGM youth to be represented in research that they would otherwise be excluded from, which is consistent with the Belmont (1978) principle of justice. Requiring parental consent may have posed a principle risk of participating in this study for some youth (e.g., risk of disclosure). Additionally, requiring parental consent may have excluded participants who are unable or unwilling to provide their parents' contact information. Several safeguards were established in an effort to protect participants' rights as research participants. Prior to participation, participants reviewed the consent form, which included information about the purpose of the study and risks and benefits for participating (see Appendix C). After reviewing the consent form, participants demonstrated capacity to consent by completing a modified evaluation to consent form (See Appendix D). The modified evaluation to consent form is consistent with recommendations by Dunn and Jeste (2001) and the UCSD Task Force on Decisional Capacity (2003). Participants who were unable to demonstrate capacity to consent were excluded from participation, and participants who demonstrated capacity to consent completed all study materials electronically. Those who completed the study were given the option to be entered into a raffle drawing for one of several gift cards. All survey data were anonymous, as identifying information was not linked to survey responses in any way.

These procedures were extensively reviewed and approved by Louisiana State University's Institutional Review Board (IRB #4076; see Appendix B).

Measures

Demographics. Each participant was asked to provide their age, grade, race/ethnicity, and home environment (e.g., lives with parent(s); lives in group home). Eligibility for free or reduced lunch was also assessed in order to obtain estimates of families' socioeconomic status. All measures are presented in Appendix E.

Sexual Orientation. Two items were used to assess sexual orientation. First, participants completed a 1-item measure of sexual orientation (i.e., *Which of the following best describes your sexual orientation?*). Responses were measured on a 5-point Likert scale (1 = 100% *heterosexual*; 2 = *mostly heterosexual*; 3 = *bisexual/pansexual*; 4 = *mostly homosexual*; 5 = *100% homosexual*). This measure is consistent with recommendations for assessing sexual orientation by Loosier & Dittus (2010) and the Society for Adolescent Medicine (2003). Research suggests that this approach may have greater reliability and validity than assessing identity labels alone (e.g., gay, lesbian, bisexual; Loosier & Dittus, 2010). Participants also completed a free-response question in order to obtain a qualitative description of their sexual orientations.

Gender Identity. Gender identity was assessed using the 2-step Approach as recommended by the Gender Identity in U.S. Surveillance group (The GenIUSS Group, 2014). The first item (i.e., step) assessed birth assigned sex (i.e., *Male, Female*), and the second item assessed gender identity (i.e., *Male, Female, Trans Male/Trans Man, Trans Female/Trans Woman, Genderqueer/Gender Non-Conforming, Different Identity*). Participants also completed a free-response question in order to obtain a qualitative description of their gender identities.

Psychological Functioning. Psychological functioning was assessed through two measures: one assessing symptoms of depression and one measure assessing symptoms of anxiety. These measures were selected because of their use in nationally representative surveys with SGM youth (i.e., Add Health; YBRSS; Russell & Joyner, 2001; Kann et al., 2016; 2018), thereby increasing potential comparability between studies.

Depressive symptoms were assessed by the 20-item *Center for Epidemiological Studies Depression* (CES-D). This measure has been shown to demonstrate good internal consistency

with adolescents (α =0.85; Radloff, 1977; 1991). Each response is measured on a 4-point scale (*0 = Never or rarely, 1 = Sometimes, 2 = A lot of the time, 3 = Most of the time or all of the time*). Items are summed to produce a total score in which higher scores indicate higher levels of depressive symptoms.

Anxiety Symptoms were assessed by the 7-item *Generalized Anxiety Disorder* (GAD-7) scale. The GAD-7 demonstrates good to high internal consistency, with Cronbach's α ranging from 0.89 to 0.92 (Spitzer, Kroenke, Williams, & Lowe, 2006; Lowe et al., 2008). Each response is measured on a 4-point scale (0 = *not at all,* 1 = *several days*, 2 = *more than half the days*, 3 = *nearly every day*). Items are summed to produce a total score in which higher scores indicate higher levels of anxious symptoms.

Risk Factors. Risk factors included measures of bullying, identity-specific victimization, and family conflict. These factors were selected because these have been repeatedly shown to be associated with poorer outcomes among SGM youth.

Bullying. The 24-item *Multidimensional Bullying Victimization Scale* (MBVS) assessed frequency of general bullying victimization. Each response is rated on a 4-point Likert scale (0 = *never*, 1 = *sometimes*, 2 = *often*, 3 = *very often*). The MBVS yields a total score as well as 3 subscales: Indirect Bullying (bullying that occurs via other people or other mediums such as the internet), Direct Bullying (face-to-face bullying), and Evaluative Bullying (bullying that targets personal attributes). All three factors demonstrate good internal consistency estimates with Cronbach's α ranging from 0.88 to 0.94 (α = .89, Direct Bullying; α = .85, Indirect Bullying; α = .84, Evaluative Bullying; Harbin, Kelley, Piscitello & Walker, 2018).

Identity-Specific Victimization. Identity-specific victimization was assessed by 2 items. One item measured sexual orientation bullying (i.e., *… how often were you bullied, harassed, or*

intimidated at school because someone thought you were gay, lesbian, or bisexual (whether you are or are not)?). This item has been included in nationally representative studies (Kann et al., 2016; 2018). The second item is an adaptation of the first item and intends to measure gender identity or expression bullying (i.e., …*because of your gender identity or gender expression?*). For both items, frequency of bullying was rated on a 5-point Likert scale (0 = *0 times*, 1 = *1 time*, 2 = *2-3 times*, 3 = *about once a week*, 4 = *several times a week or more*).

Family Conflict. Family conflict was measured using the 5-item *Family Conflict Scale* developed by Semple and colleagues (1997; 2011). Respondents were asked to indicate how much conflict they have had with their parents in the past year about their lifestyle (e.g., *They don't accept you for who you are; They are critical of your lifestyle*). Frequency of family conflict was measured on a 4-point Likert scale (i.e, 0 = *No Disagreement to* 3 = *Quite a bit of disagreement*). This measure has been shown to demonstrate good internal consistency (Cronbach's α= 0.88; Semple, Strathdee, Zians, McQuaid, & Patterson, 2011).

Protective Factors. Protective Factors included school-based factors (i.e., academic functioning, school connectedness, and GSA presence), social factors (i.e., social support and outness), and individual factors (i.e., coping, self-esteem). Prior research has suggested that these factors have been shown to be associated with decreased risk of psychological problems among SGM youth.

Student Well-Being and Belongingness. The School connectedness (e.g., perceived school belonging) and Academic Efficacy (e.g., perceived academic success) subscales from the *Student Subjective Well-Being Questionnaire* (SSWQ; Renshaw, Long, & Cook, 2014) were used to assess indicators of youths' well-being at school. Each response is rated on a 4-point

Likert scale (1 = *almost never*, 2 = *rarely*, 3 = *sometimes*, 4 = *almost always*). All of the subscales of the SSWQ demonstrate at least adequate internal consistency (Cronbach's $\alpha > 0.70$).

GSA Presence. Participants indicated whether their schools have a Gay Straight Alliance (GSA) club (i.e., *Does your school have any clubs that promote LGBTQ+ equality, such as a Gay-Straight Alliance (GSA)?)* GSA presence was measured dichotomously (i.e., *yes* or *no*).

Social Support. The 50-item *Social Support for Children* (SSQC; Gordon-Hollingsworth, Thompson, Schexnaildre, Lai, & Kelley, 2016) assessed self-reported social support across multiple domains: family, relatives, nonrelative adults, siblings, and peers. Each response was rated on a 4-point Likert scale (0 = *Never or rarely true*, 1 = *Sometimes true*, 2 = *Often or very true*, 3 = *Always true*). The SSQC total scale and five subscales demonstrates high internal consistency (Cronbach's $\alpha = 0.89$ to 0.97).

Outness. Two items will be used to assess disclosure of sexual orientation and gender identity. These items are adapted from Wilkerson and colleagues' (2016) Single-Item Outness Indicator (*I would say that I am open (out) as a gay, bisexual, or a man attracted to other men).* This measure was shown to correlate with a validated, multi-item measure of outness ($r = 0.73$), internalized homonegativity ($r = -0.63$), and social attitudes toward homosexuality ($r = -0.38$). Adapted items assessed sexual orientation outness (*I would say that I am open (or out) to others about my true sexual orientation)* and gender identity (*I would say that I am open (or out) to others about my true gender identity)*. Responses were rated on a 5-point Likert scale (1 = *not at all open (out)* to 5 = *Open (out) to all or most people I know*). The purpose of adapting this measure is to (a) extend the measure to include gender identity and (b) have a measure that is acceptable for across sexual orientations (e.g., cis-heterosexual and non-cis-heterosexual youth).

Self-Esteem. The 10-item *Rosenberg Self-Esteem Scale* (Rosenberg, 1965) was used to assess positive and negative feelings about the self. Each response is rated on a 4-point Likert scale (0 = Strongly Disagree, 1 = Disagree, 2 = Agree, 3 = Strongly Agree). Higher scores on this measure indicates higher global self-esteem. This scale demonstrates good internal consistency (Cronbach's α = 0.89; Baumeister et al., 2003; Corcoran & Fischer, 1987).

Coping. Coping skills were assessed using the 13-item *Coping Scale* (Hambry, Grynch & Branyard, 2013). This scale assessed cognitive, emotional, and behavioral approaches to coping with challenges. A higher total score on this measure is indicative of higher levels of general coping. This measure has been shown to demonstrate good to excellent internal consistency (Cronbach's α= 0.88 to 0.91; Hambry, Grynch, & Banyard, 2013).

Results

Data Screening

Prior to analyses, data were examined using SPSS Statistics 25 software for accuracy of data entry, missing values, and adherence to the assumptions of linear and hierarchical linear model regressions. Linearity was assumed for regression models with dichotomous predictor variables. Where applicable, linearity was confirmed by partial regression plots and plots of studentized residuals against the predicted values. Independence of residuals and homoscedasticity was confirmed by inspecting plots of studentized residuals against unstandardized predicted values. There was no evidence of multicollinearity, as assessed by VIF values below 10. The assumption of dependent variable normality was met across analyses.

Twenty-eight participants were excluded from analyses due to ≥ 60% missing data values. Six participants did not demonstrate capacity to consent; therefore, their participation in the study was terminated. Missing data were observed among the remaining 158 participants included in the analyses; however, data appeared missing not-at-random (e.g., failing to complete final items of surveys). As such, cases with missing data were deleted list-wise from analyses when indicated.

Preliminary Analyses: Sexual Orientation, Gender Identity, and Psychological Functioning

Prior to primary analyses, sexual orientation was recoded into two dichotomous variables: (1) exclusively heterosexual/homosexual and (2) bisexual/pansexual. This approach reflects previous research that suggests individuals in the center of the sexuality spectrum (i.e., bisexual and/or pansexual) are at increased risk of negative psychological outcomes (Hershberger, et al., 1997; Robin et al., 2002; Saewyc et al., 2007; Marshal et al., 2011; Talley et al., 2014). Preliminary analyses were conducted to determine whether these groups significantly

differed across measures of psychological functioning. Welch t-tests showed higher depressive symptoms among individuals in the bisexual/pansexual group (n = 53; M = 32.91, SD = 13.83) relative to the exclusively heterosexual/homosexual group (n = 97; M = 30.84, SD = 12.62); however, this difference was not statistically significant, $t(98.94) = .90$, $p = .938$). Similarly, individuals in the bisexual/pansexual group also reported higher symptoms of anxiety (M = 10.26, SD = 5.52) than the exclusively heterosexual/homosexual group (M = 10.00, SD = 5.81); however this difference was also not significant, $t(112.32) = .27$, $p = .785$). Taken together, these results do not suggest a significant difference in depressive or anxious symptomatology across these sexual orientation groups.

Gender identity was also recoded into a dichotomous variable with two levels: (1) gender variant and (2) cis-gender. Welch t-tests were run to determine whether individuals in these groups significantly differed across measures of psychological functioning. Gender-variant individuals (n = 26; M = 39.15, SD = 9.52) reported significantly higher symptoms of depression than cis-gender individuals (n = 122; M = 29.76, SD = 13.16), $t(47.52) = 4.16$, $p < .001$. Significantly higher symptoms of anxiety were also observed among gender variant individuals (M = 12.31, SD = 5.45) relative to cis-gender individuals (M = 9.62, SD = 5.65), $t(37.34) = 2.27$, $p = .029$. Collectively, gender-variant individuals reported higher depressive and anxious symptomatology than cis-gender individuals.

Research Question 1: Risk Factors

Bivariate correlational analyses were conducted between psychological functioning (i.e., depressive and anxious symptomatology) and risk factors (bullying, identity-specific victimization, and family conflict). All risk factors were significantly correlated with symptoms of depression (r = .20 to .52). Similarly, all risk factors were significantly correlated with

symptoms of anxiety (r = .28 to .51) except for gender-based identity-specific victimization. Table 2 presents correlation coefficients.

Table 2. Bivariate Correlations for Depression, Anxiety, and Risk Factors.

Variable	**2**	**3**	**4**	**5**	**6**
1. Depression	.74**	.52**	.30**	.29**	.20*
2. Anxiety	-	.51**	.28**	.31**	.14
3. Bullying	-	-	.22**	.64**	.33**
4. Family Conflict	-	-	-	.12	.10
5. ID Victimization (SO)	-	-	-	-	.49**
6. ID Victimization (GI)	-	-	-	-	-

Note: *p <.05; **p < .01

In order to examine the first research question, Baron-Kenny mediation analyses (Baron & Kenny, 1986) were conducted to assess whether risk factors mediated the relationships between (1) sexual orientation and psychological functioning and (2) gender identity and psychological functioning. To assess for mediation, four regression analyses were conducted. Mediation may be assumed if the following four conditions are met: (1) whether a direct effect is observed between SO/GI and psychological functioning (regression 1); (2) whether SO/GI is related to risk factors (regression 2); (3) whether risk factors are significantly related to psychological functioning (regression 3); and (4) whether SO/GI remains a significant predictor of psychological functioning when risk factors are included in the model (regression 4). Analyses were conducted separately for sexual orientation and gender identity.

Sexual Orientation. Prior to regression analyses, correlations between sexual orientation, psychological functioning, and risk factors were examined. No significant correlations were observed between sexual orientation and depression, anxiety, or any of the risk factors. Correlation coefficients for sexual orientation, psychological functioning, and risk factors are presented in Table 3.

Table 3. Bivariate Correlations for Sexual Orientation, Anxiety, Depression, and Risk Factors

Variable	Depression	Anxiety	Bullying	Fam Con	ID Vict (SO)	ID Vict (GI)
Orientation	.08	.02	.03	.04	.001	.13

Note: *p <.05; **p < .01

Regression analyses were conducted to establish direct effects of sexual orientation on (1) depressive symptoms and (2) anxiety symptoms. As expected given correlational data, results of these analyses failed to support a direct effect of sexual orientation on symptoms of depression (R_2 = .006, F(1, 148) = .86, p = .355) or symptoms of anxiety (R_2 = .000, F(1, 146) = .07, p = .788). That is, sexual orientation was not significantly predictive of symptoms of anxiety or depression. As such, the first condition of mediation was not met, and analyses were not continued. Details for both regression analyses are presented in table 4.

Table 4. Direct Effects of Sexual Orientation on Psychological Functioning

Variable	*B*	*SE*	*β*	R_2	*Adj.* R_2	*F*	*df*	*p*
Sexual Orientation								
Depression	2.07	2.23	.08	.006	-.001	.86	1,148	.355
Anxiety	.260	.98	.02	.000	-.006	.07	1, 146	.788

Note: *p <.05; **p < .01; IV = Sexual Orientation; DV = Depression, Anxiety

Gender Identity. Correlations between gender identity, psychological functioning, and risk factors were examined prior to regression analyses. Gender identity was significantly correlated with symptoms of depression (r = .267; p = .001); anxiety (r = .180; p = .028); sexuality-based (r = .203; p = .015); and gender identity-based identity-specific victimization (r = .432; p < .001). Gender identity was not significantly correlated with bullying or family conflict. Correlation coefficients for gender identity, psychological functioning, and risk factors are presented in table 5.

Table 5. Bivariate Correlations for Gender Identity, Anxiety, Depression, and Risk Factors

Variable	Depression	Anxiety	Bullying	Fam Con	ID Vict (SO)	ID Vict (GI)
Gender ID	.27**	.18*	.08	.08	.20*	.43*

Note: *p <.05; **p < .01; Fam Con = Family Conflict; ID Vict (SO) = Orientation-based victimization; ID Vict (GI) = Gender-identity-based victimization.

Prior to mediational analyses, two separate regression analyses were conducted with gender identity predicting (1) anxiety and (2) depression. Results of both analyses showed statistically significant models for symptoms of depression (R^2 = .071, F(1, 148) = 11.37, p = .001) and symptoms of anxiety (R^2 = .032, F(1, 146) = 4.90, p = .028). Gender identity was a significant predictor of both symptoms of depression (B = 9.18; β = .27; p = .001) and symptoms of anxiety (B = 2.69; β = .18; p = .028), suggesting a direct effect of gender identity on both forms of psychological functioning. Details for each regression model is presented in table 6.

Table 6. Direct Effects of Gender Identity on Psychological Functioning

Variable	*B*	*SE*	*β*	R^2	*Adj.* R^2	*F*	*df*	*p*
Gender Identity								
Depression	9.18**	2.72	.27	.071	.065	11.37	1, 148	.001
Anxiety	2.69*	1.21	.18	.032	.026	4.90	1, 146	.028

Note: *p <.05; **p < .01; IV = Gender Identity; DV = Depression, Anxiety

Gender Identity, Sexuality-Based Victimization, and Anxiety. Given the observed direct effect of gender identity on psychological functioning, researchers proceeded with mediational analyses. Analyses were conducted separately for each risk factor. First, the mediating effects of sexuality-based victimization on the relationship between gender identity and anxiety were explored. In step 2 of the mediation model, the regression of gender identity on sexuality-based, identity-specific victimization (SO victimization) was significant, suggesting a possible indirect effect of SO victimization (R^2 = .082, F(1, 140) = 12.43, p = 001). The indirect effect of SO victimization was further explored by conducting a regression of SO victimization on anxiety symptoms (step 3). Results showed that this model was also significant, confirming indirect

effects of SO victimization (R^2 = .082, F(1, 140) = 12.43, p = 001). To assess the final condition of mediation (step 4), a regression was conducted with SO victimization and gender identity predicting symptoms of anxiety. Results indicated that this model significantly predicted symptoms of anxiety (R^2 = .116, F(2, 139) = 9.15, p < .001). In this model, SO victimization was found to be a significant predictor of anxiety symptoms (B = 1.43; β = .83; p = .001); however, gender identity no longer significantly contributed to the model once SO victimization was included (B = 1.98; β = 1.19; p = .098). The Sobel test was used to assess the significance of the indirect effect of orientation-based victimization (Sobel, 1982). Results showed that the reduction in the effect of gender identity once orientation-based victimization was included was also significant (z = 2.01, p =.044). Collectively, these results suggest a statistically significant effect of orientation-based victimization that is consistent with the mediational hypothesis. That is, orientation-based victimization accounted for a significant portion of covariance in the relationship between gender identity and anxiety symptoms. Details for each regression model is presented in table 7. See figure 1 for the mediation model containing coefficients for SO victimization.

Table 7. Mediational Analyses for Gender Identity, SO Victimization, and Anxiety.

Variable	B	SE	β	R^2	*Adj.* R^2	*F*	*df*	*p*
ID Vict. – SO								
A-B	.60*	.24	.20	.041	.034	6.03	1, 140	.015
B-C	1.56**	.40	.31	.099	.092	15.34	1, 140	< .001
B-C’	1.46**	.41	.83	.116	.104	9.15	2, 139	< .001
Gender Identity								
B-C’	1.98	1.19	.14	.116	.104	9.15	2, 139	<.001

Note: A-B = Gender identity (GI) to mediator (M); BC = M to anxiety (A); B-C’ = GI to A through M (indirect effect); ID Vict. – SO = Orientation-based, identity-specific victimization; *p < .05; **p <.01.

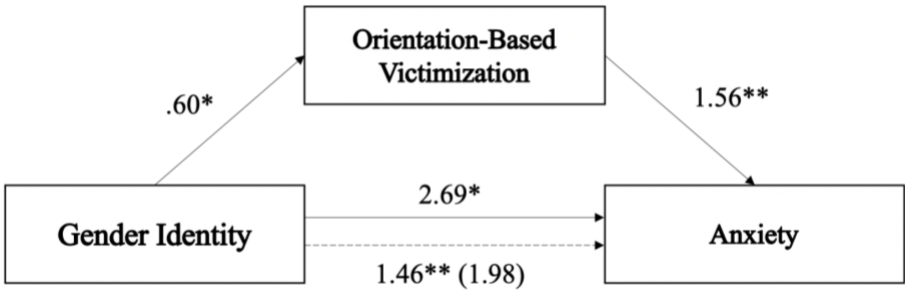


Figure 1. Mediation Model for SO Victimization, Gender Identity, and Anxiety. *Note:* Standardized regression coefficients for the relationship between gender identity and symptoms of anxiety as mediated by orientation-based, identity-specific victimization. The standardized regression coefficients for the mediational model are indicated by dashed lines with coefficients for gender identity presented in parentheses; *$p < .05$; **$p <$.01.

Gender Identity, Sexuality-Based Victimization, and Depression. As noted in previous sections, results showed a direct effect of gender identity on depression (i.e., step 1) and possible indirect effect of SO victimization (i.e., step 2). Therefore, mediational analyses were continued to examine the mediating role of SO victimization in the relationship between gender identity and depression. The indirect effect of SO victimization was further explored by conducting a regression of SO victimization on depressive symptoms (step 3). Results showed that this model was significant, confirming indirect effects of SO victimization on depressive symptoms (R^2 = .082, $F(1, 140) = 12.43$, $p = 001$). To assess the final condition of mediation (step 4), a regression was conducted with SO victimization and gender identity predicting symptoms of depression. Results indicated that this model significantly predicted depressive symptoms (R^2 = .130, $F(2, 139) = 10.35$, $p < .001$). Although gender identity and SO victimization both remained significant predictors of depression ($p = .006$, $p = .003$, respectively), a decrease in regression coefficients was observed for gender identity once SO victimization was included. That is, results suggested that SO Victimization partially mediated the relationship between gender identity and depression. The Sobel test was again used to assess the significance of the mediating effects of SO victimization (Sobel, 1982). Results showed that the reduction in the effect of

gender identity once orientation-based victimization was included was approaching statistical significance ($z = 1.89$, $p = .058$). Therefore, the results did not support a partial mediation effect of orientation-based victimization on the relationship between gender identity and depression. Details for each regression model is presented in table 8.

Table 8. Mediational Analyses for Gender Identity, SO Victimization, and Depression.

Variable	B	SE	β	R_2	*Adj.* R_2	*F*	*df*	*p*
ID Vict. – SO								
A-B	.60*	.24	.20	.041	.034	6.03	1, 140	.015
B-C	3.29**	.93	.29	.082	.075	12.43	1, 140	.001
B-C'	2.77*	.93	.24	.130	.117	10.35	2, 139	< .001
Gender Identity								
B-C'	7.59*	2.74	.22	.130	.117	10.35	2, 139	< .001

Note: A-B = Gender identity (GI) to mediator (M); B-C = M to depression (D); B-C' = GI to D through M (indirect effect); ID Vict. – SO = Orientation-based, identity-specific victimization; *$p < .05$; **$p <.01$.

Gender Identity, Gender Identity-Based Victimization, and Anxiety. A regression analysis between gender identity on gender identity-based, identity specific victimization (GI victimization) was conducted to evaluate the potential mediating effects of GI victimization on the relationship between gender identity and anxiety (i.e., Step 2). Results showed that this model was significant, suggesting a possible indirect effect of GI victimization ($R_2 = .187$, $F(1, 142) = 32.63$, $p <.001$). Indirect effects of GI victimization were further evaluated through a regression analysis between GI victimization and anxiety (step 3); however, this model was not significant ($R_2 = .020$, $F(1, 142) = 2.91$, $p = .090$), suggesting that GI victimization did not significantly predict symptoms of anxiety. As such, the third condition of mediation was not supported, and analyses were not continued. Details for each regression model is presented in table 9.

Table 9. Mediational Analyses for Gender Identity, GI Victimization, and Anxiety

Variable	B	SE	β	R^2	Adj. R^2	*F*	*df*	*p*
ID Vict. – GI								
A-B	.61**	.11	.43	.187	.181	32.62	1, 142	< .001
B-C	1.48	.87	.14	.020	.013	2.91	1, 142	.090

Note: A-B = Gender identity (GI) to mediator (M); B-C = M to anxiety (A); ID Vict. – GI = gender identity-based, identity-specific victimization; *$p < .05$; **$p < .01$.

Gender Identity, Gender Identity-Based Victimization, and Depression. As outlined in the previous section, a significant relationship was observed between gender identity and GI victimization (i.e., step 2). As such, a regression analysis between GI victimization and depression (step 3) was conducted. Results showed that this model was significant (R^2 = .038, $F(1, 141) = 5.58$, p = .020), confirming an indirect effect of GI victimization on depression. To assess the final condition of mediation (step 4), a regression analysis was conducted with GI victimization and gender identity predicting symptoms of depression. Results indicated that this model significantly predicted depressive symptoms (R^2 = .080, $F(2,140) = 6.07$, p =.003). Gender identity remained a significant predictor of depressive symptoms (B = 7.74; β = .23; p = .013); however, gender-based victimization alone did not add significantly to the model (B = 2.35; β = .10; p = .281). Therefore, mediation was not supported. Details for each regression model is presented in table 10.

Table 10. Mediational Analyses for Gender Identity, GI Victimization, and Depression.

Variable	B	SE	β	R^2	Adj. R^2	*F*	*df*	*p*
ID Vict. – GI								
A-B	.61**	.11	.43	.187	.181	32.63	1, 142	< .001
B-C	4.71*	2.00	.20	.038	.031	5.58	1, 141	.020
B-C’	2.35	2.17	.10	.080	.067	6.07	2, 140	.003
Gender Identity								
B-C’	7.74*	3.07	.23	.080	.067	6.07	2, 140	.003

Note: A-B = Gender identity (GI) to mediator (M); B-C = M to depression (D); B-C’ = GI to D through M (indirect effect); ID Vict. – GI = gender identity-based, identity-specific victimization; *$p < .05$; **$p < .01$.

Gender Identity, Bullying, and Family Conflict. Lastly, separate regression analyses were conducted to evaluate the indirect effects (step 2) of bullying and family conflict on the relationship between gender identity and psychological functioning. As expected given correlational analyses, neither models for bullying (R^2 = .007, $F(1, 143)$ = .96, p = .330) nor family conflict (R^2 = .007, $F(1, 137)$ = .97, p = .327) were significant. As such, the first condition of mediation for both bullying and family conflict was not met. Therefore, analyses were not continued. Details for both regression analyses are presented in table 11.

Table 11. Mediational Analyses for Gender Identity, Bullying, and Family Conflict

Variable	B	SE	β	R^2	*Adj.* R^2	*F*	*df*	*p*
Bullying								
A-B	2.43	2.49	.08	.007	.000	.96	1, 142	.330
Family Conflict								
A-B	.96	.98	.08	.007	.007	.97	1, 136	.327

Note: A-B = Gender identity (GI) to mediator; *$p < .05$; **$p < .01$.

Research Question 2: Protective Factors

Bivariate correlational analyses were conducted between psychological functioning (i.e., depressive and anxious symptomatology) and protective factors (i.e., school connectedness, academic efficacy, social support, self-esteem, coping, outness, and GSA presence). See table 12 for correlation coefficients. Strong, negative correlations were observed between symptoms of depression and self-esteem (r = -.73, p < .001), school connectedness (r = -.58, p < .001), and overall social support (r = -.40, p < .001). Significant, negative correlations were also observed between depression and academic efficacy (r = -.28, p = .001), gender identity outness (r = -.25, p =.002), and sexual orientation outness (r = -.19, p = .024). Moderate, negative correlations were also observed between symptoms of anxiety and school connectedness (r = -.46, p < .001) and self-esteem (r = -.57, p < .001). Significant, negative correlations were also observed between anxiety and overall social support (r = -.23, p = .007) and academic efficacy (r = -.17, p

= .040). Coping and GSA presence were not significantly correlated with either depression or anxiety.

Table 12. Bivariate Correlations for Depression, Anxiety, and Protective Factors

Variable	2	3	4	5	6	7	8	9	10
1. Depression	.74**	-.58**	-.28**	-.40**	-.73**	-.13	-.19*	-.25**	-.08
2. Anxiety	-	-.46**	-.17*	-.23**	-.57**	-.08	-.11	-.14	-.11
3. School Conn	-	-	.32**	.44**	.54**	.22**	.29**	.16*	.05
4. Acad Effect	-	-	-	.16	.30**	.21*	-.10	.05	.12
5 Social Supp	-	-	-	-	.41**	.23**	.20*	.09	.05
6. Self-Esteem	-	-	-	-	-	.24**	.15	.28**	.06
7. Coping	-	-	-	-	-	-	.21*	.20*	-.05
8. SO Outness	-	-	-	-	-	-	-	.20*	-.004
9. GI Outness	-	-	-	-	-	-	-	-	-.01
10. GSA Pres	-	-	-	-	-	-	-	-	-

*Note: *p < .05; **p* < .01.

In order to examine the second research question, Baron and Kenny (1986) moderation analyses were conducted to determine whether protective factors may moderate the relationship between gender identity and psychological functioning. To assess for moderation, 2-step hierarchical linear regressions were conducted with gender identity and protective factors in the first step and the interaction between gender identity and protective factors predicting psychological functioning in the second step. Protective factors were mean-centered prior to analyses to address assumed multicollinearity. Per the Baron and Kenny (1986) approach to moderation, the first model and effects (i.e., gender identity and protective factors) should both be significant. Conditions for moderation are met if the addition of the interaction term in block 2 also produces (1) a significant model, (2) a significant increase in explained variance, and (3) the effect of the interaction term is significant.

Moderation analyses were conducted separated for sexual orientation and gender identity. As expected given correlational data, no significant moderators were observed in the relationship between sexual orientation and psychological functioning. That is, the inclusion of the

interaction between sexual orientation and each moderator failed to contribute to a significant increase in explained variance of the overall models. Moderation analyses were also conducted for gender identity and each protective factor. Similarly, no protective factor emerged as a statistically significant moderator for the relationship between depression and anxiety. However, promising effects for several protective factors for gender identity were observed. As such, the results of moderation analyses for gender identity, protective factors, and psychological functioning are presented in greater detail below.

Gender Identity, School Connectedness, and Depression. A hierarchical regression analysis was conducted for depression with gender identity and school connectedness in the first block and the interaction between gender identity and school connectedness in the second block. Both model 1 (R^2 = .367, $F(2, 147) = 42.61$, $p < .001$) and model 2 were statistically significant (R^2 = .371, $F(3,146) = 28.68$, $p < .001$); however, the addition of the interaction term did not lead to a significant increase in the predictive validity of the model as evidenced by $F_{change}(1,146) = .895$, $p = .716$. Although both gender identity ($B = 6.73$, $\beta = .20$, $p = .005$) and school connectedness ($B = -2.62$, $\beta = -.58$, $p < .001$) were both significantly predictive of depressive symptoms, the interaction term was not significant. Therefore, moderation was not supported. Details for the regression models are presented in table 13.

Table 13. Moderation Analyses for Gender Identity, Depression, and School Connectedness

	Model 1			Model 2		
Variable	B	SE	β	B	SE	β
Gender ID	6.12**	2.29	.18	6.73**	2.37	.20
School Conn	-.25**	.30	-.55	-2.62**	.33	-.58
GI*School Conn				.75	.80	.07
R^2 (Adj. R^2)	.367 (.358)			.371 (.358)		
F (df)	42.61** (2, 147)			28.68** (3, 146)		
ΔR^2	.367			.004		
ΔF (df)	42.61 ** (2, 147)			.895 (1, 146)		

Note: *p <.05; **p < .01

Gender Identity, Anxiety, and School Connectedness. A hierarchical regression analysis was conducted for anxiety with gender identity and school connectedness in the first block and the interaction between gender identity and school connectedness in the second block. Both model 1 (R^2 = .220, $F(2, 145) = 20.45$, $p < .001$) and model 2 (R^2 = .220, $F(3,144) = 13.55$, $p < .001$) were statistically significant; however, the addition of the interaction term did not lead to a significant increase in the predictive validity of the model as evidenced by $F_{change}(1,144) = .033$, $p = .346$. Across both models, only school connectedness was significantly predictive of anxiety symptoms ($B = -.84$, $\beta = -.43$, $p < .001$), and significant effects were not observed for either gender identity or the interaction term. Therefore, moderation was not supported. Details for the regression models are presented in table 14.

Table 14. Moderation Analyses for Gender Identity, Anxiety, and School Connectedness

	Model 1			Model 2		
Variable	B	SE	β	B	SE	β
Gender ID	1.66	1.11	.11	1.61	1.15	.11
School Conn	-.86**	.146	-.44	-.84**	.16	-.43
GI*School Conn				-.07	.39	-.02
R^2 (Adj. R^2)		.220 (.209)			.220 (.204)	
F (df)		20.45** (2, 145)			13.55** (3,144)	
ΔR^2		.220			.000	
ΔF (df)		20.45** (2, 145)			.033 (1,144)	

Note: *p <.05; **p < .01

Gender Identity, Depression, and Academic Efficacy. A hierarchical regression analysis was conducted for depression with gender identity and academic efficacy in the first block and the interaction between gender identity and academic efficacy in the second block. Both Model 1 (R^2 = .132, $F(2, 147) = 11.22$, $p < .001$) and Model 2 (R^2 = .133, $F(3, 146) = 7.48$, $p < .001$) were statistically significant; however, the addition of the interaction term in the second block did not produce a statistically significant increase in the predictive validity of the model as evidenced by

$F_{change}(1, 146) = .132$, $p = .716$. Gender identity (B = 8.36, β = .24, $p = .003$) and academic efficacy (B = -1.42, β = -.26, $p = .002$) both remained significantly predictive of depressive symptoms in model 2. A significant effect was not observed for the interaction term. Therefore, moderation was not supported. Details for the regression models are presented in table 15.

Table 15. Moderation Analyses for Gender Identity, Depression, and Academic Efficacy

	Model 1			Model 2		
Variable	B	SE	β	B	SE	β
Gender ID	8.16**	2.70	.24	8.36**	2.72	.24
Acad. Effect	-1.35**	.42	-.25	-1.42**	.46	-.26
GI*Acad. Effect				.42	1.16	.03
R^2 (Adj. R^2)	.132 (.121)			.133 (.115)		
F (df)	11.22** (2, 147)			7.48** (3, 146)		
ΔR^2	.132			.001		
ΔF (df)	11.22** (2, 147)			.132 (1, 146)		

Note: *p <.05; **p < .01

Gender Identity, Anxiety, and Academic Efficacy. A hierarchical regression analysis was conducted for anxiety with gender identity and academic efficacy in the first block and the interaction between gender identity and academic efficacy in the second block. Both Model 1 (R^2 = .054, $F(2, 145) = 4.17$, $p = .017$) and Model 2 (R^2 = .069, $F(3, 144) = 3.54$, $p = .016$) were statistically significant; however, the addition of the interaction term in the second block did not produce a statistically significant increase in the predictive validity of the model as evidenced by $F_{change}(1, 144) = 2.20$, $p = .140$. In the second model, significant effects were not observed for gender identity, academic efficacy, or the interaction term. Therefore, moderation was not supported. Details for the regression models are presented in table 16.

Table 16. Moderation Analyses for Gender Identity, Anxiety, and Academic Efficacy

	Model 1			Model 2		
Variable	B	SE	β	B	SE	β
Gender ID	2.42*	1.21	.16	2.05	1.23	.14
Acad Effect	-.35	.19	-.15	-.23	.21	-.10
GI*Acad Effect				-.78	.52	-.13

(*Table cont'd.)*

(cont'd.)

	Model 1	Model 2
R_2 (Adj. R_2)	.054 (.041)	.069 (.049)
F (df)	4.17* (2, 145)	3.54* (3,144)
ΔR_2	.054	.014
ΔF (df)	4.17* (2, 145)	2.20 (1,144)

Note: *p <.05; **p < .01

Gender Identity, Depression, and Social Support. A hierarchical regression was conducted for depression with gender identity and social support in the first block and the interaction between gender identity and social support in the second block. Both model 1 (R_2 = .199, F(2, 140) = 17.412, p < .001)and model 2 (R_2 = .208, F(3, 139) = 12.141, p < .001) were statistically significant; however, the inclusion of the interaction term in the second block did not produce a statistically significant increase in the predictive validity of the model as evidenced by F_{change}(1, 139) = 1.48, p = .226. While both gender identity (B = 7.87, β = .23, p = .004) and social support (B = -.17, β = -.41, p < .001) were both significantly predictive of depressive symptoms, the interaction term was not. Therefore, mediation was not supported. Details for each regression model is presented in table 17.

Table 17. Moderation Analyses for Gender Identity, Depression, and Social Support

	Model 1			Model 2		
Variable	B	SE	β	B	SE	β
Gender ID	7.05**	2.60	.21	7.87**	2.68	.23
Social Support	-.15**	.03	-.37	-.17**	.03	-.41
GI*Social Supp.				.104	.09	.10
R_2 (Adj. R_2)	.199 (.188)			.208 (.191)		
F (df)	17.41** (2, 140)			12.14** (3, 139)		
ΔR_2	.199			.008		
ΔF (df)	17.41 (2, 140)			1.48 (1, 139)		

Note: *p <.05; **p < .01

Gender Identity, Anxiety, and Social Support. A hierarchical regression analysis was conducted for anxiety with gender identity and social support in the first block and the interaction between gender identity and social support in the second block. Both model 1 (R_2 = .071, F(2, 141) = 5.40, p =.006) and model 2 (R_2 = .080, F(3,140) = 1.32, p = .009) were

statistically significant; however, the addition of the interaction term in the second block did not produce a significant increase in the predictive validity of the model as evidenced by $F_{change}(1, 140) = 1.32$, $p = .253$. Significant effects for gender identity ($B = 2.49$, $\beta = .17$, $p = .048$) and social support ($B = -.04$, $\beta = -.26$, $p = .007$) were observed in model 2; however, the interaction term was not significant. Therefore, moderation was not supported. Details for the models are presented in table 18.

Table 18. Moderation Analyses for Gender Identity, Anxiety, and Social Support

	Model 1			Model 2		
Variable	B	SE	β	B	SE	β
Gender ID	2.13	1.21	.145	2.49*	1.24	.17
Social Support	-.04*	.02	-.20	-.04**	.02	-.26
GI*Social Supp.				.05	.04	.11
R^2 (Adj. R^2)		.071 (.058)			.080 (.060)	
F (df)		5.40** (2, 141)			1.32** (3,140)	
ΔR^2		.071			.009	
ΔF (df)		5.40** (2,141)			1.32 (1, 140)	

Note: *p <.05; **p < .01

Gender Identity, Depression, and Outness. A hierarchical regression was conducted for depression with gender identity and outness in the first block and the interaction between gender identity and outness in the second block. Both Model 1 ($R^2 = .081$, $F(2, 142) = 6.27$, $p = .002$) and Model 2 ($R^2 = .081$, $F(3, 141) = 4.15$, $p = .007$ were statistically significant; however the addition of the interaction term did not lead to a significant increase in the predictive validity of the model as evidenced by $F_{change}(1,141) = .007$, $p = .935$. Across both models, significant effects were not observed among any of the individual variables. Therefore, moderation was not supported. Details for the regression models are presented in table 19.

Table 19. Moderation Analyses for Gender Identity, Depression, and Outness

	Model 1			Model 2		
Variable	B	SE	β	B	SE	β
Gender ID	7.43	4.54	.22	6.79	8.98	.20
Outness	-.71	1.20	-.08	-.80	1.64	-.09
GI*Outness				.20	2.41	.01
R_2 (Adj. R_2)		.081 (.068)			.081 (.062)	
F (df)		6.27** (2, 142)			4.15** (3, 141)	
ΔR_2		.081			.000	
ΔF (df)		6.271** (2, 142)			.007 (1, 141)	

Note: *p <.05; **p < .01

Gender Identity, Anxiety, and Outness. A hierarchical regression was conducted for anxiety with gender identity and outness in the first block and the interaction between gender identity and outness in the second block. Neither model was statistically significant and significant effects were not observed among any of the individual variables. Therefore, moderation was not supported. Details for each regression model is presented in table 20.

Table 20. Moderation Analyses for Gender Identity, Anxiety, and Outness

	Model 1			Model 2		
Variable	B	SE	β	B	SE	β
Gender ID	3.35	2.01	.23	6.10	3.98	.42
Outness	.18	.53	.05	.58	.73	.15
GI*Outness				-.86	1.07	-.14
R_2 (Adj. R_2)		.037 (.023)			.042 (.021)	
F (df)		2.71 (2, 140)			2.01 (3, 139)	
ΔR_2		.037			.004	
ΔF (df)		2.71(2, 140)			.64 (1, 139)	

Note: *p <.05; **p < .01

Gender Identity, Depression, and Self-Esteem. A hierarchical regression was conducted for depression with gender identity and self-esteem in the first block and the interaction between gender identity and self-esteem in the second block. Both model 1 (R_2 = .540, F(2,143) = 83.87, p < .001) and model 2 (R_2 = .540, F(3,142) = 55.65, p <.001) were statistically significant; however the addition of the interaction term did not lead to a significant increase in the

predictive validity of the model as evidenced by $F_{change}(1,142) = .171$, $p = 680$. Of note, self-esteem was the only significant effect observed across either model ($B = -1.48$, $\beta = -.72$, $p < .001$). Neither gender identity nor the interaction term significantly influenced the model. Therefore, moderation was not supported. Details for the regression models are presented in table 21.

Table 21. Moderation Analyses for Gender Identity, Depression, and Self-Esteem

	Model 1			Model 2		
Variable	B	SE	β	B	SE	β
Gender ID	2.89	2.01	.08	3.34	2.3	.10
Self-Esteem	-1.46**	.12	-.71	-1.48**	.13	-.72
GI*Self-Esteem				.16	.37	.03
R_2 (Adj. R_2)	.540 (.533)			.540 (.531)		
F (df)	83.87** (2, 143)			55.65** (3,142)		
ΔR_2	.540			.001		
ΔF (df)	83.87 (2, 143)			.171 (1, 142)		

Note: *p <.05; **p < .01

Gender Identity, Anxiety, and Self-Esteem. A hierarchical regression was conducted for anxiety with gender identity and self-esteem in the first block and the interaction between gender identity and self-esteem in the second block. Both model 1 ($R_2 = .331$, $F(2,144) = 35.62$, $p < .001$) and model 2 ($R_2 = .331$, $F(3,143) = 23.59$, $p < .001$) were statistically significant; however the addition of the interaction term did not lead to a significant increase in the predictive validity of the model as evidenced by $F_{change}(1,143) = .01$, $p = .919$. Self-esteem was the only significant effect observed across either model ($B = -.50$, $\beta = -.56$, $p < .001$). Neither gender identity nor the interaction term significantly influenced the model. Therefore, moderation was not supported. Details for the regression models are presented in table 22.

Table 22. Moderation Analyses for Gender Identity, Anxiety, and Self-Esteem

	Model 1			Model 2		
Variable	B	SE	β	B	SE	β
Gender ID	.50	1.05	.03	.44	1.20	.03
Self-Esteem	-.51**	.06	-.57	-.50**	.07	-.56
GI*Self-Esteem				-.02	.20	-.10
R_2 (Adj. R_2)		.331 (.322)			.331 (.317)	
F (df)		35.62** (2, 144)			23.59** (3,143)	
ΔR_2		.331			.000	
ΔF (df)		35.62**			.01 (1, 143)	

Note: *p <.05; **p < .01

Gender Identity, Depression, and GSA Presence. A hierarchical regression was conducted for depression with gender identity and GSA presence in the first block and the interaction between gender identity and GSA presence in the second block. Both Model 1 R_2 = .079, $F(2, 147) = 6.35$, $p = .002$) and Model 2 (R_2 = .081, $F(3,146) = 4.27$, $p = .006$) were statistically significant; however the addition of the interaction term in the second block did not produce a statistically significant increase in the predictive validity of the model as evidenced by $F_{change}(1,146) = .182$, $p = .670$. Gender identity remained a significant predictor of depressive symptoms in the second model ($B = 10.67$, $\beta = .31$, $p = .011$); however, as expected given correlational analyses, neither GSA presence nor the interaction term provided significant effects to the model. Therefore, moderation was not supported. Details for the regression models is presented in table 23.

Table 23. Moderation Analyses for Gender Identity, Depression, and GSA Presence

	Model 1			Model 2		
Variable	B	SE	β	B	SE	β
Gender ID	9.34**	2.72	.27	10.67*	4.14	.31
GSA Pres	-2.35	2.06	-.09	-1.95	2.27	-.08
GI*GSA Pres				-2.35	5.51	-.05
R_2 (Adj. R_2)		.079 (.067)			.081 (.062)	
F (df)		6.35** (2, 147)			4.27** (3, 146)	
ΔR_2		.079			.001	
ΔF (df)		6.35** (2, 147)			.182 (1,146)	

Note: *p <.05; **p < .01

Gender Identity, Anxiety, and GSA Presence. A hierarchical regression was conducted for anxiety with gender identity and GSA presence in the first block and the interaction between gender identity and GSA presence in the second block. Model 2 was not significant (R^2 = .048, $F(3,144) = 2.41$, p =.069), and the inclusion of the interaction term did not produce a statistically significant increase in the predictive validity of the model, $F_{change}(1,144) = .15$, p = .696. Therefore, moderation was not supported. Details for the regression models are presented in table 24.

Table 24. Moderation Analyses for Gender Identity, Anxiety, and GSA Presence

	Model 1			Model 2		
Variable	B	SE	β	B	SE	B
Gender ID	2.78*	1.21	.19	2.24	1.84	.15
GSA Presence	-1.36	.92	-.12	-1.53	1.02	-.14
GI*GSA Pres				.96	2.45	.05
R^2 (Adj. R^2)		.047 (.034)			.048 (.028)	
F (df)		3.56* (2, 145)			2.41 (3,144)	
ΔR^2		.047			.001	
ΔF (df)		3.56* (2, 145)			.15 (1,144)	

Note: *p <.05; **p < .01

Gender Identity, Depression, and Coping. A hierarchical regression was conducted for depression with gender identity and coping in the first block and the interaction between gender identity and coping in the second block. Both Model 1 (R^2 = .085, $F(2, 131) = 6.11$, p = .003) and Model 2 (R^2 = .088, $F(3, 130) = 4.17$, p = .007 were statistically significant; however, the inclusion of the interaction term did not lead to a significant increase in the predictive validity of the model as evidenced by $F_{change}(1,130) = .35$, p = .555. Therefore, moderation was not supported. Details for the regression models are presented in table 25.

Table 25. Moderation Analyses for Gender Identity, Depression, and Coping

	Model 1			Model 2		
Variable	B	SE	β	B	SE	β
Gender ID	9.29**	2.96	.27	8.71**	3.12	.25
Coping	-.117	.142	-.07	-.07	.16	-.04
GI*Coping				-.21	.35	-.06
R_2 (Adj. R_2)		.085 (.071)			.088 (.067)	
F (df)		6.11** (2,131)			4.17** (3,130)	
ΔR_2		.085			.002	
ΔF (df)		6.11** (2, 131)			.35 (1, 130)	

Note: *p <.05; **p < .01

Gender Identity, Anxiety, and Coping. A hierarchical regression was conducted for anxiety with gender identity and coping in the first block and the interaction between gender identity and coping in the second block. Neither model was statistically significant and significant effects were not observed among any of the individual variables. Therefore, moderation was not supported. Details for each regression model is presented in table 26.

Table 26. Moderation Analyses for Gender Identity, Anxiety, and Coping

	Model 1			Model 2		
Variable	B	SE	β	B	SE	β
Gender ID	2.78*	1.29	.19	2.42	1.36	.16
Coping	-.03	.06	-.04	-.001	.07	-.001
GI*Coping				-.13	.15	-.09
R_2 (Adj. R_2)		.040 (.026)			.046 (.024)	
F (df)		2.76 (2, 132)			2.09 (3, 131)	
ΔR_2		.040			.005	
ΔF (df)		2.76 (2,132)			.742 (1, 131)	

Note: *p <.05; **p < .01

Perspectives on Parental Consent and Research

At the end of the survey, participants were asked to provide their perspectives on the waiver of parental consent. Overall, a majority of participants reported that the waiver of parental consent was at least acceptable. Specifically, over 65% of participants reported that they would not have completed the survey if parental consent was required, and less than 9% would have

obtained their parents' permission if needed to participate in the study. Additionally, most participants endorsed feeling comfortable answering survey questions, and most denied experiencing discomfort when answering survey questions. Descriptive results of quantitative responses are presented in table 27.

Table 27. Participants' Perspectives on Waiver of Parental Consent

	SD	D	N	A	SA
I felt comfortable answering the questions on this survey	0.6%	3.2%	10.8%	36.7%	33.5%
I would NOT have completed this survey if I needed to get permission from my parent(s) or guardian(s)	6.3%	6.3%	5.7%	10.1%	55.7%
The questions on this survey made me feel uncomfortable	36.7%	29.7%	13.3%	5.1%	0
The questions on this survey offended me	66.5%	15.2%	2.5%	0.6%	0
I would have asked my parent(s) or guardian(s) for permission to complete this survey if I needed to	56.3%	17.1%	2.5%	5.1%	3.8%

Note: SD = strongly disagree, D = disagree, N = neutral; A = Agree; SA = Strongly Agree

Qualitative Data. Participants were also given the option to provide qualitative feedback regarding the survey (i.e., *Please use the space below to write any additional comments that you would like to share about this survey*). Thirty-two participants elected to respond to this optional item. Many responses included brief, general feedback about the questionnaire or survey platform (e.g., "well-constructed, didn't crash"); however, a majority of responses were more detailed. These were divided into common themes and discussed in more detail below.

Parental Consent and Relationships with Parents. Several respondents provided feedback on the waiver of parental consent. All of these responses were in support of the waiver of parental consent, with nearly all of these respondents noting that they are not "out" to their parents (e.g., "I really do appreciate that I didn't have to get a parent's permission, since I'm not out to them."). Some of the participants noted potential risks of disclosing their identities to their parents (e.g., "Great not having us ask our parents, don't think they would have really accepted

me"), while others acknowledged the complexities of reconciling and disclosing their identities to others (e.g., "I wouldn't have asked given that I'm questioning."). Finally, others noted the additional intricacies of parent-adolescent relationships that can compound challenges associated with disclosing their identities to their families (e.g., "My parents are very conservative and Christian which affects how we interact and their opinions on me (agnostic liberal) even though I haven't told them about my sexuality.").

Survey Content. Many participants provided feedback regarding survey content. Some noted difficulty understanding some of the items (e.g., "The questions with 'no disagreement' and 'quite a bit of disagreement' [i.e., family conflict scale] were kinda [sic] hard to understand"), while others offered suggestions for improving accuracy of data (e.g., "I think that it could be good to distinguish between what the respondent /does/ [sic] and what they /try/ [sic] to do, since those two don't always match up perfectly"). Still others pointed out significant deficits in the current survey, particularly how utilized measures did not adequately capture how different facets of their identities impact their perceived well-being. For example:

> I feel like there should have been more questions about mental health or how you feel about being gay because I have bad thoughts almost every day about how different I feel from all the straight people and that I'll never be treated like a straight person or I'll never be able to have kids with my partner with a straight person. Also include something about emotions because I have almost no outlet to talk about my emotions and I just end up bottling up all my emotions until something ticks it off and I can't hold it back anymore and I just start crying and then once I'm done I'll be fine for a while. I don't know it's just that this survey didn't really speak to my experience of being gay so it felt like I didn't have much to add or say.

Details About Individual Responses and Experiences. Many participants provided additional details about their specific responses. Most of these responses included explanations for incomplete data (e.g., "Note I have no siblings" regarding missing data for sibling social support). However, others provided disclaimers regarding the accuracy of their data (e.g., "The

questions with disagreements [i.e., family conflict scale] would be all 3s [i.e., quite a bit of disagreement] if I was out;" "I don't get bullied at school because I'm not out at school. I don't know what the results would be like if other kids knew I was queer"), further highlighting the complexities associated with navigating adolescence while concealing a significant aspect of their identity. Others noted the significant impact of reconciliation and disclosure of identities. For example:

> Before I came out to accept myself I was an irritable bastard who never had any friends and no happiness, … and since accepting myself I made many friends and repaired severely damaged relationships with many others. I'm happy now, but there was [sic] no obstacles stopping me other then [sic] myself. Other people don't have it easy.

Appreciation for Research. Finally, a notable and central theme that was observed across many respondents was a genuine appreciation for the opportunity to participate in research for SGM youth. Some expressed hope that their responses were helpful and/or useful (e.g., "I hope what information I have given about myself can help in some way;" "I hope the results of the survey are sufficient for whatever you're trying to accomplish."). However, many respondents provided messages of thanks directly to the research team. For example:

> Thanks for conducting research on queer teens. I think that there's a definite lack of understanding about what life is really like for us, especially closeted folks.

> Thank you for your contributions towards our society as a whole. Your [sic] doing the work that others are not willing to do and taking the first step towards the brighter future. If not for you then who would we rely on? Any effort is better than none. Thank you once again and have the finest day.

Discussion

The purpose of this study was to examine the relative influence of risk and protective factors on psychological functioning among SGM youth. Prior research has consistently shown disparities in psychological functioning between SGM and cis-heterosexual youth, and a substantial body of literature has investigated the risk factors that may account for these disparities. However, fewer studies have investigated the protective factors that may ameliorate the effects of these risks, and still fewer studies have evaluated risk or protective factors among TGNC youth. This study aimed to expand upon existing literature by evaluating the mediating roles of risk factors and the moderating roles of protective factors on the relationship between both sexual and gender minority identities and psychological functioning, while taking into account known methodological issues that may reduce interpretability and generalizability of prior literature.

Risk Factors

The first aim of this study was to evaluate the mediating role of risk factors on the relationship between SGM identities and psychological functioning. This study hypothesized that risk factors, particularly identity-specific factors, would at least partially mediate the relationship between sexual orientation, gender identity, and psychological functioning. Results only partially supported this hypothesis. For gender identity, only identity-specific risk factors (i.e., orientation-based victimization) were found to mediate the relationship between identity and psychological functioning. A significant mediating effect was not observed for sexual orientation and psychological functioning. Findings are discussed in greater detail below.

The results of the current study showed a significant, complete mediation effect of orientation-based, identity-specific victimization on the relationship between gender identity and

self-reported symptoms of anxiety. That is, orientation-based victimization accounted for a significant portion of variance in the relationship between gender identity and anxiety (i.e., consistent with mediational hypothesis). This implies that the significantly higher symptoms of anxiety observed among TGNC youth relative to cis-gender youth is attributable, at least in part, to experiencing victimization due to their perceived sexual orientation. Additionally, results also showed a partial mediation effect of orientation-based victimization on the relationship between gender identity and symptoms of depression that fell just short of statistical significance. Although non-significant, this finding suggests orientation-based victimization may also contribute to the significantly higher symptoms of depression observed among TGNC youth. Taken together, these results suggest that the impacts of orientation-based victimization may adversely affect multiple domains of psychological functioning.

Notably, however, the final mediation models containing both gender identity and orientation-based victimization accounted for less than 12% of the variability in self-reported symptoms of anxiety or depression. As such, it cannot be concluded that orientation-based victimization is the sole risk factor for higher symptoms of anxiety or depression observed among TGNC youth, thus underscoring the likelihood that other factors are culpable for increased risk among TGNC youth. Yet, no other risk factor emerged as a significant mediator in the relationships between gender identity and either anxiety or depression. This finding is inconsistent with previous research that has shown these factors, particularly bullying and family conflict, to be associated with poorer psychological functioning (e.g., Bontempo & D'Augelli, 2002; Friedman, 2006; Ryan, et al., 2009; Fischer, 2011; Heck et al., 2011; Russell et al., 2011; 2014; Puckett et al., 2014; Hatchel et al., 2018). There are several possible explanations for this finding. First, these results may reflect factors unique to TGNC youth populations. Although

greater attention has been paid to TGNC youth in recent years, it remains that available literature for TGNC youth populations is severely lacking. Prior studies have suggested similarities in risk and protective factors between TGNC and SM youth (e.g., Hall, 2018); however, results have been inconsistent (Johns et al., 2018). For example, some studies have suggested that identity-specific risk factors may be particularly salient risk factors for TGNC youth (Russell et al., 2018). Consistent with this line of research, the results from the current study underscores the relative impact of identity-specific risk factors. That is, these results indicate that identity-specific risk factors account for negative psychological outcomes in TGNC youth over and above more generalized risk factors.

In contrast, the results of this study did not support mediational effects for the relationship between sexual orientation and psychological functioning. Specifically, a direct effect of sexual orientation on psychological functioning was not observed, suggesting that sexual orientation does not have a significant effect on psychological functioning. Additionally, significant differences in psychological functioning were not observed between sexual orientation groups (i.e., 100% heterosexual relative to bisexual/pansexual youth). These findings are inconsistent with substantial prior literature demonstrating differences in risks observed between SGM youth and cis-heterosexual youth, as well as between lesbian or gay youth and bisexual/pansexual youth. Although this observed homogeneity in psychological functioning across sexual orientations may be due to factors unique to this particular sample, this discrepancy in findings may reflect true lack of variability within a community sample. Much of the existing literature for SGM youth has been derived largely from nationally representative samples, clinical samples, or retrospective accounts with young adult samples (Grossman & D'Augelli, 2006; Savin-Williams & Cohen, 2015). Although these sources have provided much-needed

information about SGM youth populations, these have also been criticized for limited generalizability and overestimation of risk among community samples. As such, it is probable that the lack of variability in psychological functioning observed within this sample is, indeed, an accurate representation of non-clinical community samples of sexual minority youth. Importantly, this finding calls into the question the validity of the assumption that sexual orientation inherently increases risk for poorer psychological outcomes among SGM youth, particularly within nonclinical samples. More work is certainly needed in this area, particularly with regards to relative risks between SGM youth and cis-heterosexual youth.

Protective Factors

The second aim of this study was to evaluate the moderating role of protective factors in the relationships between sexual orientation, gender identity, and psychological functioning. This study hypothesized that protective factors would moderate the relationship between identities and psychological functioning so that sexual orientation and gender identity are only associated with poorer functioning when protective factors are limited or absent. For both sexual orientation and gender identity, none of the protective factors met conditions for moderation as outlined by Baron and Kenny. Therefore, the results of the study failed the support the second hypothesis. Nevertheless, a few noteworthy trends emerged in the relationship between gender identity and psychological functioning. These are explored in more detail below.

Among the protective factors included in this study, several emerged as demonstrating promising effects on symptoms of both depression and anxiety. Correlational analyses showed moderate to strong negative associations between psychological functioning and self-esteem, school connectedness, and social support. Regression analyses also showed that each of these three protective factors yielded significant models for both depression and anxiety. Additionally,

the inclusion of these protective factors appeared to account for variability in psychological functioning over and above gender identity alone, as evidenced by consistently decreased beta values for gender identity once these protective factors were accounted for. Although none of the protective factors met Baron and Kenny criteria for moderation (i.e., interaction terms failed to contribute significantly to any of the models), these results suggest that protective factors do, in fact, have promising positive effects on psychological functioning, at least among TGNC youth.

Notably, the results of this study highlight the uniquely protective value of self-esteem among TGNC youth. Models containing both gender identity and self-esteem accounted for 53% and 33% of explained variance in depression and anxiety, respectively. This is notable given that gender identity alone explained less than 7% of the total variance for either indicator of psychological functioning. The effects of self-esteem also appeared to exceed that of both school connectedness (36% and 21%) and social support (19% and 6%) for symptoms of depression and anxiety (respectively) among TGNC youth. This finding expands upon previous research that has demonstrated the protective value of self-esteem (e.g., Bopp et al., 2004; Garafolo et al., 2006; Johns et al., 2018).

Interestingly, results showed little to no benefits for identity-specific protective factors, such as GSA presence or outness among TGNC youth. This contradicts prior research that has suggested identity-specific factors may have greater protective value for SGM youth than generalized factors (e.g., Johns et al., 2018; Toomey et al., 2011). Although this may suggest that identity-specific factors are not as beneficial as previously believed, it is possible that this finding may be attributable to assumed overlap with other factors that showed more protective value. For example, GSA presence or lack thereof may be less protective than experiencing overall connectedness within the school environment. Additionally, disclosing your identity to

others may be less valuable than overall social support from family and peers. Similarly, feeling supported by loved ones provides an environment in which youth may be more likely to disclose their identity in the long-term. This should not necessarily call into question the protective benefit of identity-specific factors. Rather, this underscores the complexity in understanding the relationship between risk, protection, and psychological functioning.

Strengths

There are several methodological strengths for this study. First, this study utilized a multidimensional approach to measuring sexual orientation that has been shown to be an acceptable alternative to other approaches commonly utilized in previous research. In addition to the multidimensional approach, this study also provided participants' the opportunity to describe their sexual orientation qualitatively. The multidimensional approach to measuring sexual orientation in this study appeared to be ecologically valid and was described by most participants as acceptable. However, some participants also noted that this measure alone was not sufficient and expressed appreciation for being able to provide their own chosen identity labels. This is complimented by the substantial variability observed among respondents' self-reported identity labels for both sexuality and gender identity. Collectively, this suggests that this 2-step approach is an acceptable and ecologically valid approach for identifying sexual orientation.

Waiving parental consent was another notable strength of this study. By requiring parental consent for research with at-risk populations, such as SGM youth, researchers may inadvertently introduce bias into their data. This is because many SGM youths, particularly those who are unwilling or unable to disclose their identities to their parents may be unwilling to participate in research that may unintentionally "out" them. By removing parental consent as a precondition to participation, this study was able to increase participants' access to voluntary

research participation, which is consistent with the Belmont Principle of Justice. Consistent with this impression, a majority of participants reported that they would not have participated in the study if parental consent was required. Additionally, qualitative data showed positive perceptions of the waiver of parental consent, with several participants spontaneously expressing their appreciation for being able to participate. Overall, these findings highlight the acceptability and effectiveness of the use of such waivers among SGM youth populations.

Limitations

The overarching goal of this study was to provide much needed information regarding the risk and protective factors for psychological functioning among SGM youth. Although this study does indeed contribute to the growing body of literature for SGM youth, particularly TGNC youth, the findings from this study should be interpreted in light of several limitations. First, this study utilized a cross-sectional design, and therefore no causal relationships can be established. Although results provide evidence of relationships that are consistent with mediational hypotheses, further research with longitudinal data would be needed in order to confirm the causal relationship of these factors. Additionally, in order to conduct moderation and mediation analyses per Baron and Kenny guidelines, a number of regression analyses are required. As such, results should be interpreted with some caution, given the possibility of increased type 1 error rates.

Furthermore, participants in this sample were demographically homogenous. Specifically, a majority of participants were cis-gender, Caucasian males who reportedly did not qualify for free or reduced lunch. As such, the results of this study may not generalize to SGM youth from different backgrounds, socioeconomic statuses, or racial or ethnic heritage. A second limitation to this study included the lack of cis-heterosexual youth. Separation of SGM youth and

cis-heterosexual youth has been criticized in the literature, as this suggests that these groups do not share fundamental similarities (e.g., Diamond, 2003). In this study, failure to include cis-heterosexual youth posed challenges in evaluating the authenticity of the lack of direct effect of sexual orientation on psychological functioning. Additionally, failure to include cis-heterosexual youth prevented researchers from evaluating differences in psychological functioning or the relative impact of risk and protective factors on psychological functioning between cis-heterosexual youth and SGM youth. Therefore, it remains unclear whether the effects or lack thereof observed in this study is unique to SGM youth.

Importantly, cis-heterosexual youth were not explicitly excluded from participation in this study. In fact, several steps were taken in an attempt to recruit cis-heterosexual youth; however, these were not successful. Paradoxically, the waiver of parental consent, while clearly a strength in recruiting SGM participants as evidenced by participant-reported perspectives, appeared to be the primary barrier in recruiting cis-heterosexual participants. Community-based organizations, such as pediatric clinics and teen centers, declined to allow researchers to recruit participants from their sites. The primary concerns cited included community perspectives about such waivers as well as legal liability. As a result, recruitment was limited to online communities, forums, and list servs. Although this approach did result in some responses from cis-heterosexual youth, resulting responses were not sufficient to produce an adequate comparison group. Additionally, online recruitment sites utilized in this study were largely LGBTQ+ supportive, meaning that this sample may be subject to selection bias. Given that this study was unable to control for the potential protective impact of engaging with LGBTQ+ supportive forums, it is unclear the degree to which this may have biased these results

Additionally, researchers were unable to assess some of the more prominent risk factors for depression or suicidal ideation, including specific forms of victimization (e.g., sexual assault, physical assault) due to ethical and regulatory issues. As such, this study was unable to capture other factors that may have the greatest negative impact on psychological functioning among SGM youth (e.g., Hill et al., 2012; Baams et al., 2016). For example, this study was also unable to assess certain identity-specific risk factors, such as internalized homonegativity, or protective factors, such as identity-specific social support, due to a lack of standardized measures for this population. Among the identity-specific measures used in this study, few had been previously used with TGNC populations. Therefore, while this study made reasonable attempts to adapt measures previously used with youth populations to be acceptable for TGNC populations, there is little prior research demonstrating acceptability of such application.

Clinical Implications and Future Directions

Despite limitations, several implications may be obtained from this study. First, the results of this study suggest TGNC youth may experience the greatest risk for poorer psychological functioning. This is consistent with emerging research that has shown gender minority youth endorse higher rates of psychological problems relative to both cis-heterosexual and cisgender sexual minority youth (Fox et al., 2020). Yet, it remains that TGNC youth are severely underrepresented in the existing, albeit limited, literature for SGM youth populations. As such, the results of this study underscore the critical need for additional research with TGNC youth that can inform clinical work with this population. Second, the results of this study suggest that identity-specific factors appear to have the greatest negative impact on psychological functioning among TGNC youth. In contrast, generalized, non-identity specific factors, such as self-esteem, may have the greatest positive impact on psychological functioning. There are

several possible clinical implications of these findings. First, this emphasizes the importance of assessing identity-specific risk factors in clinical work, particularly with TGNC youth. Second, these results may indicate that identity-affirming clinical approaches to improving internal protective factors, such as self-esteem, may be critically important for promoting psychological well-being among SGM youth. Importantly, the results of this study failed to demonstrate a significant moderating effect for any protective factor. Therefore, more work is needed to confirm the validity of these findings with SGM youth, especially regarding the protective value of self-esteem.

Results from this study yielded a significant mediating effect of identity-specific victimization on psychological functioning for TGNC youth; however, no such effects were observed for sexual orientation. Although the observed lack of direct effect may be attributable to study limitations, this may also reflect critical problems in how previous research has conceptualized SGM identities. That is, the narrative presented by previous literature, which is overwhelmingly characterized by risk, contributes to the conceptualization of SGM identities as inherently risky (Russell, 2005; Savin-Williams, 2014). Despite ample literature demonstrating the increased risk of poorer psychological functioning among SGM youth, the fact remains that most SGM youth grow into happy, healthy, and productive SGM adults (Savin-Williams, 1995; Russel & Fish, 2016). Yet, the promotive factors that may reduce risk have received less attention in the research literature to date. This is not to suggest that deepening our understanding of risk is not important. Rather, this underscores the importance of deepening our understanding of the factors that promote resilience in the face of adversity within this population.

Regarding resiliency, the results of this study showed promising, positive effects of several promotive factors for psychological functioning among TGNC youth. Among these

factors, self-esteem emerged as a particularly valuable promotive factor. Other promising factors included school connectedness and social support. Although this study did not explicitly explore the effects of these factors among sexual minority youth, it is possible that similar trends may emerge for this population, given results of correlational data. In addition to identifying other promotive resources among SGM youth, future research should focus on the peripheral factors that may enhance the protective nature of these particular resources. For example, self-esteem, although conceptualized as a protective variable in this study, is certainly not simply an innate characteristic that one is born with. Rather, it is the result of multiple factors, both internal and external, that reciprocally interact with one another in ways that either enhance or reduce confidence in one's worth or abilities. Similarly, the sense of belongingness with the school environment is likely the result of interactions with teachers, staff, and peers. As such, future research should consider the factors that promote self-esteem and school connectedness, as well as the relative impact of different types of social support (e.g., family, peers).

Future research with SGM populations should also continue to consider the methodological flaws that are believed to limit generalizability and replicability of past studies with SGM youth. For example, the substantial variability in approaches for measuring both sexual orientation and gender identity is among the most commonly cited barrier to generalizability across studies. The 2-step, multidimensional approach utilized in this study was deemed acceptable by participants and appears to be a valid method that could be consistently employed in studies with SGM populations going forward. Additionally, future studies should include diverse community samples comprised of both SGM and cis-heterosexual youth. This would afford researchers the ability to identify universal risk and, more importantly, protective factors within the context of typical adolescent development and behavior as well as identifying

the factors that are uniquely protective among SGM youth. Lastly, future research with SGM youth would continue to obtain benefit from waiving parental consent as a precondition to participation. Despite increasing support from a growing number of adolescent health care organizations, it remains challenging for researchers to obtain such waivers through their Institutional Review Boards (Mustanski, 2011; Fisher & Mustanski, 2014; Mustanski & Fisher, 2016). If obtained, researchers may find it difficult to make use of such waivers, given liability concerns due to negative community perspectives. Therefore, in addition to obtaining waivers of parental consent in research with SGM youth, researchers are encouraged to obtain participant's perspectives on such waivers and contribute to the growing body of literature demonstrating both the acceptability and impact of waivers of parental consent.

In summary, more work is needed with SGM youth populations in order to fully appreciate the factors that promote or encumber optimal psychological functioning within this population. Although understanding of risk remains of value to inform areas that merit clinical attention, a deepened understanding of protective factors is critically important to inform therapies and treatments. Importantly, future research should consider the methodological flaws that limit the generalizability of past work. Moreover, as the body of literature for this population continues to grow, researchers should be mindful of possible methodological weaknesses that have yet been brought to light. Certainly, SGM youth will continue to evolve alongside the broader cultural context in which they develop. As researchers and clinicians, our work should prioritize frequent self-evaluation so that our methodology may also evolve and adapt alongside the SGM youth it purports to serve.

References

APA Council of Representatives. (2018). APA resolution on support for the expansion of mature minors' ability to participate in research. Washington, DC: APA.

American Psychological Association. (2015). *APA Dictionary of Psychology.* Washington, DC: APA.

American Psychological Association. (2015). Guidelines for psychological practice with transgender and gender nonconforming people. *American Psychologist*, 70(9), 832-864.

Aragon, S. R., Poteat, V. P., Espelage, D. L., & Koenig, B. W. (2014). The influence of peer victimization on educational outcomes for LGBTQ and non-LGBTQ high school Students. *Journal of LGBT Youth*, 11(1), 1–19.

Arseneault, L., Bowes, L., & Shakoor, S. (2010). Bullying victimization in youths and mental health problems: 'Much ado about nothing'? *Psychological Medicine*, 40(5), 717-729.

Austin, S. B., Jun, H., Jackson, B., Spiegelman, D., Rich-Edwards, J., Corliss, H. L., & Wright, R. J. (2008). Disparities in child abuse victimization in lesbian, bisexual, and heterosexual women in the Nurses' Health Study II. *Journal of Women's Health*, 17, 597–606.

Baams, L., Grossman, A. H., & Russell, S. T. (2015). Minority stress and mechanisms of risk for depression and suicidal ideation among lesbian, gay, and bisexual youth. *Developmental Psychology*, 51(5), 688–696.

Bockting, W. O., Miner, M. H., Swinburne Romine, R. E., Hamilton, A., & Coleman, E. (2013). Stigma, mental health, and resilience in an online sample of the US transgender population. *American Journal of Public Health*, 103(5), 943–951.

Bontempo, D., & Augelli, A. R. D. (2002). Effects of at-school victimization and sexual orientation on lesbian, gay, or bisexual youths' health risk behavior. *Journal of Adolescent Health*, 30, 364–374.

Bopp, P. J., Juday, T. R., & Charters, C. W. (2004). A school-based program to improve life skills and to prevent HIV infection in multicultural transgendered youth in Hawai'i. *Journal of Gay & Lesbian Issues in Education*, 1(4), 3–21.

Brechwald W.A. & Prinstein M.J. (2011). Beyond homophily: a decade of advances in understanding peer influence processes. *Journal of Adolescent Research*. 21:166–79

Cohen-Kettenis, P. T., & Pfäfflin, F. (2003). *Transgenderism and intersexuality in childhood and adolescence: Making choices*. Thousand Oaks, CA: Sage Publications, Inc.

Coker, T. R., Austin, S. B., & Schuster, M. A. (2010). The health and health care of lesbian, gay, and bisexual adolescents. *Annual Review of Public Health*, 31(1), 457–477.

D'Augelli, A. R., Grossman, A. H., Hershberger, S. L., & O'connell, T. S. (2001). Aspects of mental health among older lesbian, gay, and bisexual adults. *Aging & Mental Health*, 5(2), 149-158.

D'augelli, A. R., Pilkington, N. W., & Hershberger, S. L. (2002). Incidence and mental health impact of sexual orientation victimization of lesbian, gay, and bisexual youths in high school. *School Psychology Quarterly*, 17(2), 148.

D'Augelli A.R., Grossman A.H., Starks M.T., & Sinclair K.O. (2001). Factors associated with parents' knowledge of gay, lesbian, and bisexual youths' sexual orientation. *Journal of GLBT Family Studies*, 6, 178–98.

D'Augelli, A. R. (2002). Mental Health Problems among Lesbian, Gay, and Bisexual Youths Ages 14 to 21. *Clinical Child Psychology and Psychiatry*, 7(3), 433–456.

D'Augelli, A. R. (2006). Developmental and contextual factors and mental health among lesbian, gay, and bisexual youths. In A. M. Omoto & H. S. Kurtzman (Eds.), *Sexual orientation and mental health* (pp. 37–53). Washington, DC: American Psychological Association.

D'Augelli, A. R., Hershberger, S. L., & Pilkington, N. W. (1998). Lesbian, gay, and bisexual youth and their families: Disclosure of sexual orientation and its consequences. *American Journal of Orthopsychiatry*, 68(3), 361–371.

de Vries, A. L., Doreleijers, T. A., Steensma, T. D., & Cohen-Kettenis, P. T. (2011). Psychiatric comorbidity in gender dysphoric adolescents. *Journal of Child Psychology and Psychiatry*, 52(11), 1195-1202.

DeHart, D. D. (2009). Poly-victimization among girls in the juvenile justice system: Manifestations & associations to delinquency. Washington, DC: U.S. Department of Justice.

Diamond, L. M. (2003). New paradigms for research on heterosexual and sexual-minority development. *Journal of Clinical Child and Adolescent Psychology*, 32(4), 490-498.

Dickenson, J. A., & Huebner, D. M. (2015). The relationship between sexual activity and depressive symptoms in lesbian, gay, and bisexual youth: Effects of gender and family support. *Archives of Sexual Behavior*, 45, 671–681.

Doty, N.D., Willoughby, B.L.B., Lindahl, K.M., & Malik N.M. (2010) Sexuality related social support among lesbian, gay, and bisexual youth. *Journal of Youth and Adolescence*, 39:1134–47.

Dunn, L. B., & Jeste, D. V. (2001). Enhancing informed consent for research and treatment. *Neuropsychopharmacology*, *24*(6), 595-607.

Durso, L.E..; Gates, G.J. (2012) Serving Our Youth: Findings from a National Survey of Service Providers Working with Lesbian, Gay, Bisexual, and Transgender Youth who are Homeless or At Risk of Becoming Homeless. *Williams Inst. True Colors Fund*, Palette Fund; Los Angeles, CA.

Eisenberg, M. E., Gower, A. L., McMorris, B. J., Rider, G. N., Shea, G., & Coleman, E. (2017). Risk and Protective Factors in the Lives of Transgender/Gender Nonconforming Adolescents. *Journal of Adolescent Health*, 61(4), 521–526.

Field, M. J., Behrman, R. E., & Institute of Medicine (U.S.). Committee on Clinical Research Involving Children. (2004). *Ethical conduct of clinical research involving children*. Washington, DC: National Academies Press.

Finkelhor, D., Ormrod, R. K., & Turner, H. A. (2009). Lifetime assessment of poly-victimization in a national sample of children and youth. *Child Abuse & Neglect*, 33, 403–411.

Fischer, S. N. (2011). School-based supports for LGBT and other minority youth: Understanding the roles of teachers, staff, gay-straight alliances, and anti-harassment policies (Unpublished doctoral dissertation). New York University, New York, NY.

Fisher, C. & Mustanski, B. (2014). Reducing Health Disparities and Enhancing the Responsible Conduct of Research Involving LGBT Youth. *Hastings Center Report*, 44, S28-S31.

Floyd, F. J., & Stein, T. S. (2002). Sexual orientation identity formation among gay, lesbian and bisexual youths: Multiple patterns of milestone. *Journal of Research on Adolescence,* 12(2), 167–191.

Friedman, M. S., Koeske, G. F., Silvestre, A. J., Korr, W. S., & Sites, E.W. (2006). The impact of gender-role nonconforming behavior, bullying, and social support on suicidality among gay male youth. *Journal of Adolescent Health*, 38, 621–623.

Galliher, R. V., Rostosky, S. S., & Hughes, H. K. (2004). School belonging, self-esteem, and depressive symptoms in adolescents: An examination of sex, sexual attraction status, and urbanicity. *Journal of Youth and Adolescence*, 33(3), 235-245.

Garofalo, R., Wolf, C., Kessel, S., Palfrey, J., DuRant, R.H. (1998) The association between risk behaviors and sexual orientation among a school-based sample of adolescents. *Pediatrics*, 101(5): 895–902

Garofalo, R., Osmer, E., Sullivan, C., Doll, M., & Harper, G. (2006). Environmental, psychosocial, and individual correlates of HIV risk in ethnic minority male-to-female transgender youth. *Journal of HIV/AIDS Prevention in Children & Youth*, 7(2), 89–104.

GLSEN (2011). Teaching Respect: LGBT-Inclusive Curriculum and School Climate (Research Brief). GLSEN; New York

Goodenow, C., Szalacha, L., Westheimer, K. (2006) School support groups, other school factors, and the safety of sexual minority adolescents. *Journal of School Psychology.* 2006; 43:573–89.

Goodrich, K. M. (2012). Lived experiences of college-age transsexual individuals. *Journal of College Counseling*, 15(3), 215–232.

Gordon-Hollingsworth, A.T., Thompson, J.E., Geary, M.A., Schexnaildre, M.A., Lai, B.S., Kelley, M.L. (2016). Social Support Questionnaire for Children: Development and Initial Validation. *Measurement and Evaluation in Counseling and Development,* 49(2), 122-144.

Greytak, E. A., & Kosciw, J. G. (2014). Predictors of US teachers' intervention in anti-lesbian, gay, bisexual, and transgender bullying and harassment. *Teaching Education*, 25, 410–426.

Greytak, E. A., Kosciw, J. G., & Boesen, M. J. (2013). Putting the ''T'' in ''resource'': The benefits of LGBT-related school resources for transgender youth. *Journal of LGBT Youth*, 10(1–2), 45-63.

Grossman, A. H., & D'augelli, A. R. (2006). Transgender Youth. *Journal of Homosexuality*, 51(1), 111–128.

Grossman, A. H., & D'Augelli, A. R. (2007). Transgender youth and life-threatening behaviors. *Suicide and Life-Threatening Behavior*, 37(5), 527–537.

Grossman, A. H., D'Augelli, A. R., & Frank, J. A. (2011). Aspects of psychological resilience among transgender youth. *Journal of LGBT Youth*, 8(2), 103–115.

Hall, W. J. (2017). The effectiveness of policy interventions for school bullying: A systematic review. *Journal of the Society for Social Work and Research*, 8,45–69.

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.

Hamby, S., Banyard, V. L., & Grych, J. (2013). Life paths research measurement packet. Sewanee, TN: Life Paths Research Program.

Harbin, S.M., Kelley, M.L., Piscitello, J.P., & Walker, S.J. (2018). Multidimensional bullying victimization scale: Development and validation. *Journal of School Violence, 1-16.*

Hatchel, T., Valido, A., De Pedro, K. T., Huang, Y., & Espelage, D. L. (2018). Minority stress among transgender adolescents: The role of peer victimization, school belonging, and ethnicity. *Journal of Child and Family Studies*, 1–10.

Heck, N. C., Flentje, A., & Cochran, B. N. (2011). Offsetting risks: High school gay-straight alliances and lesbian, gay, bisexual, and transgender (LGBT) youth. *School Psychology Quarterly*, 26, 161–174.

Herek, G. M. (2000). Sexual prejudice and gender: Do heterosexuals' attitudes toward lesbians and gay men differ? *Journal of Social Issues*, 56, 251–266.

Hershberger, S. L., Pilkington, N. W., & D'Augelli, A. R. (1997). Predictors of suicide attempts among gay, lesbian, and bisexual youth. *Journal of Adolescent Research*, 12(4), 477-497.

Hill, R. M., & Pettit, J. W. (2012). Suicidal ideation and sexual orientation in college students: The roles of perceived burdensomeness, thwarted belongingness, and perceived rejection due to sexual orientation. *Suicide and Life-Threatening Behavior*, 42, 567–579.

Johns, M. M., Beltran, O., Armstrong, H. L., Jayne, P. E., & Barrios, L. C. (2018). Protective Factors Among Transgender and Gender Variant Youth: A Systematic Review by Socioecological Level. *Journal of Primary Prevention*, 39(3), 263–301.

Jones, T., & Hillier, L. (2013). Comparing trans-spectrum and same-sex-attracted youth in Australia: Increased risks, increased activisms. *Journal of LGBT Youth*, 10(4), 287-307.

Kann, L., McManus, T., Harris, W. A., Shanklin, S. L., Flint, K. H., Queen, B., ... & Lim, C. (2018). Youth risk behavior surveillance—United States, 2017. *MMWR Surveillance Summaries*, *67*(8), 1.

Kann, L., Olsen, E. O., McManus, T., Harris, W. A., Shanklin, S. L., Flint, K. H., … Zaza, S. (2016). Sexual Identity, Sex of Sexual Contacts, and Health-Related Behaviors Among Students in Grades 9–12 — United States and Selected Sites, 2015. *MMWR Surveillance Summaries*, 65(9), 1–202.

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: GLSEN.

Kosciw, J. G., Greytak, E. A., Giga, N. M., Villenas, C., & Danischewski, D. J. (2016). The 2015 National School Climate Survey.

Kosciw, J. G., Greytak, E. A., Palmer, N. A., & Boesen, M. J. (2014). 2013 National School Climate Survey: LGBT students experience pervasive harassment and discrimination, but school-based resources and supports are making a difference.

Loosier, P. S., & Dittus, P. J. (2010). Group differences in risk across three domains using an expanded measure of sexual orientation. *Journal of Primary Prevention*, 31(5–6), 261–272.

Luhtanen, R.K. (2002) Identity, stigma management, and well-being. *Journal of Lesbian Studies*, 7:85–100.

Macapagal, K., Coventry, R., Arbeit, M. R., Fisher, C. B., & Mustanski, B. (2017). "I Won't Out Myself Just to Do a Survey": Sexual and Gender Minority Adolescents' Perspectives on the Risks and Benefits of Sex Research. *Archives of Sexual Behavior*, 46(5), 1393–1409.

Marshal, M.P., Dietz, L.J., Friedman, M.S., Stall, R., Smith, H.A. (2011) Suicidality and depression disparities between sexual minority and heterosexual youth: a meta-analytic review. *Journal of Adolescent Health*, 49:115–23.

McDowell I. (2006). *Measuring Health: A Guide to Rating Scales and Questionnaires*. 3rd ed. New York, NY: Oxford University Press

McLaughlin, K. A., Hatzenbuehler, M. L., Xuan, Z., & Conron, K. J. (2012). Disproportionate exposure to early-life adversity and sexual orientation disparities in psychiatric morbidity. *Child Abuse & Neglect*, 36, 645–655.

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.

Meyer, I. H. (2015). Resilience in the Study of Minority Stress and Health of Sexual and Gender Minorities. *Psychology of Sexual Orientation and Gender Diversity*, 2(3), 209–213.

Meyer, I. H., & Frost, D. M. (2013). Minority stress and the health of sexual minorities. In C. J. Patterson & A. R. D'Augelli (Eds.), *Handbook of Psychology and Sexual Orientation*. New York, NY: Oxford University Press

Morris JF, Waldo CR, Rothblum ED. A model of predictors and outcomes of outness among lesbian and bisexual women. *American Journal of Orthopsychiatry*. 2001; 71:61–71.

Mustanski, B. (2011). Ethical and regulatory issues with conducting sexuality research with LGBT adolescents: A call to action for a scientifically informed approach. *Archives of Sexual Behavior*, 40(4), 673.

Mustanski, B. & Fisher, C. (2016). HIV rates are increasing in gay/bisexual teens: IRB barriers to research must be resolved to bend the curve. *American Journal of Preventative Medicine*, 51(2): 249-252.

Mustanski, B. S., Garofalo, R., & Emerson, E. M. (2010). Mental health disorders, psychological distress, and suicidality in a diverse sample of lesbian, gay, bisexual, and transgender youths. *American Journal of Public Health*, 100(12), 2426–2432.

Mustanski, B., & Liu, R. T. (2013). A longitudinal study of predictors of suicide attempts among lesbian, gay, bisexual, and transgender youth. *Archives of Sexual Behavior*, 42(3), 437–448.

Mustanski, B., Newcomb, M. E., & Garofalo, R. (2011). Mental health of lesbian, gay, and bisexual youths: A developmental resiliency perspective. *Journal of Gay & Lesbian Social Services*, 23, 204–225.

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

O'Shaughnessy, M., Russell, S., Heck, K., Calhoun, C., & Laub, C. (2004). *Safe place to learn: Consequences of harassment based on actual or perceived sexual orientation and gender non- conformity and steps for making schools safer.* San Francisco, CA: California Safe Schools Coalition.

Patterson, C. J. (1995). Sexual orientation and human development: An overview. *Developmental Psychology*, 31(1), 3–11.

Pew Research Center. (2013). *A survey of LGBT Americans: Attitudes, experiences and values in changing times.* Washington, DC: Author.

Poteat, V.P., Anderson, C.J. (2012). Developmental changes in sexual prejudice from early to late adolescence: the effects of gender, race, and ideology on different patterns of change. *Developmental Psychopathology*. 48:1403–15.

Potoczniak, D., Crosbie-Burnett, M., Saltzburg, N. (2009). Experiences regarding coming out to parents among African American, Hispanic, and white gay, lesbian, bisexual, transgender, and questioning adolescents. *Journal of Gay and Lesbian Social Services,* 21:189–205.

Puckett, J. A., & Levitt, H. L. (2015). Internalized stigma within sexual and gender minorities: Change strategies and clinical implications. *Journal of LGBT Issues in Counseling*, 9, 329– 349.

Puckett, J. A., Woodward, E. N., Mereish, E. H., & Pantalone, D. W. (2014). Parental rejection following sexual orientation disclosure: Impact on internalized homophobia, social sup-port, and mental health. *LGBT Health*.

Puckett, Sharon G. Horne, Francisco Surace, Alice Carter, Nicole Noffsinger-Frazier, Julie Shulman, Pam Detrie, Audrey Ervin & Chad Mosher (2017) Predictors of Sexual

Minority Youth's Reported Suicide Attempts and Mental Health. *Journal of Homosexuality*, 64:6, 697-715.

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.

Rew, L., Whittaker, T. A., Taylor-Seehafer, M. A., & Smith, L. R. (2005). Sexual health risks and protective resources in gay, lesbian, bisexual, and heterosexual homeless youth. *Journal for Specialists in Pediatric Nursing*, 10(1), 11-19.

Renshaw, T.L., Long, A.C.J, Cook, C.R. (2014). Assessing adolescents' positive psychological functioning at school: Development and validation of the Student Subjective Wellbeing Questionnaire. *School Psychology Quarterly,* 30(4), 534-552.

Robin, L., Brener, N. D., Donahue, S. F., Hack, T., Hale, K., & Goodenow, C. (2002). Associations between health risk behaviors and opposite-, same-, and both-sex sexual partners in representative samples of Vermont and Massachusetts high school students. *Archives of Pediatrics & Adolescent Medicine,* 156(4), 349-355.

Rosenberg, M. (1965). Rosenberg self-esteem scale (RSE). *Acceptance and Commitment Therapy. Measures Package, 61*, 52.

Rosario, M., Schrimshaw, E.W., Hunter, J. (2009). Disclosure of sexual orientation and subsequent substance use and abuse among lesbian, gay, and bisexual youths: critical role of disclosure reactions. *Psychology of Addictive Behavior,* 23, 175–84.

Russel, S. T. (2005). Beyond Risk: Resilience in the Lives of Sexual Minority Youth. *Journal of Gay & Lesbian Issues in Education*, 2(3), 5–18.

Russell, S. T., & Fish, J. N. (2016). Mental Health in Lesbian, Gay, Bisexual, and Transgender (LGBT) Youth. *Annual Review of Clinical Psychology*, 12(1), 465–487.

Russell, S. T., & Joyner, K. (2001). Adolescent sexual orientation and suicide risk: Evidence from a national study. *American Journal of Public Health*, 91, 1276–1281.

Russell, S. T., Clarke, T. J., & Clary, J. (2009). Are teens "post-gay"? Contemporary adolescents' sexual identity labels. *Journal of Youth and Adolescence*, 38(7), 884-890.

Russell, S. T., Pollitt, A. M., Li, G., & Grossman, A. H. (2018). Chosen name use is linked to reduced depressive symptoms, suicidal ideation, and suicidal behavior among transgender youth. *Journal of Adolescent Health*.

Russell, S. T., Ryan, C., Toomey, R. B., Diaz, R. M., & Sanchez, J. (2011). Lesbian, gay, bisexual, and transgender adolescent school victimization: Implications for young adult health and adjustment. *Journal of School Health*, 81, 223–230.

Russell, S. T., Toomey, R. B., Ryan, C., & Diaz, R. M. (2014). Being out at school: The implications for school victimization and young adult adjustment. *American Journal of Orthopsychiatry*, 84, 635–643.

Ryan, C., Huebner, D., Diaz, R. M., & Sanchez, J. (2009). Family rejection as a predictor of negative health outcomes in white and latino lesbian, gay, and bisexual young adults. *Pediatrics*, 123(1), 346–352.

Saewyc, E. M., Skay, C. L., Hynds, P., Pettingell, S., Bearinger, L. H., Resnick, M. D., & Reis, E. (2007). Suicidal ideation and attempts in North American school-based surveys: are bisexual youth at increasing risk?. *Journal of LGBT health research*, 3(2), 25-36.

Savin-Williams, R. C. (1994). Verbal and physical abuse as stressors in the lives of lesbian, gay male, and bisexual youths: Associations with school problems, running away, substance abuse, prostitution, and suicide. *Journal of Consulting and Clinical Psychology*, 62, 261-269

Savin-Williams, R. C. (1995). Lesbian, gay male, and bisexual adolescents. *Lesbian, gay, and bisexual identities over the lifespan: Psychological perspectives*. (D'Augelli, A. & Patterson, C.J., Eds.), 165-189. Oxford University Press.

Savin-Williams, R. C. (2005). *The New Gay Teenager*. Massachusetts: Harvard University Press.

Savin-Williams, R. C. (2014). An exploratory study of the categorical versus spectrum nature of sexual orientation. *Journal of Sex Research*, 51(4), 446–453.

Savin-Williams, R. C., & Cohen, K. M. (2015). Developmental trajectories and milestones of lesbian, gay, and bisexual young people. *International Review of Psychiatry*, 27(5), 357–366.

Savin-Williams, R. C., & Ream, G. L. (2003). Suicide attempts among sexual-minority male youth. *Journal of Clinical Child and Adolescent Psychology*, 32, 509–522.

Savin-Williams, R. C., Joyner, K., & Rieger, G. (2012). Prevalence and stability of self-reported sexual orientation identity during young adulthood. *Archives of Sexual Behavior*, 41(1), 103–110.

Savin-Williams, R.C. (1998) *"... And Then I Became Gay": Young Men's Stories*. Routledge; London.

Semple, S. J., Strathdee, S. A., Zians, J., McQuaid, J., & Patterson, T. L. (2011). Psychosocial and behavioral correlates of anxiety symptoms in a sample of HIV-positive, methamphetamine-using men who have sex with men. *AIDS care*, 23(5), 628-637.

Semple, S. J., Patterson, T. L., Temoshok, L. R., Straits-Tröster, K., Atkinson, J. H., Koch, W., & Grant, I. (1997). Family conflict and depressive symptoms: A study of HIV-seropositive men. *AIDS and Behavior*, 1(1), 53-60.

Shilo, G., & Savaya, R. (2011). Effects of social support, undermining and acceptance on mental health and sexual orientation milestones of LGB youth. *Family Relations*, 60, 318–330.

Simone, P., Smith, P. K., & Blumberg, H. H. (2013). Surveying bullying using peer nomination methods. *Pediatrics Today*, 9(1), 102-111.

Singh, A. A. (2013). Transgender youth of color and resilience: Negotiating oppression and finding support. *Sex Roles*, 68(11–12), 690–702.

Snapp, S. D., Watson, R. J., Russell, S. T., Diaz, R. M., & Ryan, C. (2015). Social support networks for LGBT young adults: Low cost strategies for positive adjustment. *Family Relations*, 64(3), 420-430.

Sobel, Michael E. (1982). Asymptotic Confidence Intervals for Indirect Effects in Structural Equation Models. *Sociological methodology*. 13: 290–312.

Society for Adolescent Medicine. (2003). Guidelines for Adolescent Health Research. *Journal of adolescent health*, 33, 396-409.

Spitzer, R. L., Kroenke, K., Williams, J. B., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: the GAD-7. *Archives of internal medicine*, *166*(10), 1092-1097.

Sterzing, P. R., Gartner, R. E., Goldbach, J. T., McGeough, B. L., Ratliff, G. A., & Johnson, K. C. (2017). Polyvictimization prevalence rates for sexual and gender minority adolescents: Breaking down the silos of victimization research. *Psychology of violence*, 9(4), 419.

The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research (1979). *The Belmont Report: Ethical Principles and Guidelines for the Protection of Human Subjects of Research*. Washington, DC: US Government Printing Office, DHEW Pub. No. (OS) 78-0012.

The GeniUSS Group. (2014). *Best practices for asking questions to identify transgender and other gender minority respondents on population-based surveys.* In J.L. Herman (Ed.). Los Angeles, CA: The Williams Institute.

Talley, A.E., Hughes, T.L., Aranda, F., Birkett, M., & Marshal, M.P. (2014) Exploring alcohol-use behaviors among heterosexual and sexual minority adolescents: Intersections with sex, age, and race/ethnicity. *American Journal of Public Health*, 104, 295–303.

Tabachnick, B. G., & Fidell, L. S. (2006). *Using multivariate statistics* (5th ed.). Boston: Allyn & Bacon.

Toomey, R. B., Ryan, C., Diaz, R. M., Card, N. A., & Russell, S. T. (2010). Gender-nonconforming lesbian, gay, bisexual, and transgender youth: School victimization and young adult psychosocial adjustment. *Developmental Psychology,* 46, 1580–1589.

Vrangalova, Z., & Savin-Williams, R. C. (2012). Mostly heterosexual and mostly gay/lesbian: Evidence for new sexual orientation identities. *Archives of Sexual Behavior,* 41(1), 85–101.

Waasdorp, T. E., & Bradshaw, C. P. (2015). The overlap between cyberbullying and traditional bullying. *Journal of Adolescent Health,* 56(5), 483-488.

Williamson, I. R. (2000). Internalized homophobia and health issues affecting lesbians and gay men. *Health Education Research,* 15, 97-107.

Wilkerson, J., Noor, S., Galos, D. & Rosser, B.R. (2016). Correlates of a single-item indicator versus a multi-item scale of outness about same-sex attraction. *Archives of Sexual Behavior,* 45(5), 1269-1277.

Willoughby, B. L., Doty, N. D., & Malik, N. M. (2008). Parental reactions to their child's sexual orientation disclosure: A family stress perspective. *Parenting: Science and Practice,* 8(1), 70-91.

Appendix A: Terminology

This appendix presents terminology of relevance to this document but does not intend to present all terminology relevant to sexual and gender minority persons. The definitions presented in this appendix reflect recommendations outlined by the American Psychological Association (APA, 2015a; 2015b).

Sexual and Gender Minority (SGM)

This paper uses the term SGM in place of LGBTQ+, a hypernym commonly used to refer to persons of sexual and gender minority status. The author uses this term in place of LGBTQ+ in acknowledgement and appreciation of the constant evolution of the language used to describe sexuality and gender.

At times, this paper may reference LGBTQ+, LGB, LGBT, or TGNC. This is intended to distinguish between resources and/or study samples. For example, this may be used to indicate that a particular study included lesbian, gay, and bisexual participants (LGB); lesbian, gay, bisexual, and transgender (LGBT), participants or transgender/gender-nonconforming (TGNC) participants.

Gender

Gender refers to the attitudes, feelings, and behaviors that a given culture associates with a person's sex. In turn, *Sex* refers to biological characteristics and is categorized as male, female, or intersex. *Gender Identity* refers to the deeply felt sense of being a man, woman, or alternative gender and is not necessarily congruent with biological sex.

Cisgender is a term used to describe a person whose gender identity is congruent with their assigned sex. *Transgender* is a hypernym used to describe a range of people whose identity is not congruent with their assigned sex (e.g., *gender non-conforming*). Although some

transgender/gender-nonconforming (TGNC) persons may identify as transgender, other may not. For example, some TGNC persons may identify as *genderqueer,* which is a term used to describe a person whose gender identity is not congruent with a *binary* understanding (i.e., man or woman) of gender. There are a number of identity labels that a person may use to describe their gender identity that are not noted here.

Gender Expression refers to the physical characteristics (e.g., hairstyles, clothing choices, use of make-up) and behavior that may communicate aspects of gender or gender role.

Sexual Orientation

Sexual Orientation is a distinct aspect of a person's identity that is not necessarily congruent with their biological sex, gender, or gender expression. Sexual orientation is comprised of three factors: physical or sexual attraction to a particular sex/gender(s), emotional attraction (e.g., relationships), and behaviors (e.g., sexual interactions).

Heterosexual is sexual orientation label used to describe people who are exclusively attracted to people of the same sex/gender. Historically, this has been used to describe persons who are cisgender and exclusively attracted to the opposite sex. However, it is equally valid for a TGNC person who is exclusively attracted to the opposite gender to identify as heterosexual. Similarly, a TGNC person may identify as *gay* (man attracted to men) or *lesbian* (woman attracted to women) despite whether this is congruent with their biological sex.

Bisexual is a sexual orientation label used to describe sexual attraction to both sexes. *Pansexual* is a sexual orientation label used to describe sexual attraction to all genders. There are a number of identity labels that a person may use to describe their sexuality that are not noted here. *Cis-heterosexual* is a term used to describe persons who are both cisgender and heterosexual.

Appendix B: IRB Approval

ACTION ON PROTOCOL APPROVAL REQUEST

Institutional Review Board
Dr. Dennis Landin, Chair
130 David Boyd Hall
Baton Rouge, LA 70803
P: 225.578.8692
F: 225.578.5983
irb@lsu.edu
lsu.edu/research

TO: Mary Lou Kelley
Psychology

FROM: Dennis Landin
Chair, Institutional Review Board

DATE: September 17, 2018

RE: IRB# 4076

TITLE: Investigation of Risk and Protective Factors of Adolescents Across Gender Identities & Sexual Orientations

New Protocol/Modification/Continuation: New Protocol

Review type: Full __X__ Expedited ____ **Review date:** 8/10/2018

Risk Factor: Minimal _____ Uncertain ___X_____ Greater Than Minimal_____

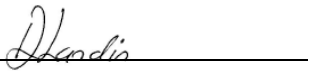
Approved _____X_____ **Disapproved** _____

Approval Date: 9/14/2018 **Approval Expiration Date:** 9/132019

Re-review frequency: (annual unless otherwise stated)

Number of subjects approved: 500

LSU Proposal Number (if applicable)**:**

By: Dennis Landin, Chairman 

PRINCIPAL INVESTIGATOR: PLEASE READ THE FOLLOWING –
Continuing approval is CONDITIONAL on:

1. Adherence to the approved protocol, familiarity with, and adherence to the ethical standards of the Belmont Report, and LSU's Assurance of Compliance with DHHS regulations for the protection of human subjects*
2. Prior approval of a change in protocol, including revision of the consent documents or an increase in the number of subjects over that approved.
3. Obtaining renewed approval (or submittal of a termination report), prior to the approval expiration date, upon request by the IRB office (irrespective of when the project actually begins); notification of project termination.
4. Retention of documentation of informed consent and study records for at least 3 years after the study ends.
5. Continuing attention to the physical and psychological well-being and informed consent of the individual participants, including notification of new information that might affect consent.
6. A prompt report to the IRB of any adverse event affecting a participant potentially arising from the study.
7. Notification of the IRB of a serious compliance failure.
8. SPECIAL NOTE: **Make sure you use bcc when emailing more than one recipient.**

**All investigators and support staff have access to copies of the Belmont Report, LSU's Assurance with DHHS, DHHS (45 CFR 46) and FDA regulations governing use of human subjects, and other relevant documents in print in this office or on our World Wide Web site at http://www.lsu.edu/irb*

Appendix C: Youth Consent Form

1. **Study Title:** Investigation of Risk and Protective Factors of Adolescents Across Gender Identities & Sexual Orientations

2. **Data Collection**: Data for this study will be collected at local public and private schools, community centers and programs, youth centers and programs, after school programs, medical clinics, and online.

3. **Contact Information**: If you have any questions about the study, you may contact a member of the research team during regular business hours: Mary Lou Kelley, Ph.D. or Ilayna Mehrtens, M.A., by phone at 225-246-4113 or by email at imehrt1@lsu.edu.

4. **Goal of the Study**: The goal of the study is to learn more about the problems that young people experience and the things that help young people deal or cope with those problems. You will be asked questions about your background, including the people you live with, your race/ethnicity, and your gender and sexual identity; problems you may experience, including bullying, violence, alcohol or substance use, and your mental health; and things that may make these problems easier or harder like your family, community, and peer support.

5. **Who is involved?** Young people between the ages of 14 to 17 will be asked if they would like to participate in the study. Young people who would like to participate will be asked to provide consent before they participate. This means that a member of the research team will explain the study to you by going over this form with you and answering any questions that you have before asking you to sign this form. If you agree to participate and sign this form, you will be asked to fill out a survey about your background and experiences.

6. **Benefits:** There is no direct benefit to you for participating in this study. Your answers will help us to better understand young people's experiences. The results of this study may help professionals, like doctors, therapists, and teachers, provide better care and services to young people. As a thank you for your time, you will be entered into a drawing for a $50 gift card.

7. **Risks:** There are no known risks for taking part in this study, but you may feel uncomfortable answering some of the questions. If you feel uncomfortable, you may stop filling out the survey at any time. A member of the research team can give you resources for community health care if you would like.

8. **Participation is voluntary:** You are not required to participate in this study. If you decide to participate, you can choose not to answer any questions. If you choose to participate but change your mind and decide you do not want to participate, please let the researcher know. They will destroy your survey without looking at your answers.

9. **Right to Privacy:** Your privacy is really important to us. The information that you provide to us is for research only and will be kept private and confidential. Any identifying information (like your name) will be kept separate from your survey answers. Your name will only go on the consent form and contact sheet, which will be stored separately from your answers. There will be no way to connect your name with your research data. When the study is finished, a report will be written about the results, but your name will not be used in any way.

10. **Cost:** There is no cost for participating in this study.

11. **Withdrawal:** You may refuse to participate or leave the study at any time. If you decide to leave the study, you will not get into any trouble with LSU or the place you are filling out the study.

This study has been explained to me and all my questions have been answered. If I have questions about the study in the future I will contact the study investigators. If I have questions about my rights as a research participant or any other concerns, I can contact Dennis Landin Ph.D., Chairman, LSU Institutional Review Board, 225-578-8692.

I agree to participate in the study described above and acknowledge the researchers' responsibility to provide me with a copy of this consent form if signed by me.

_____ _____

Signature of Participant Date

The study participant has informed me that he/she is unable to read. I certify that I have read this consent form to the participant and explained that by completing the signature line above, the participant has agreed to participate.

_____ _____

Signature of Reader Date

Appendix D: Modified Evaluation to Consent

Please answer the following questions about the consent form that you completed before answering any additional items.

1. Information about the study was explained to me	Yes	No
2. I was given the chance to ask questions about the study	Yes	No
3. I can contact a member of the research team if I have any other questions about the study	Yes	No
4. I understand the goals of the study	Yes	No
5. I understand what will be asked of me during the study	Yes	No
6. I understand the potential risks of participating in the study	Yes	No
7. I understand that I can stop participating in the study at any time without getting in trouble	Yes	No
8. I understand that I can skip any questions that make me uncomfortable	Yes	No
9. I understand that a member of the research team will give me information about community health resources if I would like	Yes	No

Appendix E: Questionnaires

Youth Survey

Please answer the following questions about yourself and your experiences. There are no right or wrong answers, and your name will not be attached to this survey in any way.

1. How old are you? _____

2. What is your 5-digit zip-code? _____

3. What grade are you in? _____

4. Do you qualify for free or reduced lunch at school? ☐ Yes ☐ No ☐ I don't go to school

5. What is your racial heritage? Please select all that apply.
   - ☐ White/ Caucasian
   - ☐ Black/African American
   - ☐ Asian
   - ☐ American Indian
   - ☐ Alaskan Native
   - ☐ Pacific Islander
   - ☐ Native Hawaiian
   - ☐ Other (Please Describe: _____)

6. What is your ethnicity? Please select one. ☐ Hispanic or Latinx ☐ Not Hispanic or Latinx

7. How would you describe your home environment?
   - ☐ I live with my parent(s)
   - ☐ I live with an adult who is not my parent.
   - ☐ I live in a group home with other people my age.
   - ☐ Other (Please describe: _____)

Here are some questions about what you think, feel and do at school. Read each sentence and circle the <u>one</u> best answer. SSWQ	Almost Never	Rarely	Sometimes	Almost Always
1. I feel like I belong at this school	1	2	3	4
2. I am a successful student	1	2	3	4
3. I can really be myself at this school	1	2	3	4
4. I do good work at school	1	2	3	4
5. I feel like people at my school care about me	1	2	3	4
6. I do well on my class assignments	1	2	3	4
7. I am treated with respect at my school	1	2	3	4
8. I get good grades in my classes	1	2	3	4

9. Does your school have any clubs that promote LGBTQ+ equality, such as a Gay-Straight Alliance (GSA)? ☐ Yes ☐ No

10. Do you participate in your GSA (or similar) club?
    ☐ Not at all ☐ Rarely ☐ Sometimes ☐ Often ☐ My school does not have a GSA club

The next few questions are about your sexuality and gender identity. Please answer each question as best as you can using the options provided.

1. Which of the following best describes your sexual orientation?
    ☐ 100% heterosexual or straight
    ☐ Mostly heterosexual or straight
    ☐ Bisexual/Pansexual
    ☐ Mostly homosexual or gay or lesbian
    ☐ 100% homosexual or gay or lesbian

2. People use different words to describe their sexuality or sexual orientation (For example: straight, gay, queer, questioning, asexual, etc.). What word(s) do you use to describe your sexuality? _____

3. What sex were you assigned on your original birth certificate? ☐ Male ☐ Female

4. What is your current gender identity?
    ☐ Male ☐ Female
    ☐ Trans male/Trans man/MTF ☐ Trans female/Trans woman/FTM
    ☐ Genderqueer/Non-Conforming ☐ Different Identity (describe: _____)

5. A person's appearance, style, or dress may affect the way people think of them. How do you think people describe your appearance, style, or dress? (Circle one)

(1) Very Feminine	(2)	(3)	(4)	(5)	(6)	(7) Very Masculine

6. A person's mannerisms (such as the way a person walks or talks) may affect the way people think of them. How do you think people describe your mannerisms? (Circle one)

(1) Very Feminine	(2)	(3)	(4)	(5)	(6)	(7) Very Masculine

7. I would say that I am open (out) to others about my true sexual orientation. (Circle one)

(1) Not at all open (out)	(2)	(3)	(4)	(5) Open (out) to all or most people I know

8. I would say that I am open (out) to others about my true gender identity. (Circle one)

(1) Not at all open (out)	(2)	(3)	(4)	(5) Open (out) to all or most people I know

9. Please use this space below to let us know if you have any comments that you would like to share about these last few questions.

The next few questions are about ways you might have felt or acted. Please select how much you have felt this way during the *past month*. CES-D				
During the past month…	Not at	A little	Some	A lot
1. I was bothered by things that usually don't bother me.	0	1	2	3
2. I did not feel like eating; I wasn't very hungry	0	1	2	3
3. I wasn't able to feel happy, even when my family or friends tried to help me feel better.	0	1	2	3
4. I felt like I was just as good as other kids.	0	1	2	3
5. I felt like I couldn't pay attention to what I was doing.	0	1	2	3
6. I felt down and unhappy	0	1	2	3
7. I felt like I was too tired to do things	0	1	2	3
8. I felt like something good was going to happen.	0	1	2	3
9. I felt like things I did before didn't work out right.	0	1	2	3
10. I felt scared.	0	1	2	3
11. I didn't sleep as well as I usually sleep	0	1	2	3
12. I was happy	0	1	2	3
13. I was more quiet than usual	0	1	2	3
14. I felt lonely, like I didn't have any friends	0	1	2	3
15. I felt like kids I know were not friendly or that they didn't want to be with me	0	1	2	3
16. I had a good time	0	1	2	3
17. I felt like crying	0	1	2	3
18. I felt sad	0	1	2	3
19. I felt people didn't like me	0	1	2	3
20. It was hard to get started doing things	0	1	2	3

During the *last two weeks*, how much have you been bothered by the following problems? GAD-7				
	Not at all	Several days	More than half the days	Nearly every day
1. Feeling nervous, anxious or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it is hard to sit still	0	1	2	3
6. Becoming easy annoyed or irritable	0	1	2	3
7. Feeling afraid as if something awful might happen	0	1	2	3

Below is a list of statements dealing with your general feelings about yourself. Please indicate how strongly you agree or disagree with each statement. RSEI				
	Strongly Disagree	Disagree	Agree	Strongly Agree
1. On the whole, I am satisfied with myself	0	1	2	3
2. At times, I think I'm no good at all	0	1	2	3
3. I feel that I have a number of good qualities	0	1	2	3
4. I am able to do things as well as most other people	0	1	2	3
5. I feel I do not have much to be proud of	0	1	2	3
6. I certainly feel useless at times	0	1	2	3
7. I feel that I am a person of worth, at least on an equal plane with others	0	1	2	3
8. I wish I could have more respect for myself	0	1	2	3
9. All in all, I am inclined to feel that I am a failure	0	1	2	3
10. I take a positive attitude toward myself	0	1	2	3

Sometimes kids get bullied by their classmates and friends. Please indicate which of the answers describes how often these things have happened to you. MBVS				
My Peers:	Never	Sometimes	Often	Very Often
1. Call me mean names	0	1	2	3
2. Post negative comments on my pictures, comments, or statuses (e.g., Facebook, Twitter, Instagram)	0	1	2	3
3. Spread rumors about me in text messages	0	1	2	3
4. Push or shove me	0	1	2	3
5. Curse at me	0	1	2	3
6. Make fun of me	0	1	2	3
7. Ignore my texts	0	1	2	3
8. Tease me	0	1	2	3
9. Punch or hit me	0	1	2	3
10. Bump into me on purpose	0	1	2	3

11. Call me stupid	0	1	2	3
12. Yell at me	0	1	2	3
13. Make fun of my appearance	0	1	2	3
14. Throw objects at me	0	1	2	3
15. Ignore me	0	1	2	3
16. Make fun of my size	0	1	2	3
17. Make negative comments about my clothing	0	1	2	3
18. Spread rumors about me	0	1	2	3
19. Take, hide, or knock my things down	0	1	2	3
20. Make fun of my physical features (e.g., my eyes or my nose)	0	1	2	3
21. Make fun of my weight	0	1	2	3
22. Leave me out or exclude me	0	1	2	3
23. Make fun of me for being smart	0	1	2	3
24. Make fun of me for my grades	0	1	2	3

1. In the last month, how often were you bullied, harassed, or intimidated at school because someone thought you were gay, lesbian, or bisexual (whether you are or are not)?
   ☐ 0 times ☐ 1 time ☐ 2-3 times ☐ About once a week ☐ Several times a week or more

2. In the last month, how often were you bullied, harassed or intimidated at school because of your gender identity or expression?
   ☐ 0 times ☐ 1 time ☐ 2-3 times ☐ About once a week ☐ Several times a week or more

The next few questions are about social support from your parents, relatives, other adults, siblings, and friends. Please read each item and decide how often each statement is true for you.

Please answer the following questions about a **parent**. For reference, a **parent** is someone who lives with you and takes care of your most of the time SSQC-P				
	Never or Rarely True	Sometimes True	Often or Very True	Always True
1. I have a parent that I can count on	0	1	2	3
2. A parent cares about my feelings	0	1	2	3
3. A parent listens when I want to talk	0	1	2	3
4. A parent helps me when I need it	0	1	2	3
5. I have a parent who encourages me	0	1	2	3
6. I have a parent who treats me fairly	0	1	2	3
7. A parent makes sure I have what I need	0	1	2	3
8. A parent helps me feel good about myself	0	1	2	3
9. A parent shows me how to do things	0	1	2	3
10. A parent shows me affection	0	1	2	3

Please answer the following questions about a **relative**. A **Relative** is an adult who is related to you by blood or marriage; someone other than a parent. SSQC-R				
	Never or Rarely True	Sometimes True	Often or Very True	Always True
11. I have a relative who gives me good advice	0	1	2	3
12. A relative comforts me when I am upset	0	1	2	3
13. A relative explains things I don't understand	0	1	2	3
14. A relative helps me when I need it	0	1	2	3
15. A relative helps me feel good about myself	0	1	2	3
16. A relative helps take care of things I can't do alone	0	1	2	3
17. A relative listens when I want to talk	0	1	2	3
18. I have a relative who shows me how to do things	0	1	2	3
19. A relative helps me cope with my problems	0	1	2	3
20. A relative is there when I need them	0	1	2	3

Please answer the following questions about an **adult**. An **adult** refers to a teacher, coach, religious leader, club leader, neighbor, close family friend or other person over the age of 18 who you do not live with, and you are not related to. SSQC-A				
	Never or Rarely True	Sometimes True	Often or Very True	Always True
21. An adult spends time with me when I need it	0	1	2	3
22. An adult helps me feel good about myself	0	1	2	3
23. An adult cares about my feelings	0	1	2	3
24. An adult shows me affection	0	1	2	3
25. An adult cares about my feelings	0	1	2	3
26. I have an adult in my life who really cares about me	0	1	2	3
27. I have an adult in my life who I can really count on	0	1	2	3
28. An adult gives me good advice	0	1	2	3
29. An adult helps me when I need it	0	1	2	3
30. An adult shows me how to do things	0	1	2	3

Please answer the following questions about a **sibling**. A **sibling** is a full biological, half, or step-brother or sister. SSQC-S

	Never or Rarely True	Sometimes True	Often or Very True	Always True
31. I have a sibling who cares about me	0	1	2	3
32. I have a sibling who treats me fairly	0	1	2	3
33. I enjoy spending time with a sibling	0	1	2	3
34. A sibling helps me when I need it	0	1	2	3
35. A sibling accepts me for who I am	0	1	2	3
36. A sibling gives me affection	0	1	2	3
37. I have a sibling I can trust to keep a secret	0	1	2	3
38. I have a sibling who supports my decisions	0	1	2	3
39. A sibling comforts me when I am upset	0	1	2	3
40. A sibling will let me borrow money if needed	0	1	2	3

Please answer the following questions about a **peer**. A **peer** is anyone around your age who you associate with such as a friend, classmate, or teammate. SSQC-F

	Never or Rarely True	Sometimes True	Often or Very True	Always True
41. A peer comforts me when I am upset	0	1	2	3
42. I have a peer I can count on	0	1	2	3
43. A peer gives me good advice	0	1	2	3
44. A peer cares about me and makes me feel wanted	0	1	2	3
45. A peer accepts me for who I am	0	1	2	3
46. A peer supports my decisions	0	1	2	3
47. A peer encourages me	0	1	2	3
48. I have a peer who understands me	0	1	2	3
49. A peer praises me when I've done something well	0	1	2	3
50. I have a peer who will lend me money if I need it	0	1	2	3

51. Think about all of the sources of social support that you experience. Which single source of social support do you think is the most helpful? Examples of social support include friends from school, friends online, parents, family members, etc.

    _____

The next few questions are about disagreements with your parents. How much disagreement have you had with your parents in the past year because of the following? FCI				
	No disagreement			Quite a bit of disagreement
1. They don't accept you for who you are.	0	1	2	3
2. They are critical of your lifestyle	0	1	2	3
3. They think that you can change the way you are.	0	1	2	3
4. They seem to avoid you.	0	1	2	3
5. They don't approve of your partner.	0	1	2	3

The next few questions are about the things that you do when you are dealing with a problem. Please read each statement and then choose how true it is of you. CS				
When dealing with a problem....	Mostly True	Somewhat True	A little True	Not True
1. I spend time trying to understand what happened	3	2	1	0
2. I try to see the positive side of the situation	3	2	1	0
3. I try to step back from the problem and think about it from a different point of view	3	2	1	0
4. I consider several alternatives for handling the problem	3	2	1	0
5. I try to see the humor in it	3	2	1	0
6. I think about what it might say about bigger lifestyle changes I need to make	3	2	1	0
7. I often wait it out and see if it doesn't take care of itself	3	2	1	0
8. I often try to remember that the problem is not as serious as it seems	3	2	1	0
9. I often use exercise, hobbies, or meditation to help me get through a tough time	3	2	1	0
10. I make jokes about it or try to make light of it	3	2	1	0
11. I make compromises	3	2	1	0
12. I take steps to take better care of myself and my family for the future	3	2	1	0
13. I work on making things better for the future by changing my habits, such as diet, exercise, budgeting, or staying in closer touch with the people I care about	3	2	1	0

These last few questions are about how you felt while taking this survey. Opin					
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I felt comfortable answering the questions on this survey.	0	1	2	3	4
I would NOT have completed this survey if I needed to get permission from my parent(s) or guardian(s).	0	1	2	3	4
The questions on this survey made me feel uncomfortable.	0	1	2	3	4
The questions on this survey offended me.	0	1	2	3	4
I would have asked my parent(s) or guardian(s) for permission to complete this survey if I needed to.	0	1	2	3	4

Please use the space below to write any additional comments that you would like to share about this survey.

☺ **Thank you for your time!** ☺

Your answers on this survey will help professionals like doctors, nurses, and teachers better serve young people from different backgrounds, orientations, and identities.

If you would like additional information, like community mental health resources, or have a question, please contact a member of the research team at imehrt1@lsu.edu.

Vita

Ilayna K. Mehrtens, a New Orleans, Louisiana native, completed her Bachelor of Science in Psychology from the University of New Orleans in 2013. Following completion of her undergraduate degree, Ilayna worked as a research associate for the Department of Psychiatry at LSU's School of Medicine. Ilayna completed her Master of Arts in psychology at Louisiana State University in 2018. She is currently completing her APA-accredited pre-doctoral residency at Rush University Medical Center in Chicago, Illinois. Following the completion of her doctoral degree, she will begin a post-doctoral fellowship in pediatric psychology at the University of Chicago School of Medicine. Throughout her career, Ilayna hopes to continue to pursue her clinical and research interests in child and adolescent health disparities in underserved populations, particularly among sexual and gender minority youth.