

Sponsoring Committee: Professor Arnold H. Grossman, Chairperson
Professor Ying Lu, Committee Member
Dr. Emily A. Greytak, Committee Member

FACTORS PROMOTING RISK AND RESILIENCE FOR SUICIDAL IDEATION
AMONG TRANSGENDER YOUTH

John A. Frank

Program in Counseling Psychology
Department of Applied Psychology

Submitted in partial fulfillment
Of the requirements for the degree of
Doctor of Philosophy in the
Steinhardt School of Culture, Education, and Human Development
New York University
2016

Copyright © 2016 John Frank

ACKNOWLEDGMENTS

I owe a debt of gratitude to the chair of my dissertation committee, Dr. Arnold Grossman, for his support in this endeavor and throughout my graduate career. Dr. Grossman kindled my interest in conducting research with the LGBTQ community and served as an influential mentor. A role model in the field, Dr. Grossman demonstrated to what I could strive and helped me develop the skills needed to achieve my goals. Not only was Dr. Grossman able to provide feedback on my written work, he also knew how to help me overcome my anxiety about speaking publically. I am grateful for all he has done in helping me to refine and assert my voice as a researcher.

I would also like to thank the other members of my dissertation committee, Drs. Emily Greytak and Ying Lu, for their integral feedback. I was impressed by Dr. Greytak's knowledge of this topic, and I am grateful for her help in identifying gaps in the reviewed literature. Dr. Lu's guidance related to statistics helped to elevate and clarify my approach to analyses. Thank you both for your timely replies to the multiple rounds of revisions.

Many others have supported me throughout my life, and I would not have been able to reach this stage in my career without them. I thank my mother, father, and brothers for their ever-present love, support, and guidance. Brady Chin, and the goal of building a life with him, served as a motivating force that helped me through the stress of meeting deadlines and managing all my other responsibilities. Drs. Hoyt, Williamson, Forsyth, and Lindgren of the University of Richmond fostered my interest in psychology and social justice and inspired me to pursue a doctoral degree. I would also like to acknowledge the support of Drs. Juni, McRae, Okazaki, Richardson, Suzuki, and Weinberg, and all of the other professors at New York University who welcomed me to their academic community and laid the foundation for my graduate career. Finally, thanks to my lab-mates, Michael McCutcheon, Alex Belser, and Zachary Barletta, for their support on the SOGI-Q project and to my fellow interns at Northwestern, Darnell Motley and Kinton Rossman, for their encouragement and support.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	iii
LIST OF TABLES	vii
LIST OF FIGURES	viii
CHAPTER	
I INTRODUCTION	1
Purpose	3
Language and Labels	4
II LITERATURE REVIEW	10
Suicide Among TGNC Youth	10
Risk Factors	12
Protective Factors	16
Theoretical Framework	18
Research Aims and Questions	24
III METHOD	27
Study Population and Sample	27
Procedures	28
Instruments	30
Data Preparation	39
Analytic Approach	44
IV RESULTS	54
Participants	54
Descriptive Statistics	56
Analyses Related to Research Questions	59

V	DISCUSSION	85
	Descriptive Findings	86
	Summary of Analyses	87
	Limitations	96
	Implications	99
	REFERENCES	108
	APPENDICES	122
A	GLOSSARY	122

LIST OF TABLES

1	Reliability Analyses for Scale Measures	40
2	Skewness and Kurtosis for Scale Measures	43
3	Descriptive Statistics for Scale Measures	57
4	Descriptive Statistics for Categorical Measures	58
5	Classification Table for Regression with Burden. as Predictor	60
6	Logistic Regression on Dichotomized Suicidal Ideation	60
7	Classification Table for Regression with Mental Health Variables	62
8	Correlation Analysis of IPTS and Mental Health Variables	63
9	Classification Table for Regression with IPTS and Mental Health Variables	65
10	Correlation Analysis of Stressful Life Experiences and Outcomes	66
11	Moderation Analyses for Gender-Based Harassment at School	67
12	Logistic Regression on Dichotomized Suicidal Ideation	68
13	Classification Table for Logistic Regression with Stressful Life Experiences	69
14	Correlation Analysis of Stressful Life Experiences and Outcomes	74
15	Moderation Analyses for Presence of GSA and School Enrollment	76
16	Moderation Analyses for Anti-Bully Policy and School Enrollment	76
17	Classification Table for Logistic Regression with Protective Factors	79

LIST OF FIGURES

1	Histogram of suicidal ideation with cut-point	42
2	Histogram of depression	42
3	Histogram of self-esteem	43
4	Scatter plot of depression and suicidal ideation	70
5	Scatter plot of victimization and depression	70
6	Scatter plot of psychological abuse and depression	71
7	Scatter plot of physical abuse and depression	71
8	Illustration of proposed path model for suicidal ideation with stressful life experiences	72
9	Illustration of path analysis with stressful life experiences as predictors and depression as a mediating variable	73
10	Scatter plot of parental support and depression	80
11	Scatter plot of support from a close friend and depression	81
12	Scatter plot of support from a classmate and depression	81
13	Scatter plot of support from teachers and depression	81
14	Illustration of proposed path model for suicidal ideation with stressful life experiences and protective factors	83
15	Illustration of the path analysis including stressful life experiences and protective factors as predictors and depression as a mediating variable.	84

CHAPTER I

INTRODUCTION

Transgender and gender-nonconforming (TGNC) youth face unique challenges and daily sanctions related to their gender non-conforming expression, which put them at risk for negative mental and physical health outcomes (Clements-Nolle, Goldblum et al., 2012; Marx, & Katz, 2006; Perez-Brumer et al., 2015; Reisner et al., 2015; Su et al., 2016; Toomey et al., 2010; Toomey et al., 2012, Ybarra et al., 2014). The term “TGNC youth” encompasses gender non-conforming expression and includes both youth who identify as transgender and youth whose gender identities transcend traditional binary conceptualizations of gender (APA, 2006). TGNC youth take countless risks to live and identify in a way that is authentic to their core sense of self. Due to peoples’ prejudicial and stigmatizing reactions to their gender identity and nonconforming behaviors, TGNC youth experience higher rates of violence and harassment (Grant et al., 2011; Toomey et al., 2012) and homelessness (Ray, 2006) than their cisgender peers. TGNC youth also have elevated rates of negative mental health outcomes like depression (Nuttbrock, 2012; Toomey et al., 2010) and suicidal ideation and attempts (see Appendix A for Glossary; Clements-Nolle, Goldblum et al., 2012; Haas et al., 2014; Marx, & Katz, 2006; Perez-Brumer et al., 2015; Reisner et al., 2015; Su et al., 2016; Toomey et al., 2010; Toomey et al., 2012, Ybarra et al., 2014)

compared to their cisgender peers. Estimates of lifetime prevalence of suicide attempts range from 28% to 32% among samples of transgender adults (Clements-Nolle, et al., 2006; Goldblum et al., 2015, Perez-Brumer et al., 2015).

Death by suicide is a preventable outcome, and psychologists and other mental health professionals need to be informed of both the risk and protective factors for suicide among TGNC youth (NIMH, 2012). In an effort to aid counseling psychologists helping this population, the current study was be guided by the following aims: 1) Determine whether thwarted belongingness and perceived burdensomeness account for variance in suicidal ideation among TGNC youth in accordance with Joiner's (2005) interpersonal psychological theory of suicide (IPTS); 2) Compare IPTS constructs (i.e., thwarted belongingness and perceived burdensomeness) to mental health outcomes (e.g., self-esteem and depression) associated with minority stress (Meyer, 2003); 3) Explore the relationships between suicidal ideation among TGNC youth and stressful life experiences (e.g., sexual orientation- or gender identity-based victimization, unsafe school environment, and parental psychological and physical abuse) informed by minority stress (Meyer, 2003); 4) Explore the relationships between protective factors informed by Meyer's (2003) minority stress model (e.g., social support, school resources, and TGNC identity affirmation) and suicidal ideation among TGNC youth.

Purpose

The purpose of the current study was to examine risk and protective factors for suicidal ideation among TGNC youth. Suicidal ideation was selected as the primary outcome as it is a risk factor for suicide attempts (Han et al., 2015). Using quantitative data collected during the first panel of a longitudinal study of suicidal ideation and attempts among LGBTQ youth, the researcher tested the predictors of suicidal ideation informed by a well-known theory of why people die by suicide developed for the general population (Joiner, 2005). The interpersonal psychological theory of suicide (IPTs) posits that when an individual experiences elevated levels of thwarted belongingness and perceived burdensomeness without seeing a possibility of change in circumstances, that person will have an increased likelihood of wishing to die by suicide (Joiner). The researcher also explored whether previously identified mental health outcomes associated with Meyer's (2003) minority stress model better accounted for variance in suicidal ideation than the two IPTs constructs associated with suicidal ideation (i.e., thwarted belongingness and perceived burdensomeness).

Previous research has identified the following risk factors among TGNC youth and adults: exposure to psychological and physical abuse (Lombardi et al., 2001; Nuttbrock et al., 2010), discrimination and victimization (Clements-Nolle et al., 2006; Grossman & D'Augelli, 2006), and school-based harassment (Goldblum et al., 2012). These stressors were

introduced into analyses to determine if the process by which TGNC youth develop a desire to die by suicide was qualitatively different from the process proposed for the general population. Although Joiner's theory does not account for any resiliency factors in predicting whether people will develop a desire to die by suicide, this researcher was also interested in determining the efficacy of known resiliency factors in the presence of risk. Therefore, once an updated risk model for suicidal ideation was developed, resiliency factors were introduced as potential moderators or predictors. Previously reported protective factors among TGNC adults and youth include social support (Budge et al., 2014), validation of TGNC identity (Boza & Perry, 2014), and school-based resources (McGuire et al., 2010). The current study builds on existing literature by innovatively applying a popular theory of why people die by suicide to an underserved population and exploring whether TGNC-specific risk and protective factors better account for variance in suicidal ideation among this population.

Language and Labels

The use of words and labels to describe and identify people is of particular importance to the TGNC community. In the history of this community, words have been used to both hurt and empower; to discriminate and to validate; to mock and to respect (Nadal et al., 2012). Social constructivism argues that language has the power to shape and determine how people are viewed and understood. As with any effort to use

words to discuss important aspects of people's identities, the overriding goal is to respect the words used by the individuals. It is important to avoid imposing external descriptions of people that do not reflect their own understanding of their lives. Using an inappropriate label to describe the gender identity of others is a form of discrimination and can have a negative impact on their mental health (Nadal et al.).

One of the wonderful aspects of the TGNC community is the diversity of people and experiences found within this community. However, as a researcher, this diversity can present some challenges. In order for research to be used to inform policy and promote change on a large scale, it is useful to produce findings that can be generalized beyond the sample. An integral step in developing representative research is to define the groups that are being represented and to select members of that group. For the sake of the current research, this involves delineating a group of people from a larger sample to be included in analyses. One potential cost of grouping people in this way is that using a label to group people may diminish the differences between members of this group and may imply similarities among members that do not exist. One way that this will be remedied will be to use the participants' own labels for themselves whenever possible and to detail when participants' self-reported identities differ in any way from the label of the group to which they have been assigned in analyses. For the ease of the reader, some commonly used terms are defined below.

Before discussing what it means to be transgender or gender nonconforming, it is imperative that the reader understands the distinctions between sex, gender identity, gender expression, and sexual identity. These terms are often conflated and misunderstood (Nadal et al., 2012). “Sex” refers to the designation made at birth based on the newborn’s anatomy and/or biology and is usually determined using external genitalia (Fenway Health, 2010). Traditionally, sex has been understood as a dichotomous trait with two categories, male and female. However, there is a wide range of biological and anatomical variance found in traditional sex markers and some now argue that sex should not be thought of dichotomously, but rather that it exists on a spectrum (Erickson-Schroth, 2013). “Gender identity” refers to the way in which people identify their own gender. Fenway Health described gender identity as “a person’s innate, deeply-felt psychological identification as a man, woman, or something else, which may or may not correspond to the person’s external body or assigned sex at birth (p. 3).” “Gender expression” is the way in which people choose to externally demonstrate their gender identities (Fenway Health). This expression may or may not align with societal gender role expectations. Finally, “sexual identity” refers to the ways in which people identify their sexual and/or romantic attraction to others and is typically based on the gender identity and expression associated of one’s romantic and sexual partners as well as

identification with specific sexual identity groups, e.g., gay, lesbian, bisexual, straight (Fenway Health).

In her discussion of the social construction of gender, Lorber (1994) outlined the ways in which gender is formed by society. Traditionally in America, children are assigned a birth sex (i.e., male, female, or intersex) based on their external genitalia at birth. According to Lorber, this birth sex then informs how others perceive their gender. Infants who are assigned a male birth sex are considered boys by those around them. Based on this gender label, the child is then expected to act a certain way. The gender expression of the child is supposed to conform with what is expected of children of that gender. In other words, boys are expected to be masculine and act “like boys” and girls are expected to be feminine and act “like girls.” In this way, gender is socially constructed. Over time, a gender identity develops and young people typically come to see themselves as either a man or a woman. For most people, their gender identities align with what is expected based on their assigned sex at birth (Coolhart et al., 2013). Because there are two commonly presented genders and sexes, this traditional conceptualization of gender development is referred to as dichotomous gender or binary gender. However, not all people develop according to this proscribed sequence (Coolhart et al.).

Some people identify in a way that does not conform to what other people expect based on their assigned sex at birth (Erickson-Schroth, 2013).

There are people who are assigned a male birth sex but later identify as women. There are people who were assigned female at birth but now do not identify as either men or women. That is, they reject the binary notion of gender and opt for a different category. There are still other people who have an assigned birth sex and a gender that others would expect based on that birth sex, but who express their gender in ways that do not match others' expectations (Erickson-Schroth). "Transgender" or "gender nonconforming" (TGNC) are phrases that can be used to refer to people for whom the traditional conceptualization of gender development does not apply. "Transgender" is an "umbrella term used to describe people whose self-identification or gender expression transcends society's constructed established gender categories or who do not conform to the culturally defined norms of their biological sex" (Grossman, D'Augelli, & Frank 2011, p. 104). "Gender non-conforming" is used to refer to individuals who do not identify with a traditional gender and/or do not express their gender identity in ways that match the expectations of others which are based on their assigned sex at birth (Fenway Health).

Given the variety of people who label themselves and/or get labeled as transgender, there is a considerable amount of ambiguity in use of this definition. "Transgender" is perhaps the most widely used term to describe people who experience some disparity between their own sense of gender identity or gender expression and the expectations others have about their

gender. The APA (2006) noted, “Anyone whose identity, appearance, or behavior falls outside of conventional gender norms can be described as transgender” (p. 1). In the proposed study, an effort will be made to respect the designated individual identities of the participants and make note of the numerous self-reported identities included in groups created for analyses. TGNC will refer to participants who identify as transgender as well as participants whose reported gender identity and birth sex are not aligned with the traditional male/man and female/woman pairing. Please see the Glossary (Appendix A) for more detailed information about the gender identity labels to be used in this study.

CHAPTER II

LITERATURE REVIEW

The following review provides background information on suicidal thoughts and behaviors among TGNC youth. Literature on previously identified risk and protective factors is discussed and two possible theoretical explanations for suicidal ideation among TGNC youth are presented. Although the current study is focused on the experiences of TGNC youth, studies of TGNC adults will be incorporated throughout the literature review to demonstrate the lifelong impact of discrimination and to supplement the relative dearth of studies involving TGNC youth.

Suicidal Thoughts and Behaviors Among TGNC Youth

Several studies have found that rates of suicidal ideation and suicide attempts are elevated among TGNC individuals (Clements-Nolle, Goldblum et al., 2012; Grant et al., 2011; Marx, & Katz, 2006; Perez-Brumer et al., 2015; Reisner et al., 2015; Su et al., 2016; Toomey et al., 2010; Toomey et al., 2012, Ybarra et al., 2014). Ybarra and colleagues (2015) conducted an online survey of 5,907 youth (aged 13 to 18) from across the United States (3.4% self-identified as transgender, 3.6% as gender-nonconforming, and .9% as a different gender). In this sample, 41-53% of “non-cisgender youth” endorsed passive suicidal ideation in the past two weeks compared to 21% of cisgender females and 13% of cisgender males (Ybarra et al.). Of note,

participants who identified as transgender, gender nonconforming, or a different gender were more likely to endorse suicidal ideation relative to cisgender peers even after controlling for victimization. In a study of LGBT youth that included 21 transgender youth between the ages of 16 and 20 from a large, Midwest city, Mustanski and colleagues (2013) found that 52% of self-identified transgender youth had attempted suicide in the past. This rate was significantly higher than the rate of participants who had attempted suicide among the cisgender sample. Transgender patients (N = 180) between the ages of 12 and 29 in a Boston-based community health center had a threefold risk for depression, suicidal ideation, suicide attempts, self-harm, and mental health treatment compared to their cisgender peers (Reisner et al., 2015). Grossman and D'Augelli (2007) interviewed 55 transgender youth living in New York City and found that 44% of the youth had thought seriously about ending their lives and 26% had made an attempt.

Transgender adults also report elevated rates of suicide (Grant et al., 2011). As part of the National Transgender Discrimination Survey (NTDS), the National Gay and Lesbian Task Force and the National Center for Transgender Equality surveyed 6,450 TGNC adults from across the United States, including participants from all 50 states, the District of Columbia, Puerto Rico, Guam, and the U.S. Virgin Islands (Grant et al., 2011). Among this nationally-representative sample of TGNC adults, 41% of respondents

had attempted suicide in their lifetimes. Of note, rates of suicide attempts were higher among younger respondents (between the ages of 18 and 25). Among a sample of 91 transgender adults and 676 LGB cisgender adults living in Nebraska, transgender participants (N = 91) reported more experiences with discrimination, symptoms of depression, and suicide attempts than LGB cisgender adults (Su et al., 2016). Clements-Nolle and colleagues (2006) surveyed 515 transgender people living in San Francisco and found that more transgender participants under the age of 25 had attempted suicide (47%) than participants over 25 (30%), suggesting that the risk for suicide attempts is high among youth.

Risk Factors

Although limited research exists that empirically explores the reasons why the rate of suicidal behaviors among TGNC youth are higher than their peers, there have been several important studies that inform the direction of the current study. This section reviews the existing research on factors that contribute to an increased risk for suicidal thoughts and behaviors among TGNC youth. Specifically, findings are presented related to the prevalence and impact of violence, discrimination, and harassment among TGNC youth.

Exposure to Violence and Harassment

The results of the National Transgender Discrimination Survey (NTDS) indicated that 78% of the transgender adults sampled experienced harassment, 35% were physically assaulted, and 12% experienced sexual

violence (Grant et al., 2011). Experiences with harassment, physical assault, and sexual assault were all associated with increased likelihood of having attempted suicide in the past (Grant et al.). A retrospective study of 571 male-to-female transgender adults living in New York City explored the impact of gender-related violence on the mental health of TGNC adolescents and adults (Nuttbrock et al., 2010). Nuttbrock and colleagues found that gender-related psychological abuse and physical abuse were related to depression during adolescence. Gender-related abuse was related to suicidal ideation at all stages of the lifespan (Nuttbrock et al.). Furthermore, Rood and colleagues (2015) found that experiences with violence and discrimination related to one's identity were associated with elevated risk for suicidal ideation among 350 transgender adults living in Massachusetts.

Discrimination

Based on a series of focus group interviews with 24 transgender youth from the New York City metropolitan area, Grossman and D'Augelli (2006) reported that participants experienced negative reactions to their gender atypical behavior that ranged from being questioned about their gender and sexual orientation to physical assault by family members and neighbors. They also felt considerable concern for their safety at school, feared potential violence at disclosing their transgender identity, felt vulnerable as a result of not having access to a safe environment, and experienced a "lack of continuity of caregiving by their families and

communities” (Grossman & D’Augelli, 2006, p. 123). As Nadal and colleagues (2016) note, discrimination can take many forms and range from overt acts of hostility to subtler forms of invalidation like not using one’s preferred name or gender pronouns.

The discrimination faced by sexual minority and transgender youth has considerable negative consequences. Several studies have demonstrated a link between discrimination and mental health variables such as anxiety and depression among lesbian, gay, and bisexual individuals (Herek et al., 1999; Hershberger & D’Augelli, 1995; Mays & Cochran, 2001). Among transgender adults, multiple studies indicated that gender-based discrimination is associated with depression (Jefferson et al., 2013; Nuttbrock et al., 2014) and suicidality (Clements-Nolle et al., 2006; Lehavot, 2016; Testa et al., 2012).

Gender-Based Harassment at School

The 2013 National School Climate Survey (NSCS) is a “representative national” online survey of 7,898 students between the ages of 13 and 21, 9.5% of whom identified as transgender, 10.6% identified as genderqueer, and 4.3% identified as a different noncisgender gender (Kosciw et al. 2014, p. xvi). Seventy-five percent of transgender participants, 66% of genderqueer participants, and 55% of participants with other gender identities felt unsafe at school due to anticipated negative reactions to their gender expression (Kosciw et al.). Among transgender participants, 73.6%

had been verbally harassed at school, 32.5% had been physically harassed at school, and 16.2% had been physically assaulted (Kosciw et al.). Among genderqueer participants, 59.6% had been verbally harassed at school, 21.1% had been physically harassed at school, and 8.4% had been physically assaulted (Kosciw et al.). Among participants with other gender identities, 50.8% had been verbally harassed at school, 24.3% had been physically harassed at school, and 12.5% had been physically assaulted (Kosciw et al.). Findings from the NSCS also indicate that 42.2% of transgender students had been prevented from using their preferred name, 59.2% of transgender students had been required to use a bathroom or locker room of their legal sex, and 31.6% of transgender students had been prevented from wearing clothes considered inappropriate based on their legal sex (Kosciw et al.).

In the NTDS sample of TGNC adults described above, 78% of participants experienced harassment at school in grades K-12, 35% experienced physical assault, and 12% experienced sexual violence (Grant et al., 2011). Fifteen percent of the TGNC adults sampled in this study left school due to experiences with harassment (Grant et al.). In a nationwide online survey of 5,542 adolescents aged 13 to 18, 11.5% of whom identified as TGNC, Reisner and colleagues (2015) found that TGNC youth faced higher rates of bullying at school compared to their cisgender peers, and this bullying was associated with higher rates of substance use. Furthermore, in a study of 290 transgender adults from the Virginia Transgender Health

Initiative Survey (THIS), participants who retrospectively endorsed school-based victimization related to their gender identity were four times more likely to have attempted suicide than transgender adults without a history of school-based victimization (Goldblum et al., 2012).

Protective Factors

This section reviews the existing research on protective factors that contribute to a decreased risk for suicidal thoughts and behaviors among TGNC youth. Specifically, findings related to the protective benefits of social support, gender affirmation, and supportive school resources among TGNC youth are discussed.

Social Support

Meyer's (2003) minority stress model posits that social support may ameliorate some of the negative effects of discrimination. In a study of lesbian and gay male adults, social support was associated with lower levels of depression (Feinstein et al., 2014). However, social support failed to moderate the relationship between victimization and depression (Feinstein et al., 2014). Budge and colleagues (2014) explored the role of social support in the lives of 64 genderqueer adults from across the United States (see Appendix A for Glossary). The authors found that participants who had higher levels of social support had lower levels of depression and anxiety. Support from transgender peers moderated the association between social stigma and depression among an online of transgender adults from across

the United States (Bockting et al., 2013). When compared with low-support and non-family support, support from family members was associated with lower levels of loneliness, hopelessness, depression, and suicidality among 232 LGBT youth living in the Chicago metropolitan area (McConnell et al., 2015). In the NTDS sample of TGNC adults, participants with accepting families were less likely to have attempted suicide.

Efforts to Live as Authentic Gender

Another potential protective factor in the lives of TGNC youth is the ability to live and receive validation as their authentic gender. In a recent edition of *The Advocate*, Chris Godfrey (2016) described the experiences of transgender individuals who changed their names and had these names supported and used by the people around them. Describing the experiences of Jett Chapman, a transgender man, Godfrey wrote, “When [Chapman] finally did change his name, a psychological burden lifted. At last he felt he was truly himself” (p. 47). The research on identity affirmation has supported these sentiments. Rotondi (2011) argued that transgender identity support (i.e., the extent to which others reinforce one’s transgender identity) can serve as a protective factor against depression. Similarly, in a longitudinal study of 571 transgender women from the New York metropolitan area, increases in gender identity affirmation (i.e., the extent to which people were treated how they wanted with regard to their gender

identity) were associated with decreases in depression over time (Nuttbrock et al., 2011).

School Climate

One structural change administrators can make to improve school environments is to implement an anti-bullying policy that specifically targets LGBT-related bullying. Research is developing regarding the success of these policies for protecting TGNC youth and reducing negative mental health outcomes. In a qualitative study of 68 transgender youth from California, McGuire and colleagues (2010) found that protective school policies and the presence of a GSA worked to increase feelings of safety among transgender youth by developing supportive connections between teachers and transgender youth. Greytak and colleagues (2014) explored the experiences of 409 transgender youth across the country and found that GSA's, supportive educators, LGBT-inclusive curricula, and comprehensive anti-bullying policies were related to decreased absenteeism. GSA's, supportive educators, and LGBT-inclusive curricula were also related to decreased discrimination (Greytak et al.)

Theoretical Framework

The current study was informed by two theories related to mental health outcomes. The first theory, Joiner's (2005) interpersonal psychological theory of suicide (IPTS), presents an explanation for how the desire to die by suicide develops among the general population. The second

theory, Meyer's (2003) minority stress model, does not explicitly address suicidal ideation, but it provides an explanation for how identity-related discrimination contributes to negative mental health outcomes.

Interpersonal Theory of Suicide

Joiner's (2005) interpersonal psychological theory of suicide has been used to explain suicidal ideation and attempts among the general population of adults in the United States. In this model, thwarted belongingness and perceived burdensomeness contribute to a desire to die by suicide. When this desire is present, acquired capability for lethal self-injury predicts suicidal behavior. Thwarted belongingness refers to the sense that one does not play an integral role in any social or familial groups and is characterized by feelings of isolation and low social support. Perceived burdensomeness is the belief that someone's existence hinders and burdens others. Perceived burdensomeness is also associated with loss of meaning in life and diminished sense of competence. As Van Orden and colleagues (2010) argue, when levels of thwarted belongingness and perceived burdensomeness have been persistently elevated stable and there is no hope for change in the future, a person has a greater likelihood of desiring to die by suicide, and of attempting suicide if a high tolerance for pain and capability of self-harm that is sufficient to overcome the opponent process of survival is also present. Of note, Joiner (2005) argued that thwarted belongingness and perceived burdensomeness should account for variance in suicidal ideation beyond the

variance accounted for by depression. Van Orden and colleagues (2010) articulated two hypotheses related to suicidal ideation based on this model. The first hypothesis posits that thwarted belongingness and perceived burdensomeness should both independently predict passive suicidal ideation. The second suggests that the simultaneous and stable presence of both factors should account for variance in suicidal ideation beyond the variance accounted for by each factor independently.

Two previous studies have evaluated thwarted belongingness and perceived burdensomeness as predictors of suicidal ideation among lesbian, gay, and bisexual (LGB) college students (Hill & Pettit, 2012; Woodward et al., 2014), a population that also faces elevated rates of discrimination and social rejection (Meyer, 2003). In a comparison study of LGB and heterosexual college students, Hill and Pettit found that higher rates of suicidal ideation among LGB students compared to heterosexual students were explained by higher rates of burdensomeness among LGB students. Levels of thwarted belongingness did not differ between LGB and heterosexual students and did not account for any of the difference in suicidal ideation scores between these groups. Woodward and colleagues surveyed 210 LGB adults and found that 21% of participants endorsed current suicidal ideation. Suicidal ideation was predicted by perceived burdensomeness but not by thwarted belongingness. Participants who

reported perceived burdensomeness were three to five times more likely to experience current suicidal ideation.

In an effort to explain why thwarted belongingness did not predict current suicidal ideation, the Woodward and colleagues (2014) argued that thwarted belongingness, as it is measured by the 12-item version of the Interpersonal Needs Questionnaire (INQ; Van Orden et al., 2008), may not be indicative of belongingness for LGB individuals. This measure may capture thwarted belongingness in relation to families of origin or peer groups, but it may not reflect the sense of belongingness participants feel with LGB groups or chosen families.

Although limited data exists on the ability of Joiner's (2005) theory to explain and predict suicide among TGNC youth, the existing literature suggests that this population faces rejection from family and peers (Grossman & D'Augelli, 2005) and exposure to pain via violence and harassment (Lombardi et al., 2001), which could contribute to thwarted belongingness and perceived burdensomeness. However, like the studies of LGB adults cited above, it may be that the 12-item measure of thwarted belongingness that appears in the INQ (Van Order et al., 2008) may not be a valid measure of belonging for this group. Hendricks and Testa (2012) argued that Joiner's (2005) interpersonal theory for why people die by suicide provides a frame for understanding how stressors faced by transgender individuals contribute to suicidal ideation. The proposed study

will assess the extent to which the constructs found in Joiner's (2005) interpersonal psychological theory of suicide match the described experiences of transgender youth.

Minority Stress Model

The current study is also informed by Meyer's (2003) minority stress model. This model posits that, as a result of stigma and heterosexism, sexual minority people face chronic, socially-based stressors that affect their mental health. In addition to discrimination that they may experience from others, the model also claims that sexual minority people are affected by internalized stigma and stress related to expectations of rejection from others. Meyer (2003) posited that for LGB youth, the negative messages they hear about homosexuality from their families, peers, religious institutions, and in the media may all contribute to their experience of minority stress. Given their exposure to these messages, they may, in turn, come to view themselves in a negative light and expect others to reject them. In a study on the minority stress model among LGBT adults living in Nevada, McCarthy and colleagues (2014) found that perceived discrimination and self-acceptance were associated with depression. Although originally developed as a model to understand mental health among LGB people, Hendricks and Testa (2012) introduced the possibility of using this model to explain the elevated rates of suicidal ideation and attempts among transgender individuals. They suggest that minority stress may be a useful frame for understanding the impact of

stressors transgender youth face like social rejection and discrimination. After further reviewing the existing research on suicidal ideation and attempts among TGNC youth, Testa and Hendricks (2015) argue that life experiences faced by transgender individuals (e.g., familial rejection, homelessness, victimization) contribute to minority stress, the expectation of rejection, and internalized transphobia. These proximal stressors then contribute to low self-esteem, mood disorders, and suicidal ideation (Testa & Hendricks, 2014).

In his discussion of the minority stress model, Meyer (2003) argued that LGB people must have access to personal and group-level resources that help them cope with minority stress and ameliorate the negative impact of this stress on their lives. He suggested that one way to counter the negative impact of minority stress is social support. Social support reduces LGB individuals' sense of alienation and provides them with a network of people with whom they can discuss their negative emotions. These positive relationships can also reduce the expectations this population has for being rejected and, hopefully, work to lessen internalized negative beliefs about being lesbian, gay, or bisexual. Although Meyer initially focused on the protective nature of in-group support (e.g., support from other LGB people), it is likely that support and positive reactions from people who were aware of an LGB person's sexual minority status would have similar effects. Testa

and Hendricks (2014) suggest that it is possible that these supportive factors can be protective for TGNC youth as well.

Research Aims and Questions

The current study was guided by four primary research aims. The first aim was to determine whether thwarted belongingness and perceived burdensomeness account for variance in suicidal ideation among TGNC youth in accordance with Joiner's (2005) Interpersonal Psychological Theory of Suicide. To address this aim, the following questions were explored: 1a) After controlling for age, race, ethnicity, gender identity, and site location, do the IPTS variables related to suicidal ideation (i.e., thwarted belongingness and perceived burdensomeness) accurately distinguish TGNC youth who endorsed suicidal ideation from TGNC who did not endorse suicidal ideation? 1b) After controlling for age, race, ethnicity, gender identity, and site location, does the product of the two constructs related to suicidal ideation in the IPTS model (i.e., thwarted belongingness and perceived burdensomeness) contribute to accurately distinguishing between TGNC youth who endorsed suicidal ideation and TGNC youth who did not endorse suicidal ideation beyond what is predicted by each construct independently?

The second aim of the study was to compare IPTS constructs (i.e., thwarted belongingness and perceived burdensomeness) to mental health indicators of minority stress (i.e., self-esteem and depression). The following questions guided the exploration of this aim: 2a) After controlling for age,

race, ethnicity, gender identity, and site location, do mental health indicators of minority stress (i.e., depression and self-esteem) accurately distinguish TGNC youth who endorsed suicidal ideation from TGNC who did not endorse suicidal ideation? 2b) To what extent are mental health indicators of minority stress (i.e., depression and self-esteem) correlated with the IPTS constructs (i.e., thwarted belongingness and perceived burdensomeness)? 2c) Do thwarted belongingness and perceived burdensomeness accurately distinguish between TGNC youth who endorsed suicidal ideation and TGNC who did not endorse suicidal ideation after controlling for mental health indicators of minority stress (i.e., depression, self-esteem)?

The third aim was to explore the relationships between suicidal ideation and stressful life experiences related to minority stress (Meyer, 2003), i.e., sexual orientation- or gender identity-based victimization, unsafe school environment, and parental psychological and physical abuse among TGNC youth. The following questions guided the exploration of this aim: 3a) To what extent are the stressful life experiences (i.e., sexual orientation- or gender identity-based victimization, psychological abuse by a caregiver, physical abuse by a caregiver, and gender-based harassment at school) independently related to depression, self-esteem, and suicidal ideation? 3b) When considered together, are the stressful life experiences (i.e., sexual orientation- or gender identity-based victimization, psychological abuse by a caregiver, physical abuse by a caregiver, and gender-based harassment at

school) associated with suicidal ideation either directly or indirectly via depression or self-esteem?

Finally, the fourth aim was to explore the relationships between protective factors informed by Meyer's (2003) minority stress model (i.e., social support, school resources, and TGNC identity affirmation) and suicidal ideation among TGNC youth. The fourth aim was addressed with the following questions: 4a) To what extent do protective factors (i.e., support from parents, support from close friend, support from classmates, support from teachers, presence of a GSA at one's school, comprehensive anti-bullying policy at one's school, and ability to use one's preferred name) relate independently to suicidal ideation, depression, and self-esteem? Question 4b. Is the presence of a GSA related to decreased experiences of gender-based harassment at school and increased support from teachers, classmates, and friends? 4c) When considered in the context of risk factors, are the protective factors (i.e., support from parents, support from a close friend, support from classmates, support from teachers, presence of a GSA at one's school, comprehensive anti-bullying policy at one's school, and ability to use one's preferred name) associated with suicidal ideation?

CHAPTER III

METHOD

The purpose of the current study was to use quantitative data from the first panel of a longitudinal survey study of LGBTQ youth to examine risk and protective factors for suicidal ideation among TGNC youth. The researcher also explored whether previously identified life experiences and mental health outcomes associated with Meyer's (2003) minority stress model better accounted for variance in suicidal ideation than the two interpersonal psychological theory of suicide (IPTs) constructs associated with suicidal ideation (i.e., thwarted belongingness and perceived burdensomeness).

Study Population and Sample

Participants were selected from among a sample of 1061 lesbian, gay, bisexual, transgender, questioning, and same-sex attracted (LGBTQ) youth (aged 15-21) who were participating in the "Risk and Protective Factors for Suicide Among Sexual Minority Youth" (a.k.a. SOGI-Q [Sexual Orientation, Gender Identity, Questioning Youth]) research project, an NIH-funded longitudinal study (R01-MH091212) of which Arnold Grossman is the principal investigator. For the SOGI-Q study from which the participants were drawn, the age range of youth was defined based on criteria for youth determined by the Center for Disease Control and Prevention (CDC). The

CDC defined youth as a category that includes adolescents and young adults and ranges in age from 10-24 (CDC, 2010). Due to IRB restrictions, the current sample was restricted to youth who were age 15 or older.

Additionally, the upper age limit for the first panel was 21 so participants were still considered youth when they participated in the last panel (i.e., not over age 24). The SOGI-Q project was a longitudinal quantitative exploration of risk and protective factors related to suicidal ideation and attempts among sexual minority youth living in three metropolitan cities of the United States.

Procedures

Participants were initially recruited via community-based organizations serving LGBTQ youth in three metropolitan cities of the United States (i.e., the Northeast, the Southwest, on the West Coast). Other recruitment methods included sending invitations via list-serves targeting this population, inviting youth at LGBTQ-pride parades and activities to participate, and snowball sampling. When invited to participate, youth were informed that they could receive incentives for participating in a study about the experiences of LGBTQ youth. They were told that they would be asked to return to the labs for four additional panels over the course of three years. If interested, the youth scheduled a time to participate in the first panel by contacting the lab managers via telephone or email.

When participants arrived at the labs (i.e., private offices or rooms at each of the three sites) for the first panel, trained research assistants or a lab

manager informed them of the risks associated with the study and their rights as participants. Participants were also asked to read and sign consent documentation. For participants under 18 years old, a youth advocate explained the study to the youth and helped to ensure informed assent. After giving informed consent or assent, the participants were asked to complete a paper-based survey packet that included measures of self-esteem, self-mastery, depression, resilience, social support, victimization, drug use, and suicidal ideation and behaviors. The methods of recruitment and procedures of the study were approved by the institutional review boards of both universities involved in the project, and a federal certificate of confidentiality was obtained.

Surveys took participants between 40 and 80 minutes to complete. Upon completion of the survey packet, a trained doctoral-level research assistant or lab manager debriefed the participants and assessed risks for suicidal behaviors. In the event that the participant was having thoughts about suicide, the research assistant or lab manager provided the participant with a referral to a culturally competent mental health professional. In the event of imminent risk, a protocol was in place to ensure that the proper emergency resources were employed; throughout the first panel no such measures were required. All participants were provided with a list of LGBTQ-friendly mental health resources.

Following data collection, responses from the paper-based survey were converted into an SPSS (IBM Corp., 2013) dataset using the Qualtrics (Version 6348130, 2016) computer software. Graduate-level research assistants entered written responses into an electronic survey developed through Qualtrics software. The Qualtrics software was programmed to generate an SPSS file with the entered data converted into numerically coded values. Syntax was developed to reverse code appropriate items within the SPSS dataset and generate summary scores for each of the scales.

Instruments

Included below are descriptions of the measures used in the current analyses. Descriptive data for these instruments is provided in the Results section.

Suicidal ideation

Suicidal ideation was measured by the negative subscale of the *Positive and Negative Suicidal Ideation Inventory (PANSI)* developed by Gutierrez and Osman (2008). The *PANSI* is a 14-item measure with two subscales (i.e., positive ideation and negative ideation), and participants used a 5-point scale from none of the time (1) to most of the time (5) to report the relative frequency of the items within the past two weeks. The negative ideation scale is a direct measure of the extent to which suicidal ideation has been present in the past two weeks, whereas the positive ideation subscale measures resilience (i.e., confidence in coping with stressors and optimism

for the future). Although information about predictors of resilience would be useful for supporting TGNC youth, exploring this topic was beyond the scope of the current study, and only the negative ideation was used in the current analyses. Sample items of the negative subscale include: “seriously considered killing yourself because you could not live up to the expectations of other people” and “felt hopeless about the future and you wondered if you should kill yourself.” Higher scores on the negative ideation subscale of the PANSI indicated higher levels of suicidal ideation. Gutierrez and Osman (2008) reported a Chronbach’s alpha score of .96 for the negative ideation subscale.

Thwarted Belongingness and Perceived Burdensomeness

Thwarted belongingness and perceived burdensomeness were measured using the two subscales of *the Interpersonal Needs Questionnaire (INQ)*, a 12-item measure (Van Orden et al., 2008). Participants responded using a 7-point scale ranging from not at all true of me (1) to very true of me to report how they relate to the individual items. The belongingness subscale of the *INQ* ($\alpha = .85$ [Van Orden et al.]) consisted of 5 items including: “These days, I feel disconnected from other people” and “These days, I feel that there are people I can turn to in times of need [reverse-coded item].” Higher scores on the thwarted belongingness subscale indicated lower belongingness. Perceived burdensomeness was measured by the 7-item perceived burdensomeness subscale of the *INQ* ($\alpha = .89$ [Van Ordern et al.]).

Sample items include: “These days, I feel like a burden on the people in my life” and “These days, I think the people in my life wish they could be rid of me.” Higher scores on the burdensomeness subscale indicated greater levels of perceived burdensomeness.

Depression

Depression was measured using the Beck Depression Inventory - Youth (BDI - Y; Beck, Beck, Jolly, & Steer, 2005). The BDI-Y is a 20-item scale that assesses the presence and magnitude of symptoms commonly associated with clinical samples of depressed persons. Items are scored on a 4-point scale from 0 (*never*) to 3 (*always*). Sample items include: “I have trouble sleeping” and “I think that bad things happen because of me.” The sum of score across all items was calculated to produce the depression score. Beck and colleagues (2005) reported reliability coefficients of .75 for both males and females. Higher scores on this scale indicated a greater degree of depressive symptoms.

Self-Esteem

Self-esteem was measured using the Rosenberg Self-Esteem Scale (Rosenberg, 1989). This scale includes 10 items and measures participants’ subjective evaluations of themselves. Items are scored on a 4-point scale from 1 (strongly agree) to 4 (strongly disagree). Five of the items were reverse coded. Sample items include: “All in all, I am inclined to feel that I am a failure [reverse-coded item]” and “I feel that I am a person of worth, at least

on an equal plane with others.” D’Augelli and colleagues (2008) reported a Cronbach’s alpha value of .84 when this scale was used with LGB cisgender youth. Higher scores on this scale indicated a higher self-esteem and a more positive self-evaluation.

Sexual Orientation- or Gender Identity-Based Victimization

Six items were used to assess lifetime experience of harassment and violence due to participants’ perceived sexual and gender identities (D’Augelli, Grossman, & Starks, 2006). Participants were asked to indicate how often they experience each type of victimization due to their sexual or gender identity over the course of their lives. The six types of victimization reflect two categories, i.e., verbal (e.g., insults, threats of violence) and physical (e.g., being punched, kicked or beaten, sexually assaulted) victimization. Participants responded on a 4-point scale ranging from 0 (*never*) to 3 (*3 or more times*). Participants’ responses on these six items were added to create an index score, with higher scores indicating more frequent experiences of victimization.

Gender-Based Harassment at School

One item was used to assess whether a participant experienced harassment due to their perceived gender identity on school grounds. Participants were asked: “During the past 12 months, how many times on school property were you harassed or bullied because of your gender identity?” Participants could respond by indicating “Never”, “Once/month or

less", "Once a week", "Once a day", or "More than once/day." Due to an unequal distribution across groups, these responses were collapsed into two groups (i.e., participants who experienced no harassment and participants who experienced harassment at school at least once).

Parental Psychological and Physical Abuse

The Child and Adolescent Psychological and Physical Abuse Measure (Briere & Runtz, 1988) was used to measure parental psychological and physical abuse from a parent or caregiver. The measure consists of 13 items scored on a 4-point scale ranging from 0 (*never*) to 3 (*often*). Participants answered each item for both a male parent or caregiver and a female parent or caregiver. The items contribute to two scales: a psychological/verbal abuse scale (7 items including "yelled at you" and "insulted you") and a physical abuse scale (6 items including "slapped you"). Higher scores on the two scales indicated greater parental psychological and physical abuse.

Social Support

The Child and Adolescent Social Support Scale (CASSS; Malecki, Demaray, & Elliot, 2000) was used to measure parental support, teacher support, classmate support, and support from a close friend. The entire scale consists of 60 items related to sources of support across five subscales (i.e., parent, teacher, classmate, close friend, and other adults at school). Sample items include: "My parents listen to me when I need to talk" and "My close friend helps me when I am lonely." Participants rated each item on a 6-point

scale ranging from 1 (*never*) to 6 (*always*) on how often they are supported. Malecki and colleagues (2000) reported the Cronbach's alpha for the entire scale to be .97. Higher scores on each subscale indicated a higher level of support.

School-Based Resources

One "yes or no" dichotomous item was used to assess whether or not participants were currently attending school at the time of their participation. Another "yes or no" dichotomous item was used to assess whether their current or most recent (if they were not currently attending school) school had a Gay-Straight Alliance (GSA). Participants were also asked if their current or most recent school had an anti-bullying policy that specifically mentioned LGBTQ-related bullying. Participants could respond by indicating "Yes," "No," or "I don't know." For the purposes of the current analyses, participants who responded "no," representing the absence of such a policy, and participants who responded "I don't know," reflecting lack of awareness of such a policy's existence, were combined in a single group.

TGNC Identity Affirmation

For the proposed study, use of preferred name was used a proxy for perceived validation of TGNC identity. When TGNC youth identified a gender that is different from the gender they were assigned at birth, they choose a new, "preferred name," one that is more closely aligned with their gender identity. In the SOGI-Q survey, four dichotomous (i.e., yes or no) items

assessed whether participants felt that they were able to go by their preferred names at home, school, work, and with friends. Based on their scores, participants were divided into two groups (i.e., participants who were unable to use their preferred name in at least one setting and participants who faced no obstacles to using their preferred name).

Demographic Items

Participants were asked to respond to the open-ended question “How old are you?” to indicate their age. To identify participants’ ethnicity, participants were asked “What is your ethnicity?” provided with the options “Hispanic or Latino” and “Not Hispanic or Latino,” and asked to select all that apply. When asked about their race, participants were presented with the options of “Asian or Asian American,” “Black or African American,” “White, Caucasian, Anglo, European American,” “American Indian, Native American, or Alaskan Native,” “Native Hawaiian or Other Pacific Island,” and “Multi-Racial,” and asked to select all that apply. Participants were also provided the option to write their race. Site location was measured by reporting from which of the three sites participants were recruited. Participants were asked to designate their birth sex as “Male,” “Female,” or “Intersex.” Of note, the inclusion criteria for the larger SOGI-Q study excluded intersex participants. However, because intersex identity was not assessed prior to survey administration, “Intersex” was included as an option for birth sex as way to assess for intersex status. Four survey respondents identified as intersex

and were removed from the sample as they did not meet inclusion criteria. For gender identity, participants selected between “Man,” “Woman,” “Trans-man,” “Trans-woman,” or “Genderqueer.” Participants also had the option to write a response to this question.

Gender Identity

Based on responses to questions about current gender identity and sex assigned at birth, participants were categorized into four gender categories: a) trans-women and women whose sex assigned at birth was male b) trans-men and men whose sex assigned at birth was female, c) female-to-different-gender (i.e., participants who reported their sex assigned at birth was female and current gender identity was non-binary), and d) male-to-different-gender (i.e., participants who reported their sex assigned at birth was male and current gender identity was non-binary). Category A was created by identifying any participant who reported a current gender identity of “trans-man” (regardless of reported assigned sex at birth) or any participant who reported a gender identity of “man” and an assigned sex at birth of female. Similarly, category B was created by identifying participants who reported a current gender identity of “trans-woman” (regardless of reported assigned sex at birth) and participants who reported a gender identity of “woman” and an assigned sex at birth of male. The nature of the demographic question related to gender identity was limited in that participants were forced to choose only one gender identity label to capture

their identities. Therefore, someone who identified as transgender, but felt that their gender identity was best captured by either “man” or “woman” would not be able to additionally indicate a transgender identity on the current survey. These participants were included in the current study and grouped with participants who identified as “trans-men” or “trans-women” based on how “transgender” is defined for the youth. However, the writer acknowledges that this grouping did not fully capture the reported identities of participants.

Categories C and D were created by identifying participants who reported a gender identity that was not captured by “man,” “woman,” “trans-man,” or “trans-woman.” These participants included youth who indicated that their gender identity was genderqueer and youth who reported a gender identity that was not listed as an option. Two participants reported gender identities that did not clearly meet the criteria for TGNC defined in Chapter 1 (i.e., a participant who identified as “alien” and a participant who identified as “mostly woman, but with some male tendencies”). Further analyses were conducted to determine whether these two participants responded to questions about having a TGNC identity (e.g., “How old were you when you became aware that your gender identity was not consistent with your birth sex?”). Because these TGNC identity-specific items were skipped by both participants, they were not included in the current sample of TGNC youth. Finally, following the process established by Beemyn and Rankin (2011),

participants who identified their assigned sex at birth as “male” and indicated a non-binary gender identity (i.e., not “trans-man,” “trans-woman,” “man,” or “woman”) were categorized as “male-to-different-gender,” and participants who identified their assigned sex at birth as “female” and indicated a non-binary gender identity were categorized as “female-to-different-gender.” Although these categories do not capture the nuances of the individual gender identities used by participants, they provide two overarching categories that recognize the nuanced gender identities and serve as a means of distinguishing these participants from binary-identified transgender youth. Non-binary participants were grouped based on assigned sex at birth in an effort to emphasize how current gender identities differ from expectations based on gender norms and societal expectations based on one’s assigned sex at birth. However, the writer acknowledges that this distinction relies on assigned sex at birth, and participants may feel that this construct does not meaningfully capture their experience.

Control Variables

The control variables utilized in the current analyses included age (in years), ethnicity (i.e., Hispanic or Latino, not Hispanic or Latino, and not reported), race (i.e., White, Black or African American, Asian or Asian American, American Indian, Native American, or Alaskan Native, Native Hawaiian or other Pacific Islander, multiracial, or did not report a race), gender identity (i.e., trans-man/man, trans-woman/woman, male-to-

different gender, female-to-different gender), and site location (i.e., Northeast, Southwest, and West Coast).

Data Preparation

To enhance the trustworthiness of the data, screening techniques proposed by DeSimone and colleagues (2015) were employed to identify participants who did not appear to exert sufficient effort in responding to survey items. Specifically, participants were removed from the dataset if they responded with a lengthy string of invariant responses on at least two measures that included semantic antonym items (i.e., items would be reverse coded because they are the opposite of the other items). Their insufficient effort on these measures made it unclear whether valid responses were provided on other measures. The removal of these participants occurred prior to any analyses and did not affect sample sizes across analyses.

Table 1

Reliability Analyses for Scale Measures

<u>Scale</u>	<u>Chronbach's Alpha</u>
Suicidal Ideation	.94
Thwarted Belongingness	.68
Perceived Burdensomeness	.88
Depression	.95
Self-Esteem	.88
Psychological Abuse by a Caregiver	.89
Physical Abuse by a Caregiver	.90
Support from Parents	.96
Support from a Close Friend	.97
Support from Classmates	.96
Support from Teachers	.97

Reliability analyses also included evaluating Chronbach's Alpha values among the current sample of TGNC youth for all of the scales to be used in analyses. Although the majority of the Chronbach's Alpha values were above .70, one scale falls below this cut-off (See Table 1). Among the current sample, internal consistency is lower for the measure of thwarted belongingness ($\alpha = .68$). Given that this scale has been used reliably with other populations in previous studies (Hill & Pettit, 2012; Woodward et al., 2014) and that the goal of the current study is to evaluate its use with transgender youth, the measure will be maintained in its original form for subsequent analyses. However, caution should be used when interpreting results including thwarted belongingness.

For all analyses, participants with missing data on a scale were removed from analyses that included that scale. Accordingly, sample sizes vary across analyses and will be reported for each set of analyses. Further screening was undertaken prior to conducting regression and path analyses. Univariate normality was considered in the screening process by reviewing histograms of the primary outcome (Figures 1-3) and evaluating skewness and kurtosis indices for all continuous variables (Table 2). The histograms indicated that suicidal ideation was not normally distributed, and depression and self-esteem were normally distributed. None of the skewness index values exceeded an absolute value of 1.5, and none of the kurtosis index values exceeded an absolute value of 1.5, indicating that the distributions of

the variables were within the acceptable range of normality for path analyses (Kline, 2011). Because the shape of the histogram for suicidal ideation indicates a non-normal distribution and the absolute skewness score for this measure exceeds 1.00, a transformation is recommended when this variable is included as an outcome measure in regression analyses (Bulmer, 1979). To address the skewed distribution, the histogram of suicidal ideation was reviewed, and the decision was made to transform suicidal ideation into a dichotomous variable with two groups (i.e., participants with no current suicidal ideation and participants who endorsed at least one item related to suicidal ideation) when used in regression analyses.

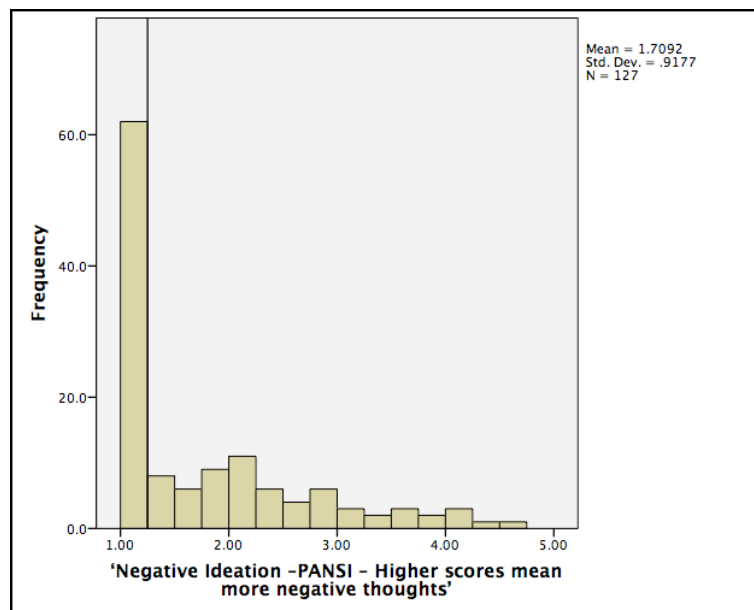


Figure 1. Histogram of suicidal ideation with cut-point

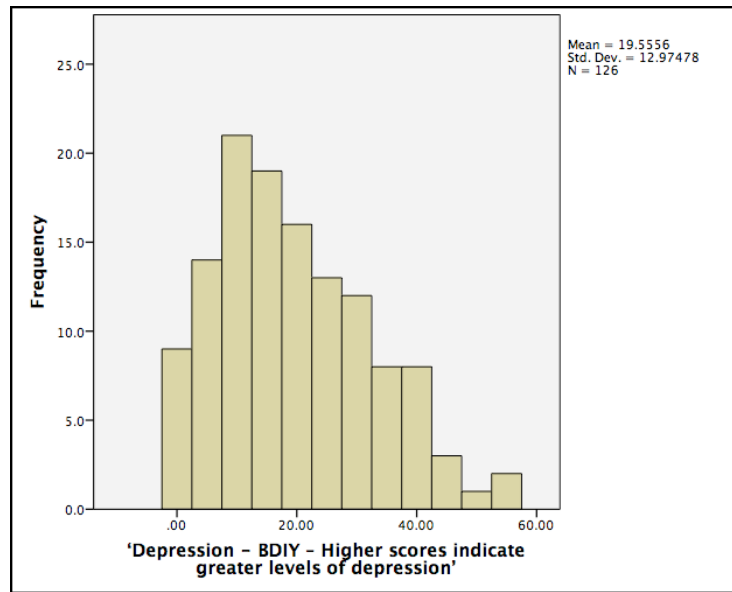


Figure 2. Histogram of depression.

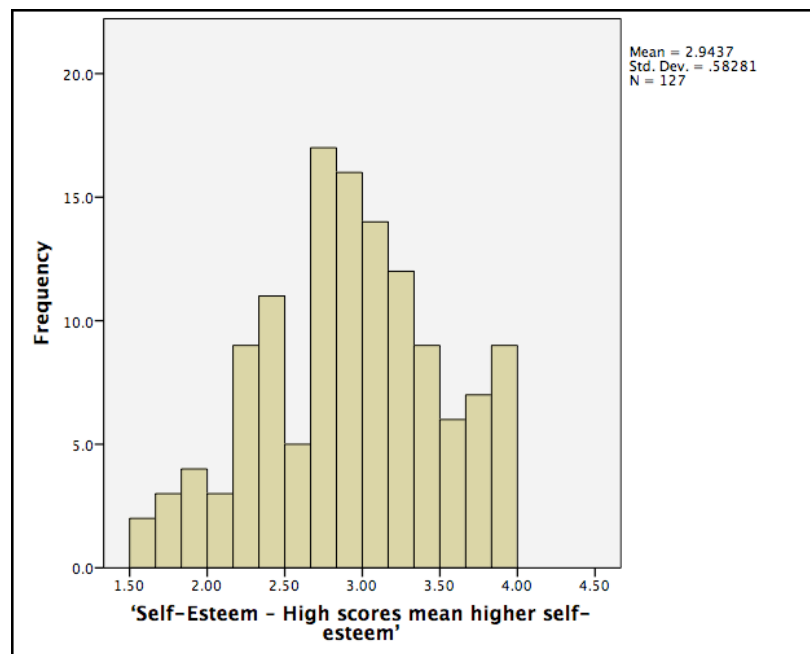


Figure 3. Histogram of self-esteem.

Table 2

Skewness and Kurtosis for Scale Measures

<u>Scale</u>	<u>Skewness (SE)</u>	<u>Kurtosis (SE)</u>
Suicidal Ideation	1.32(.21)	.90(.43)
Thwarted Belongingness	.31(.22)	-.59(.43)
Perceived Burdensomeness	.75(.21)	-.07(.43)
Depression	.60(.22)	-.23(.43)
Self-Esteem	-.16(.21)	-.38(.43)
Psych. Abuse by a Caregiver	.06(.22)	-.46(.43)
Physical Abuse by a Caregiver	1.39(.22)	1.42(.43)
Support from Parents	.41(.22)	-.41(.43)
Support from a Close Friend	-.91(.22)	.46(.43)
Support from Classmates	.42(.22)	-.25(.44)
Support from Teachers	-.50(.22)	-.46(.44)

Severe collinearity was evaluated by running separate regression analyses on each of the IPTS constructs and mental health variables (i.e., thwarted belongingness, perceived burdensomeness, depression, self-esteem). For each regression analysis, all of the variables that were not included as the dependent variable were included as predictors. None of the R-squared values for these regression analyses exceeded .90, indicating that severe collinearity should not be a concern when conducting path analyses.

Analytic Approach

The research questions were crafted to progressively address the research aims listed in the last section of chapter two. Each of the questions under a given aim generates a piece of information that, when considered in context with the results of the other questions, facilitates inductive reasoning

related to the stated aims. Accordingly, analyses are structured to address individual questions and progressively build upon one another.

Question 1a. After controlling for age, race, ethnicity, gender identity, and site location, do the IPTS variables related to suicidal ideation (i.e., thwarted belongingness and perceived burdensomeness) accurately distinguish TGNC youth who endorsed suicidal ideation from TGNC youth who did not endorse suicidal ideation?

As highlighted above, suicidal ideation is not normally distributed among the current sample of TCNC youth (*skewness* = 1.31) and was transformed in to a dichotomous variable. Logistic regressions were conducted in order to use categorical and continuous variables as predictors while not having the results be affected by the skewed distributions of the outcome variable. A logistic regression was conducted to test whether the IPTS constructs (i.e., thwarted belongingness and perceived burdensomeness) accurately distinguished TGNC youth with suicidal ideation from TGNC youth without suicidal ideation while controlling for age, race, ethnicity, gender identity, and site location.

Question1b. After controlling for age, race, ethnicity, gender identity, and site location, does the product of the two constructs related to suicidal ideation in the IPTS model (i.e., thwarted belongingness and perceived burdensomeness) contribute to accurately distinguishing between TGNC youth who endorsed

suicidal ideation and TGNC youth who did not endorse suicidal ideation beyond what is predicted by each construct independently?

Another logistic regression analysis was conducted on suicidal ideation. In addition to the control variables (i.e., age, race, ethnicity, gender identity, and site location), thwarted belongingness, perceived burdensomeness, and the product of these two variables were included as predictors. This test was conducted to determine whether an interaction existed such that participants with high levels of both thwarted belongingness and perceived burdensomeness were more prone to suicidal ideation than participants who had elevated scores on either thwarted belongingness or perceived burdensomeness but not the other.

Question 2a. After controlling for age, race, ethnicity, gender identity, and site location, do mental health indicators of minority stress (i.e., depression and self-esteem) accurately distinguish TGNC youth who endorsed suicidal ideation from TGNC youth who did not endorse suicidal ideation?

A logistic regression on suicidal ideation was conducted to determine whether mental health indicators of minority stress (i.e., depression and self-esteem) significantly contributed to distinguishing between participants with suicidal ideation and participants without suicidal ideation after controlling for age, ethnicity, race, gender identity, and site location.

Question 2b. To what extent are the mental health indicators of minority stress (i.e., depression and self-esteem) correlated with the IPTS constructs (i.e., thwarted belongingness and perceived burdensomeness)?

Correlation analyses were conducted to explore the independent relationships between depression, self-esteem, thwarted belongingness, and perceived burdensomeness.

Question 2c. Do thwarted belongingness and perceived burdensomeness accurately distinguish between TGNC youth who endorsed suicidal ideation and TGNC youth who did not endorse suicidal ideation after controlling for mental health indicators of minority stress (i.e., depression, self-esteem)?

Another logistic regression analysis was conducted on suicidal ideation with thwarted belongingness and perceived burdensomeness included as predictors, and depression, self-esteem, age, race, ethnicity, gender identity, and site location included as control variables. Depression and self-esteem were included in this analysis to determine whether the IPTS constructs contribute to the accuracy of the model beyond the contribution of established risk factors (i.e., depression and self-esteem) as hypothesized by Van Orden and colleagues (2010) in a discussion of the IPTS model.

Question 3a. To what extent are the stressful life experiences (i.e., sexual orientation- or gender identity-based victimization, psychological abuse by a caregiver, physical abuse by a caregiver, and gender-based harassment at school) independently related to depression, self-esteem, and suicidal ideation?

A series of bivariate correlation analyses were conducted to explore the independent relationships between stressful life experiences (e.g., sexual orientation- or gender identity-based victimization, psychological abuse by a caregiver, and physical abuse by a caregiver) and mental health outcomes (i.e., suicidal ideation, depression, and self-esteem). Additionally, a series of t-tests were conducted to determine if participants who experienced gender-based harassment at school had higher levels of suicidal ideation and depression and lower self-esteem. Of note, because depression and self-esteem were used as endogenous predictors in subsequent analyses, they were treated as both outcomes and predictors for a number of analyses, and all the analyses related to depression and self-esteem are associational rather than causal.

Because a number of participants were not currently enrolled in school and it is unclear if they would be affected by school-related variables in the same way as participants who were enrolled in school, a follow-up series of regression analyses were conducted on suicidal ideation (binary logistic), depression (linear), and self-esteem (linear) which tested for the potential moderating effect of current school enrollment on the relationships between gender-based harassment at school and mental health outcomes. This was done to determine whether the impact of prior harassment at school was stronger for participants who were currently in school compared to students who were no longer in school. Gender-based harassment, school

enrollment, and the product of those two variables were included as predictor variables in the regression analyses.

Question 3b. When considered together, are the stressful life experiences (i.e., sexual orientation- or gender identity-based victimization, psychological abuse by a caregiver, physical abuse by a caregiver, and gender-based harassment at school) associated with suicidal ideation either directly or indirectly via depression or self-esteem?

A logistic regression was conducted on suicidal ideation with the stressful life experiences (i.e., sexual orientation- or gender identity-based victimization, psychological abuse by a caregiver, physical abuse by a caregiver, and gender-based harassment at school), depression, and self-esteem, included as predictors and age, ethnicity, race, gender identity, and site location included as controls to determine if stressful life experiences enhanced the ability of the model to successfully distinguish between TGNC youth with suicidal ideation and TGNC youth without suicidal ideation.

A path model was then developed to determine whether the mental health variables (i.e., depression and self-esteem) mediated the relationship between stressful life experience (e.g., sexual orientation- and gender identity-based victimization, psychological abuse by a caregiver, physical abuse by a caregiver, and gender-based harassment at school) and suicidal ideation. All of the endogenous variables (i.e., depression, self-esteem, and suicidal ideation) were adjusted for age, ethnicity, race, gender identity, and

site location. The path analysis was conducted using the lavaan package (Rosseel, 2012) for R Studio (RStudio Team, 2015). The lavaan computer program computed direct and indirect effects and error terms with maximum likelihood estimation. Based on recommendations by Hu and Bentler (1999), model fit was judged based on whether the root mean square error of approximation (RMSEA) was less than 0.06, the comparative fit index (CFI) was greater than 0.95, the Tucker Lewis index (TLI) was greater than 0.95, and the standardized root-mean-square residual (SRMR) was less than 0.08. Because the Beck Depression Inventory - Youth (BDI-Y; Beck, Beck, Jolly, & Steer, 2005) is a clinical instrument used to monitor depression severity and guide treatment decisions, the choice was made to include the BDI-Y score in its intended form as a manifest variable and not to evaluate how this manifest variable aligned with an unmeasured latent variable. Using the BDI-Y score in these analyses allows the researcher to test whether this measure has clinical utility as an indicator for suicide risk among TGNC youth. Similarly, the Rosenberg self-esteem scale (Rosenberg, 1989) has a long history of use and will be analyzed in its original form in a desire to determine whether it has utility as an indicator for suicide risk. Evaluating the ability of existing measures to accurately capture latent constructs among TGNC youth is beyond the scope of this study. Because the goal of the current study was to measure the ability of existing measures to predict risk for suicidal ideation and not to assess whether these measures accurately

reflect underlying constructs, factor analyses were not conducted and a measurement model was not required.

Question 4a. To what extent do protective factors (i.e., support from parents, support from close friend, support from classmates, support from teachers, presence of a GSA at one's school, comprehensive anti-bullying policy at one's school, and ability to use one's preferred name) relate independently to suicidal ideation, depression, and self-esteem?

A series of bivariate correlation analyses were conducted to explore the independent relationships between the social support variables (e.g., support from parents, support from close friend, support from classmates, support from teachers) and mental health outcomes (i.e., suicidal ideation, depression, and self-esteem). Additionally, a series of t-tests and ANOVA analyses were conducted to determine whether school resources or preferred name use were associated with suicidal ideation, depression, or self-esteem. Because a number of participants were not currently enrolled in school and it is unclear if they would be affected similarly by school-related variables as participants who were enrolled in school, a follow-up series of regression analyses were conducted on suicidal ideation (binary logistic), depression (linear), and self-esteem (linear) which tested for the potential moderating effect of current school enrollment on the relationships between a school-related resource (i.e., GSA or anti-bullying policy) and mental health outcomes.

Question 4b. Is the presence of a GSA related to decreased experiences of gender-based harassment at school and increased support from teachers, classmates, and friends?

Previous research has indicated that the presence of a GSA reduced the risk of exposure to discrimination (Greytak et al., 2014) and increased access to social support in school (McGuire et al., 2010) among TGNC youth. A series of t-tests were conducted to determine whether the presence of a GSA at participants' schools was associated with gender-based harassment at school and social support from teachers, classmates, and friends.

Question 4c. When considered in the context of risk factors, are the protective factors (i.e., support from parents, support from a close friend, support from classmates, support from teachers, presence of a GSA at one's school, comprehensive anti-bullying policy at one's school, and ability to use one's preferred name) associated with suicidal ideation?

A logistic regression was conducted on suicidal ideation with the protective factors (i.e., support from parents, support from close friend, support from classmates, presence of a GSA at one's school, comprehensive anti-bullying policy at one's school, and ability to use one's preferred name), depression, self-esteem, stressful life experiences (i.e., sexual orientation- or gender identity-based victimization, psychological abuse by a caregiver, physical abuse by a caregiver, and gender-based harassment at school) included as predictors, and age, ethnicity, race, gender identity, and site

location included as controls. This logistic regression was conducted to determine if the protective factors contributed to successfully distinguishing between TGNC youth with suicidal ideation and TGNC youth without suicidal ideation beyond the previously identified risk factors.

A path model was then developed to determine whether the impact of stressful life experience (e.g., sexual orientation- and gender identity-based victimization, psychological abuse by a caregiver, physical abuse by a caregiver, and gender-based harassment at school) and protective factors (i.e., support from parents, support from close friend, support from classmates, presence of a GSA at one's school, comprehensive anti-bullying policy at one's school, and ability to use one's preferred name) on suicidal ideation was mediated by mental health variables (i.e., depression and self-esteem). All of the endogenous variables (i.e., depression, self-esteem, and suicidal ideation) were adjusted for age, ethnicity, race, gender identity, and site location. The analysis was conducted using the lavaan package (Rosseel, 2012) for R Studio (RStudio Team, 2015) and effects were computed with maximum likelihood estimation. Similar to the path analysis conducted for Question 3b, the goal of this analysis was to test for mediational pathways among manifest variables and not to evaluate how these manifest variables aligned with latent variables. Therefore, factor analyses were not conducted and a measurement model was not required.

CHAPTER IV

RESULTS

The first purpose of this chapter is to provide basic descriptive information related to the sample and scales of the current study and highlight notable findings. Following a review of the descriptive statistics, the results of the statistical analyses outlined in the previous chapter are presented.

Participants

Because the focus of this study is on the experiences of TGNC youth, participants were included only if they identified as transgender, reported a gender identity that did not “match” their sex assigned at birth, or identified with a gender identity other than “man” or “woman.” Based on this criteria, 127 TGNC participants from the first panel of the “Risk and Protective Factors for Suicide Among Sexual Minority Youth” research project were included in the current analysis. The participants (N = 127) ranged in age from 15-years-old to 21-years-old (M = 18.69). Thirty-two percent of participants (N = 40) identified their ethnicity as Hispanic or Latino, 53% of participants (N = 68) as not Hispanic or Latino, and 15% (N=19) did not report an ethnicity. Regarding the reported racial identities of participants, 27% (N=34) identified as White, 25% (N=32) identified as Black or African American, 6% (N=8) identified as Asian or Asian American, 3% (N=4) as

American Indian, Native American, or Alaskan Native, 1% (N=1) as Native Hawaiian or other Pacific Islander, 26% (N=33) as multiracial, and 12% (N=15) did not report a race. Participants identified their sexual identities as lesbian (13%, N=17), gay (19%, N=24), bisexual (28%, N=35), heterosexual or straight (19%, N = 24), or questioning (11%, N=14). Thirteen participants (10%) did not report a sexual identity.

Based on responses to questions about sex assigned at birth and current gender identity, participants were grouped into four gender categories: a) trans-women and women whose sex assigned at birth was male (35%, N=44), b) trans-men and men whose sex assigned at birth was female (32%, N=40), c) female-to-different-gender (24%, N=30) who reported their sex assigned at birth was female and current gender identity was non-binary, and d) male-to-different-gender (10%, N=13) who reported their sex assigned at birth was male and current gender identity was non-binary. The current gender identities of participants in either of the two “different gender” categories included agender, androgenous, both, fem-boy, gender fluid, gender bend, intergendersex, masculine to center high femme/stem, non-binary, questioning, trans-queer androgyne, two-spirited, and unknown. One participant wrote in that they do not believe in gender.

Regarding geographic location, 44.1% (N=56) of participants lived in the Northeast, 40.2% (N=51) lived on the West Coast, and 16% (N=20) lived in the Southeast. Participants endorsed a number of different living

situations with 16% (N=20) indicating that they lived alone, 46% (N=58) lived with family, 4% (N=5) lived with their lover or romantic partner, 14% (N=18) lived with friends, 1% (N=1) lived in foster care, 9% (N=11) lived in a group home, shelter, or transitional living program, and 8% (N=10) indicated that they were currently homeless.

Sixty-one percent of participants (N=78) were currently attending school. Of the participants that were currently attending school, 6% (N=5) were in middle school, 46% (N=36) were in high school, and 47% (N=37) were in college. Of the participants not attending school, 41% (N=18) did not finish high school, 27% (N=12) finished with a high school degree but did not attend college, and 20% (N=14) started college but dropped out.

Descriptive Statistics

Means and standard deviations are provided for all scales in Table 3. Additionally, frequency data is provided in Table 4 for categorical and single-item measures. Several notable findings emerged from the descriptive data related to the mental health of participants. Based on criteria proposed by Beck (1996) on the scoring of the BDI-II, 17% (N=22) of participants scored in the moderate range for depression and 27% (N = 34) of participants scored in the severe range. Based on responses to the PANSI, 16.4% (N=21) of participants seriously considered suicide in the past two weeks at least “some of the time” due to not living up to the expectations of others, and

27.3% (N=35) felt hopeless about the future and contemplated suicide at least “some of the time” over the past two weeks.

The descriptive statistics also provide striking details about the lived experiences of the participants. When asked about experiences of victimization related to their LGBT identity, over half (56%; N= 71) reported they had been insulted at least three times, 32% (N=41) they were threatened with violence at least three times, 46% (N = 59) they had objects thrown at them at least once, and 25% (N = 32) they had been beaten, punched, or kicked at least once. A distressing 23% (N = 29) of the sample reported being sexually assaulted or raped due to their perceived LGBT identity, with 12 of these participants (9% of the entire sample) indicating they were sexually attacked at least three times.

Table 3

Descriptive Statistics for Scale Measures

<u>Scale</u>	<u>N</u>	<u>Mean(SD)</u>	<u>Range</u>
Suicidal Ideation	127	1.71(.92)	1.00-4.63
Thwarted Belongingness	126	3.42(1.36)	1.00-6.80
Perceived Burdensomeness	127	2.76(1.39)	1.00-6.71
Depression	126	19.56(12.97)	0.00-57.00
Self-Esteem	127	2.94(.58)	1.60-4.00
Psych Abuse by a Caregiver	125	2.49(.77)	1.00-4.00
Physical Abuse by a Caregiver	125	1.64(.78)	1.00-4.00
Support from Parents	125	37.58(16.69)	12.00-72.00
Support from a Close Friend	125	54.15(15.49)	12.00-72.00
Support from Classmates	116	39.56(15.65)	12.00-72.00
Support from Teachers	118	49.21(16.81)	12.00-72.00

The current or most recent school experiences of these youth were varied. Sixty-one percent (N=78) of the participants attended/had attended schools with a Gay-Straight Alliance, and 41%(N=52) attended/had attended a school with a known LGBT-inclusive bullying policy. Fifteen percent of participants perceived that they were harassed at least once per week on school property related to their gender identity.

Table 4

Descriptive Statistics for Categorical Measures

<u>Victimization Items</u>	<u>Never</u>	<u>Once</u>	<u>Twice</u>	<u>Three or More</u>
<i>How many times have you:</i>	<i>%(N)</i>	<i>%(N)</i>	<i>%(N)</i>	<i>%(N)</i>
Been Verbally Insulted	29%(24)	8%(10)	13%(17)	56%(71)
Threatened - Physical Violence	41%(52)	16%(20)	7%(9)	32%(41)
Had Objects Thrown at You	49%(62)	17%(21)	14%(18)	17%(21)
Been Punched, Kicked, Beaten	63%(80)	14%(18)	5%(7)	15%(19)
Been Threatened with Weapon	71%(90)	10%(13)	7%(9)	7%(9)
Been Sexually Attacked/Raped	72%(91)	10%(13)	4%(5)	9%(12)
 <u>Preferred Name Use</u>	 <u>Yes</u>	 <u>No</u>	 <u>N/A</u>	
<i>Able to use preferred name:</i>				
At Home	47%(60)	18%(23)	35%(45)	
At School	48%(61)	15%(19)	38%(48)	
At Work	44%(56)	19%(24)	38%(48)	
With Friends	57%(73)	7%(9)	36%(46)	
Unable - At Least One Context	25%(32)	75%(96)		
 <u>School-Based Items</u>				
<i>Does (Did) your school have:</i>	<u>Yes</u>	<u>No</u>	<u>Unsure</u>	
A GSA	61%(78)	39%(50)		
LGBT-Inclusive Bullying Policy	41%(52)	16%(21)	43%(55)	
	<u>Never</u>	<u>Monthly</u>	<u>Weekly</u>	<u>Daily</u>
Harassed due to Gender	56%(71)	21%(27)	5%(6)	10%(13)

Analyses Related to Research Questions

Question 1a. After controlling for age, race, ethnicity, gender identity, and site location, do the IPTS variables related to suicidal ideation (i.e., thwarted belongingness and perceived burdensomeness) accurately distinguish TGNC youth who endorsed suicidal ideation from TGNC youth who did not endorse suicidal ideation?

A logistic regression analysis on suicidal ideation was conducted with perceived burdensomeness and thwarted belongingness included as predictors and age, race, ethnicity, gender identity, and site location included as control variables. The results of a Hosmer and Lemeshow Test ($X^2(8) = 4.13, p = .85$) indicated there was not a difference between the probability for suicidal ideation predicted by the model and the observed probability for each case. As displayed in Table 5, the sensitivity of the model was 76.1%, meaning that it was able to accurately identify participants with suicidal ideation 76.1% of the time. The specificity of the proposed model was 63.6%, meaning that 63.6% of the participants identified by the model as not having suicidal ideation were correctly identified (Table 5). As displayed below in Table 6, the coefficient for perceived burdensomeness was statistically significant. Controlling for age, race, ethnicity, gender identity, and site location, higher levels of perceived burdensomeness were associated with the presence of suicidal ideation. Thwarted belongingness was not associated with suicidal ideation in this model. Of note, site location was

significantly associated with the presence of suicidal ideation. A follow-up analysis of variance (ANOVA) on suicidal ideation ($F(2, 124)=5.12, p < .01$) with Tukey HSD post hoc tests indicated that participants from the west coast site ($M = 2.01, SD = .98$) reported higher rates of suicidal ideation than participants from the Northeast site ($M = 1.47, SD = .81, p < .01$).

Table 5

Classification Table for Regression with Burdensomeness as Predictor

<u>Observed</u>	<u>Predicted</u>		<u>Accuracy</u>
	No Ideation	Ideation	
No Ideation	35	20	63.6%
Ideation	17	54	76.1%

Table 6

Logistic Regression on Dichotomized Suicidal Ideation

<u>Variables</u>	<u>Q1a</u>		<u>Q1b</u>		<u>Q2a</u>		<u>Q2c</u>	
	<u>Exp(B)</u>	<u>p</u>	<u>Exp(B)</u>	<u>p</u>	<u>Exp(B)</u>	<u>p</u>	<u>Exp(B)</u>	<u>P</u>
N=	126		126		126		125	
Age	1.16	.25	1.17	0.23	1.11	.49	1.15	.35
Race	1.08	.51	1.09	0.44	1.16	.25	1.16	.24
Ethnicity	1.23	.55	1.24	0.55	1.15	.71	1.23	.60
Gender Identity	1.10	.64	1.10	0.61	.97	.88	1.01	.95
Site Location	1.85	.01	1.87	0.01	1.37	.25	1.41	.22
Perceived Burden	2.14	<.01	3.35	0.03	--	--	1.14	.61
Thwarted Belonging	1.03	.87	1.38	0.40	--	--	1.03	.87
PB x TB	--	--	0.89	0.38	--	--	--	--
Depression	--	--	--	--	1.09	<.01	1.08	.03
Self-Esteem	--	--	--	--	0.24	.02	0.24	.02
Constant	.001	.03	<.01	0.02	1.07	.99	0.27	.74

Question 1b. After controlling for age, race, ethnicity, gender identity, and site location, does the product of the two constructs related to suicidal ideation in the IPTS model (i.e., thwarted belongingness and perceived burdensomeness) contribute to accurately distinguishing between TGNC youth who endorsed suicidal ideation and TGNC youth who did not endorse suicidal ideation beyond what is predicted by each construct independently?

A logistic regression analysis on suicidal ideation was conducted with perceived burdensomeness, thwarted belongingness, and the product of those two variables included as predictors and age, race, ethnicity, gender identity, and site location included as control variables. The results of a Hosmer and Lemeshow Test ($X^2(8) = 2.77, p = .95$) indicated that there was not a difference between the probability for suicidal ideation predicted by the model and the observed probability for each case. However, because the interaction term was not significant (Table 5), the model should be rejected in favor of the model identified in the previous question which did not include the interaction term.

Question 2a. After controlling for age, race, ethnicity, gender identity, and site location, do the mental health indicators of minority stress (i.e., depression and self-esteem) accurately distinguish TGNC youth who endorsed suicidal ideation from TGNC youth who did not endorse suicidal ideation?

A logistic regression analysis on suicidal ideation was conducted with perceived self-esteem and depression included as predictors and age, race, ethnicity, gender identity, and site location included as control variables. The results of a Hosmer and Lemeshow Test ($\chi^2 (8) = 6.01, p = .65$) indicated there was not a difference between the probability for suicidal ideation predicted by the model and the observed probability for each case. In this study's sample of TGNC youth, the sensitivity of the proposed model was 83.1 % and the specificity was 78.2% (Table 7). As displayed in Table 6, the coefficients for depression and self-esteem were both statistically significant. Controlling for age, race, ethnicity, gender identity, and site location, higher levels of depression were associated with the presence of suicidal ideation. Conversely, higher levels of self-esteem were associated with the absence of suicidal ideation.

Table 7

Classification Table for Regression with Mental Health Variables

<u>Observed</u>	<u>Predicted</u>		<u>Accuracy</u>
	No Ideation	Ideation	
No Ideation	43	12	78.2%
Ideation	12	59	83.1%

Question 2b. To what extent are the mental health indicators of minority stress (i.e., depression and self-esteem) correlated with the IPTS constructs (i.e., thwarted belongingness and perceived burdensomeness)?

As displayed in Table 8, there was a high level of correlation within and between the IPTS constructs and the other mental health variables. As documented above in the “Data Screening” section, this high level of correlation does not prohibit the use of these variables together in regression or path analyses, but it does suggest that there may be considerable overlap in what is being measured by these constructs. The use of confirmatory factor analyses to identify unique factors when items from the various mental health and IPTS variables were aggregated was considered but ultimately not pursued as such an endeavor is beyond the scope of the current study. Furthermore, given the extensive use of these measures in previous literature, the decision was made to use them in their existing form.

Table 8

Correlation Analysis of IPTS and Mental Health Variables

	<u>1.</u>	<u>2.</u>	<u>3.</u>
1. Thwarted Belonging	-		
2. Perceived Burden.	.47***	-	
3. Depression	.30***	.66***	-
4. Self-Esteem	-.33***	-.62***	-.74***

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

Question 2c. Do thwarted belongingness and perceived burdensomeness accurately distinguish between TGNC youth who endorsed suicidal ideation and TGNC youth who did not endorse suicidal ideation after controlling for mental health outcomes associated with minority stress (i.e., depression, self-esteem)?

A logistic regression analysis on suicidal ideation was conducted with perceived burdensomeness, thwarted belongingness, depression, and self-esteem included as predictors and age, race, ethnicity, gender identity, and site location included as control variables. The results of a Hosmer and Lemeshow Test ($\chi^2 (8) = 8.96, p = .35$) indicated there was not a difference between the probability for suicidal ideation predicted by the model and the observed probability for each case. In this study's sample of TGNC youth, the sensitivity of the proposed model was 81.4% and the specificity was 76.4% (Table 8). As displayed in Table 6, both depression and self-esteem were significantly related to suicidal ideation in this model. While controlling for all of the other included variables, higher levels of depression were associated with the presence of suicidal ideation. Additionally, while controlling for other variables, higher levels of self-esteem were associated with the absence of suicidal ideation. Neither thwarted belongingness nor perceived burdensomeness was associated with suicidal ideation in this analysis. Of note, this model accurately identified participants with suicidal ideation less accurately than the model that included mental health variables

(i.e., depression and self-esteem) without any IPTS variables. Therefore, the decision was made to remove IPTS variables from subsequent analyses.

Table 9

Classification Table for Regression with IPTS and Mental Health Variables

<u>Observed</u>	<u>Predicted</u>		<u>Accuracy</u>
	No Ideation	Ideation	
No Ideation	42	13	76.4%
Ideation	13	57	81.4%

Question 3a. To what extent are the stressful life experiences (i.e., sexual orientation- or gender identity-based victimization, psychological abuse by a caregiver, physical abuse by a caregiver, and gender-based harassment at school) independently related to depression, self-esteem, and suicidal ideation?

A series of bivariate correlation analyses were conducted to explore the extent to which stressful life experiences (e.g., sexual orientation- or gender identity-based victimization, psychological abuse by a caregiver, and physical abuse by a caregiver) were independently associated with suicidal ideation, depression, and self-esteem (Table 10). All three life experiences were significantly related to suicidal ideation and depression. However, only sexual orientation- or gender identity-based victimization and psychological abuse were related to self-esteem.

Table 10

Correlation Analysis of Stressful Life Experiences and Outcomes

<u>Life Experience</u>	<u>Suicidal Ideation</u>	<u>Depression</u>	<u>Self- Esteem</u>
1. Victimization	.29**	.36**	-.19*
2. Psych. Abuse	.36**	.51**	-.34**
3. Physical Abuse	.33**	.36**	-0.08

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

A series of t-tests were then conducted to determine if experiencing at least one instance of gender-based harassment on school property was related to suicidal ideation, depression, and self-esteem. Gender-based harassment on school property was independently related to suicidal ideation ($t(125) = -3.18, p < .01$), depression ($t(124) = -2.80, p < .01$), and self-esteem ($t(125) = 2.47, p < .05$). Participants who perceived that they experienced harassment at school had higher levels of suicidal ideation ($M = 2.03, SD = 1.16$) and depression ($M = 23.64, SD = 15.04$) and lower levels of self-esteem ($M = 2.78, SD = .64$) compared to students who did not experience harassment at school ($M = 1.52, SD = .67$; $M = 17.13, SD = 10.97$; $M = 3.04, SD = .53$, respectively). A subsequent series of regression analyses were conducted with school enrollment included as a potential moderating factor (Table 11). The results of a Hosmer and Lemeshow Test ($\chi^2(8) = 8.96, p = .35$) for the logistic regression on suicidal ideation indicated there was not a difference between the probability for suicidal ideation predicted by the model and the observed probability for each case. However, none of the

predictors in this model were significantly associated with suicidal ideation (Table 11). The linear regression analyses conducted on depression and self-esteem were also not significant ($F(3,122) = 2.61, p = .06$, $F(3,123) = 2.53, p = .06$, respectively).

Table 11

Moderation Analyses for Gender-Based Harassment at School

<u>Variables</u>	<u>Suicidal Ideation</u>		<u>Depression</u>		<u>Self-Esteem</u>	
	<u>Exp(B)</u>	<u>p</u>	<u>Beta</u>	<u>p</u>	<u>Beta</u>	<u>p</u>
N=	126		125		126	
Harass. At School	.63	.47	.28	0.07	-.24	.11
Enrollment	.96	.93	.04	0.74	-.12	.25
Harass. x Enroll.	3.19	.15	-.05	0.79	.06	.75
Constant	1.19	.61	--	<.01	--	<.01

Question 3b. When considered together, are the stressful life experiences (i.e., sexual orientation- or gender identity-based victimization, psychological abuse by a caregiver, physical abuse by a caregiver, and gender-based harassment at school) associated with suicidal ideation either directly or indirectly via depression or self-esteem?

To determine whether stressful life experiences contributed to the predictive ability of the model that included depression and self-esteem, another logistic regression analysis on suicidal ideation was conducted with depression, self-esteem, and the stressful life experience (i.e., sexual orientation- or gender identity-based victimization, psychological abuse by a

caregiver, physical abuse by a caregiver, and gender-based harassment at school) included as predictors, and age, race, ethnicity, gender identity, and site location included as control variables. The results of a Hosmer and Lemeshow Test ($\chi^2 (8) = 1.62, p = .99$) indicated there was not a difference between the probability for suicidal ideation predicted by the model and the observed probability for each case. In this study's sample of TGNC youth, the sensitivity of the proposed model was 82.6% and the specificity was 76.9% (Table 12).

Table 12

Classification Table for Logistic Regression with Stressful Life Experiences

<u>Observed</u>	<u>Predicted</u>		<u>Accuracy</u>
	No Ideation	Ideation	
No Ideation	40	12	76.9%
Ideation	12	57	82.6%

As displayed in Table 13, depression was significantly related to suicidal ideation, but self-esteem was no longer related to suicidal ideation. While controlling for all of the other included variables, higher levels of depression were associated with the presence of suicidal ideation. None of the stressful life experiences were significantly associated with increased likelihood of reporting suicidal ideation in this model.

Table 13

Logistic Regression on Dichotomized Suicidal Ideation

<u>Variables</u>	<u>Q2a</u>		<u>Q3b</u>		<u>Q4b</u>	
	<u>Exp(B)</u>	<u>p</u>	<u>Exp(B)</u>	<u>p</u>	<u>Exp(B)</u>	<u>p</u>
N=	126		121		111	
Age	1.11	.49	1.13	0.43	1.03	0.89
Race	1.16	.25	1.17	0.68	1.37	0.52
Ethnicity	1.15	.71	1.16	0.26	1.20	0.28
Gender Identity	0.97	.88	0.96	0.87	1.36	0.24
Site Location	1.37	.25	1.37	0.30	1.067	0.87
Depression	1.09	<.01	1.11	<0.01	1.13	<.01
Self-Esteem	0.24	.02	0.27	0.06	0.20	0.06
Victimization	--	--	1.06	0.86	1.19	0.65
Psychological Abuse	--	--	0.74	0.50	0.94	0.91
Physical Abuse	--	--	1.24	0.66	1.27	0.68
Harass at School	--	--	0.79	0.67	0.83	0.76
Parental Support	--	--	--	--	1.02	0.42
Friend Support	--	--	--	--	0.99	0.57
Classmate Support	--	--	--	--	1.03	0.22
Teacher Support	--	--	--	--	1.00	0.95
GSA	--	--	--	--	0.37	0.16
Anti-Bully Policy	--	--	--	--	1.56	0.27
Preferred Name Use	--	--	--	--	0.55	0.43
Constant	1.07	.99	0.56	.87	0.22	0.74

Although the logistic regression analysis conducted above indicated that stressful life experiences were not directly related to suicidal ideation when considered together with depression and self-esteem, a path analysis was conducted to determine if any of the stressful life experiences were indirectly related to suicidal ideation via depression. Self-esteem was not included as a potential mediator as it was no longer associated with suicidal ideation in the context of other risk factors. Scatter plots (Figures 4-7) were

reviewed to visually evaluate both a) the relationships between the potential mediator (i.e. depression) and suicidal ideation and b) the relationships between the continuous stressful life experience variables (i.e., sexual orientation- or gender identity-based victimization, psychological abuse, and physical abuse) and depression. The scatterplots appear to all display linear relationships.

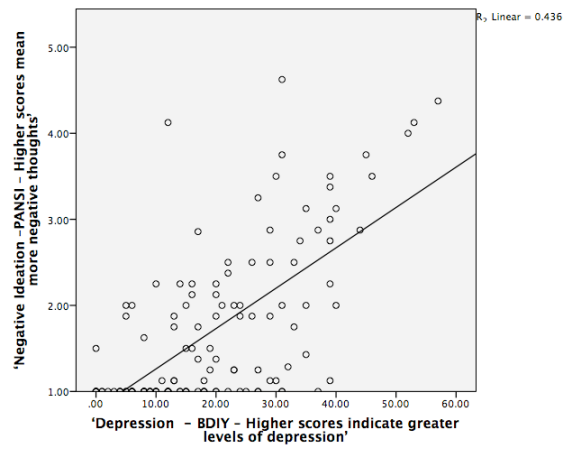


Figure 4. Scatter plot of depression (X-axis) and suicidal ideation (Y-axis).



Figure 5. Scatter plot of victimization (X-axis) and depression (Y-Axis).

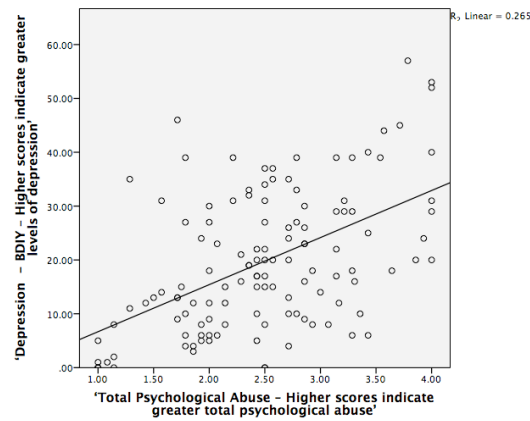


Figure 6. Scatter plot of psychological abuse (X-axis) and depression (Y-Axis).

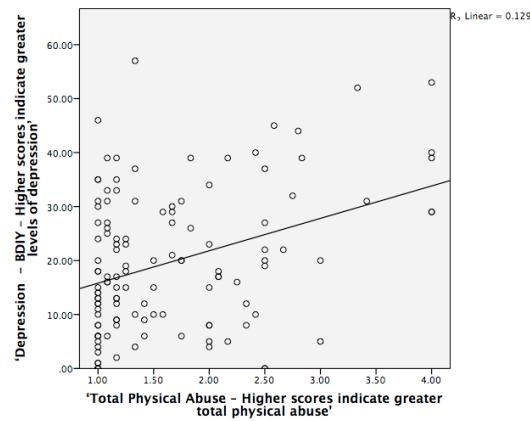


Figure 7. Scatter plot of physical abuse (X-axis) and depression (Y-Axis).

A path model was then tested that included depression as an endogenous predictor of suicidal ideation (Figure 8). Sexual orientation- and gender identity-based victimization, caregiver psychological abuse, caregiver physical abuse, and gender-based harassment at school were included as exogenous predictors of depression in the path model. All of the endogenous variables (i.e., depression and suicidal ideation) were adjusted for age,

ethnicity, race, gender identity, and site location. Of note, this analysis is unable to determine causality and was used to identify significant associations. The model demonstrated good fit. The non-significant chi-square test ($X^2(4) = 4.93, p = .30$), RMSEA of 0.04 ($p(\text{RMSEA} < 0.05) = 0.44$), CFI of 0.99, TLI of .96, and SRMR of 0.02 were all at or better than the accepted level for evidence of good model fit.

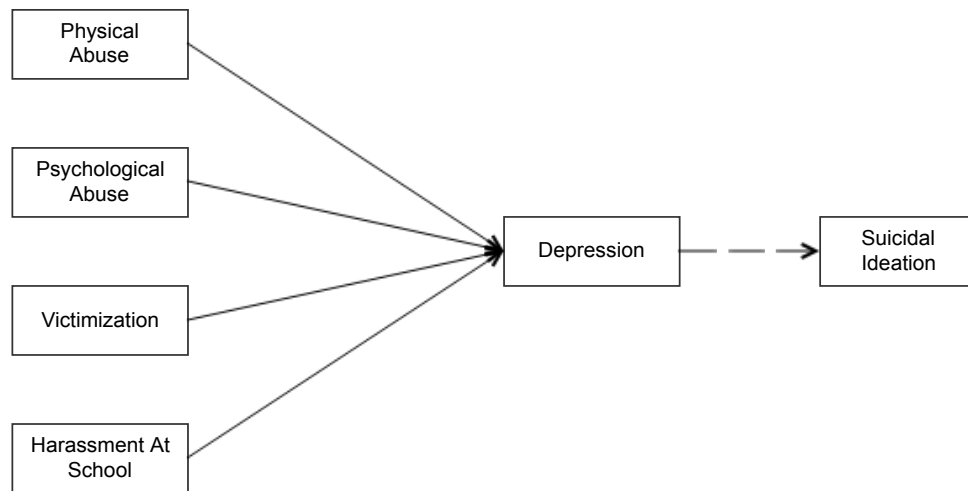


Figure 8. Proposed path model for suicidal ideation with stressful life experiences included as predictors and depression included as a mediator. The dashed line is used to reflect potential endogeneity between depression and suicidal ideation.

Overall, the model explained 47% of the variance in suicidal ideation and 33% of the variance in depression. Figure 9 provides an illustration of the model with only significant pathways included. Depression ($\beta = .66, p < .001$) was directly related to suicidal ideation. Sexual orientation- or

gender identity-based victimization ($\beta = .12, p < .05$) and psychological abuse ($\beta = .23, p < .01$) were indirectly related to suicidal ideation via depression. In this model, neither physical abuse nor gender-based harassment at school were related depression ($\beta = .08, p = .39$; $\beta = .09, p = .28$, respectively) or suicidal ideation ($\beta = .06, p = .39$, $\beta = .06; p = .29$, respectively).

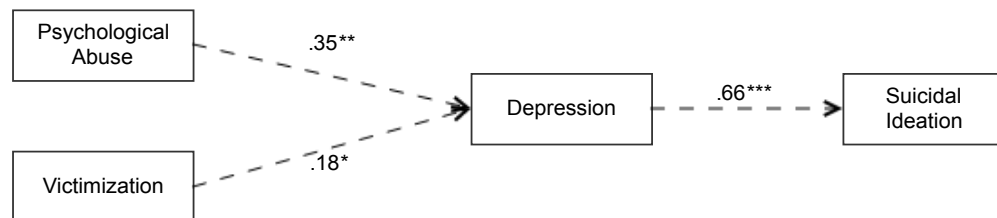


Figure 9. This figure displays the results of the path analysis including stressful life experiences informed by the minority stress model as predictors and depression as a mediating variable. Standardized path coefficients are provided. The dashed lines represent significant mediational pathways. * $p < .05$. ** $p < .01$. *** $p < .001$.

Question 4a. To what extent do protective factors (i.e., support from parents, support from close friend, support from classmates, support from teachers, presence of a GSA at one's school, comprehensive anti-bullying policy at one's school, and ability to use one's preferred name) relate independently to suicidal ideation, depression, and self-esteem?

A series of bivariate correlation analyses were conducted to explore the extent to which of the sources of social support (i.e., support from parents, support from close friend, support from classmates support from teachers) were independently associated with suicidal ideation, depression, and self-esteem (Table 14). Parental support was inversely related to suicidal ideation and depression. Support from a close friend was inversely related to suicidal ideation and depression and positively related to self-esteem. Support from a classmate was inversely related to depression and positively related to self-esteem. Support from a teacher was inversely related to suicidal ideation and depression and positively related to self-esteem.

Table 14

Correlation Analysis of Stressful Life Experiences and Outcomes

<u>Source of Support</u>	<u>Suicidal Ideation</u>	<u>Depression</u>	<u>Self- Esteem</u>
1. Parent	-.20*	-.29**	.17
2. Friend	-.40**	-.37**	.30**
3. Classmate	-.18	-.33**	.27**
4. Teacher	-.19*	-.27**	.19*

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

A series of t-tests were then conducted to determine if the presence of a GSA was associated with suicidal ideation, depression, or self-esteem. Unexpectedly, participants who attended schools with a GSA (M = 2.85, SD = .57) had lower levels of self-esteem compared to students who did not

attend schools with a GSA ($M = 3.09$, $SD = .58$, $t(125) = 2.28$, $p < .05$). The presence of a GSA was not associated with significant differences in either depression or suicidal ideation. A subsequent series of t-tests were conducted to determine if the presence of a known comprehensive anti-bullying policy was associated with suicidal ideation, depression, or self-esteem. None of these t-tests were significant. Knowing that one's school had a comprehensive anti-bullying policy was not significantly associated with suicidal ideation ($t(125) = -.34$, $p = .73$), depression ($t(124) = -.36$, $p = .72$), or self-esteem ($t(125) = -.04$, $p = .97$) among the current sample.

A subsequent series of regression analyses were conducted with school enrollment included as a potential moderating factor in the relationships between mental health outcomes (i.e., suicidal ideation, depression, and self-esteem) and the presence of a GSA (Table 15) as well as in the relationships between mental health outcomes and the presence of an anti-bullying policy (Table 16). When the presence of a GSA, school enrollment, and the product of these two variables were included as predictors, the results of a Hosmer and Lemeshow Test ($X^2(2) = 0$, $p = 1.00$) for the logistic regression on suicidal ideation indicated there was a difference between the probability for suicidal ideation predicted by the model and the observed probability for each case, indicating that school enrollment did not moderate the relationship between the presence of a GSA and suicidal ideation. Additionally when the presence of a GSA, school

enrollment, and the product of these two variables were included in linear regression analyses on depression and self-esteem (Table 15), the models were not significant ($F(3,122)=.447, p = .72$; $F(3,123) = 1.954, p = .12$, respectively).

Table 15

Moderation Analyses for Presence of GSA and School Enrollment

<u>Variables</u>	<u>Suicidal Ideation</u>		<u>Depression</u>		<u>Self-Esteem</u>	
	<u>Exp(B)</u>	<u>p</u>	<u>Beta</u>	<u>p</u>	<u>Beta</u>	<u>p</u>
N=	127		125		126	
GSA	1.10	.87	.02	0.90	-.18	.20
Enrollment	1.33	.62	.09	0.52	-.08	.55
GSA x Enroll.	1.09	.92	.01	0.97	.01	.97
Constant	1.00	1.00	--	<.01	--	<.01

Table 16

Moderation Analyses for Presence of Anti-Bully Policy and School Enrollment

<u>Variables</u>	<u>Suicidal Ideation</u>		<u>Depression</u>		<u>Self-Esteem</u>	
	<u>Exp(B)</u>	<u>p</u>	<u>Beta</u>	<u>p</u>	<u>Beta</u>	<u>p</u>
N=	127		125		126	
Policy	1.06	.87	-.07	0.66	-.20	.84
Enrollment	1.25	.74	< -.01	0.98	-.57	.57
Policy x Enroll.	1.12	.81	.17	0.41	.24	.81
Constant	.98	.96	--	<.01	--	<.01

A similar series of moderation analyses were conducted with the presence of an anti-bullying policy included as a predictor and school

enrollment included as the potential moderator. When the presence of an anti-bullying policy, school enrollment, and the product of these two variables were included as predictors, the results of a Hosmer and Lemeshow Test ($X^2(4) = 4.49, p = .34$) for the logistic regression on suicidal ideation indicated there was not a difference between the probability for suicidal ideation predicted by the model and the observed probability for each case. However, as seen in Table 16, none of the predictors were significantly related to suicidal ideation, indicating that school enrollment did not moderate the relationship between the presence of a GSA and suicidal ideation. Additionally when the presence of a GSA, school enrollment, and the product of these two variables were included in linear regression analyses on depression and self-esteem (Table 15), the models were not significant ($F(3,122) = .608, p = .61$; $F(3,123) = .863, p = .46$, respectively).

A final set of t-tests were conducted on suicidal ideation, depression, and self-esteem with the ability to use one's preferred name in all contexts (i.e., at home, at work, at school, and with friends) included as the predictor in each analysis. Preferred name use was independently related to suicidal ideation ($t(125) = 3.30, p < .01$), depression ($t(124) = 4.11, p < .001$), and self-esteem ($t(126) = -3.20, p < .01$). Participants who were able to use their preferred names in all contexts had lower levels of suicidal ideation ($M = 1.52, SD = .77$) and depression ($M = 16.68, SD = 11.80$) and higher levels of self-esteem ($M = 3.05, SD = .54$) compared to students who were not able to

use their preferred name in at least one context ($M = 2.23$, $SD = 1.13$; $M = 27.41$, $SD = 13.09$; $M = 2.67$, $SD = .59$, respectively).

Question 4b. Is the presence of a GSA related to decreased experiences of gender-based harassment at school and increased support from teachers, classmates, and friends?

A series of t-tests were conducted to determine if the presence of a GSA was associated with gender-based harassment at school, support from teachers, support from classmates, and support from a close friend. None of these t-tests were significant. Knowing that one's school had a GSA was not significantly associated with gender-based harassment at school ($t(125) = .85$, $p = .40$), support from teachers ($t(116) = -1.06$, $p = .29$), support from classmates ($t(114) = -.32$, $p = .75$), or support from friends ($t(123) = .83$, $p = .41$) among the current sample.

Question 4c. When considered in the context of risk factors, are the protective factors (i.e., support from parents, support from a close friend, support from classmates, support from teachers, presence of a GSA at one's school, comprehensive anti-bullying policy at one's school, and ability to use one's preferred name) associated with suicidal ideation?

To determine whether protective factors contributed to the predictive ability of the model that included depression, self-esteem, and stressful life experiences, another logistic regression analysis on suicidal ideation was conducted with depression, self-esteem, the stressful life experience (i.e.,

sexual orientation- or gender identity-based victimization, psychological abuse by a caregiver, physical abuse by a caregiver, and gender-based harassment at school), and the protective factors (i.e., support from parents, support from a close friend, support from classmates, support from teachers, presence of a GSA at one's school, comprehensive anti-bullying policy at one's school, and ability to use one's preferred name) included as predictors, and age, race, ethnicity, gender identity, and site location included as control variables. The results of a Hosmer and Lemeshow Test ($X^2(8) = 7.43, p = .49$) indicated there was not a difference between the probability for suicidal ideation predicted by the model and the observed probability for each case. The sensitivity of the proposed model was 86.9% and the specificity was 78.0% (Table 17). Depression, but not self-esteem, was significantly related to suicidal ideation in this model (Table 12). Controlling for the included variables, higher levels of depression were associated with the presence of suicidal ideation. None of the stressful life experiences or protective factors were significantly associated with the presence of suicidal ideation.

Table 17

<i>Classification Table for Logistic Regression with Protective Factors</i>			
<u>Observed</u>	<u>Predicted</u>		<u>Accuracy</u>
	No Ideation	Ideation	
No Ideation	39	11	78.0%
Ideation	8	53	86.9%

Although the logistic regression analysis conducted above indicated that the protective factors (i.e., support from parents, support from a close friend, support from classmates, and support from teachers) were not directly related to suicidal ideation when considered together with depression and self-esteem, a second path analysis was conducted to determine if any of the protective factors were indirectly related to suicidal ideation via depression when considered in the context of previously identified stressful life experiences associated with suicidal ideation. Self-esteem was not included as a potential mediator as it was no longer associated with suicidal ideation in the context of other risk factors. Scatter plots (Figures 10-13) were reviewed to visually evaluate the relationships between the continuous protective factors (i.e., parental support, support from a close friend, support from classmates, and support from teachers) and depression. The scatterplots all appeared to display linear relationships.

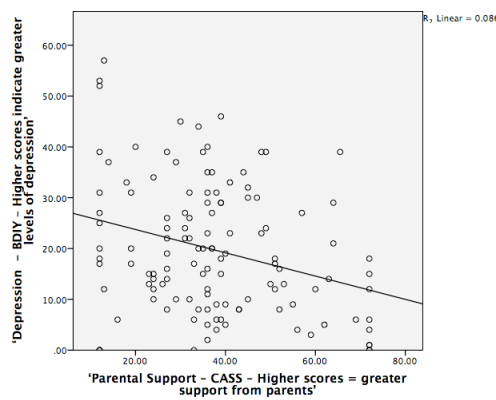


Figure 10. Scatter plot of parental support (X-axis) and depression (Y-axis).

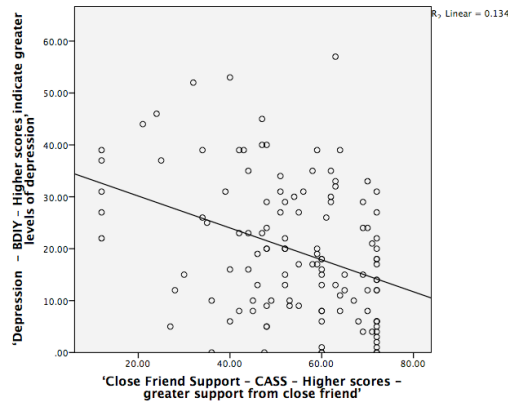


Figure 11. Scatter plot of support from a close friend (X-axis) and depression (Y-axis).

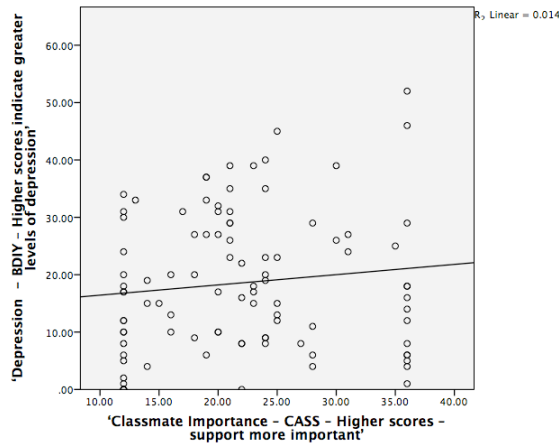


Figure 12. Scatter plot of support from a classmate (X-axis) and depression (Y-axis).

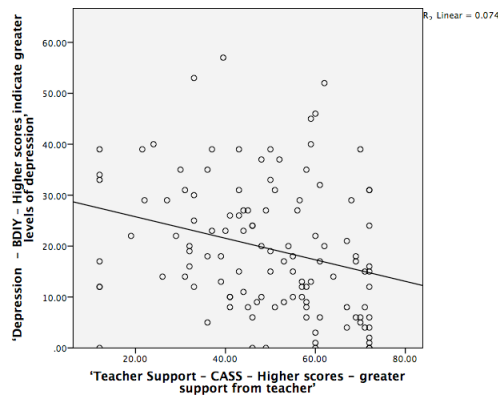


Figure 13. Scatter plot of support from teachers (X-axis) and depression (Y-axis).

A path model was then tested that included depression as an endogenous predictors of suicidal ideation (Figure 14). Sexual orientation- and gender identity-based victimization and caregiver psychological abuse, were included as exogenous predictors of depression as these were identified in the previous path analyses as indirectly related to suicidal ideation. The model also included the social support variables, preferred name use and the presence of a GSA as additional exogenous predictors of depression. Presence of an anti-bullying policy was not included as previous analyses demonstrated that it was not related to suicidal ideation, depression, or self-esteem. Additionally, the presence of a GSA was not included as a predictor of gender-based harassment at school or social support, as previous analyses demonstrated that these variables were not related in the current sample. All of the endogenous variables (i.e., depression and suicidal ideation) were adjusted for age, ethnicity, race, gender identity, and site location. Of note, this analysis is unable to determine causality and was used to identify significant associations. The model demonstrated good fit. The non-significant chi-square test ($X^2(8) = 7.24, p = .51$), RMSEA of $< .001$ ($p(\text{RMSEA} < 0.05) = 0.69$), CFI of 1.00, TLI of 1.02, and SRMR of 0.01 were all at or better than the accepted level for evidence of good model fit.

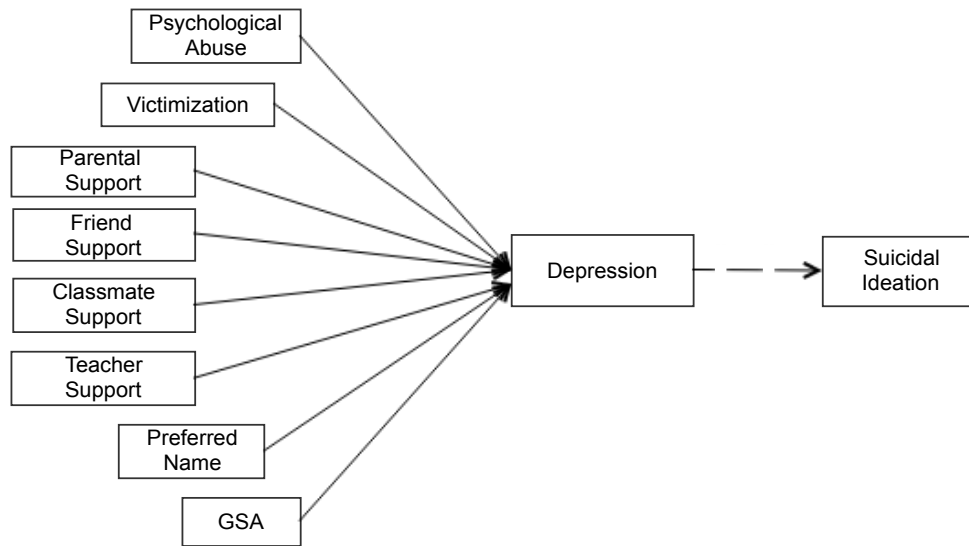


Figure 14. Proposed path model for suicidal ideation with stressful life experiences and protective factors included as predictors and depression included as a mediator. The dashed line reflects the potential endogeneity between depression and suicidal ideation.

Overall, the model explained 49% of the variance in suicidal ideation and 51% of the variance in depression. Figure 15 provides an illustration of the model with only significant pathways included. Depression ($\beta = .68, p < .001$) was directly related to suicidal ideation. Both of the included stressful life experiences, sexual orientation- or gender identity-based victimization ($\beta = .14, p < .05$) and psychological abuse ($\beta = .20, p < .01$), were indirectly related to suicidal ideation via depression. Of the included protective factors, support from a close friend ($\beta = -.13, p < .05$), support from classmates ($\beta = -.13, p < .05$), support from teachers ($\beta = -.17, p < .01$), and preferred name use ($\beta = -.17, p < .01$) were all indirectly related to

suicidal ideation via depression. In this model, neither parental support nor the presence of a GSA were related depression ($\beta = .15, p = .11$; $\beta = .06, p = .40$, respectively) or suicidal ideation ($\beta = .10, p = .11$; $\beta = .04, p = .41$, respectively).

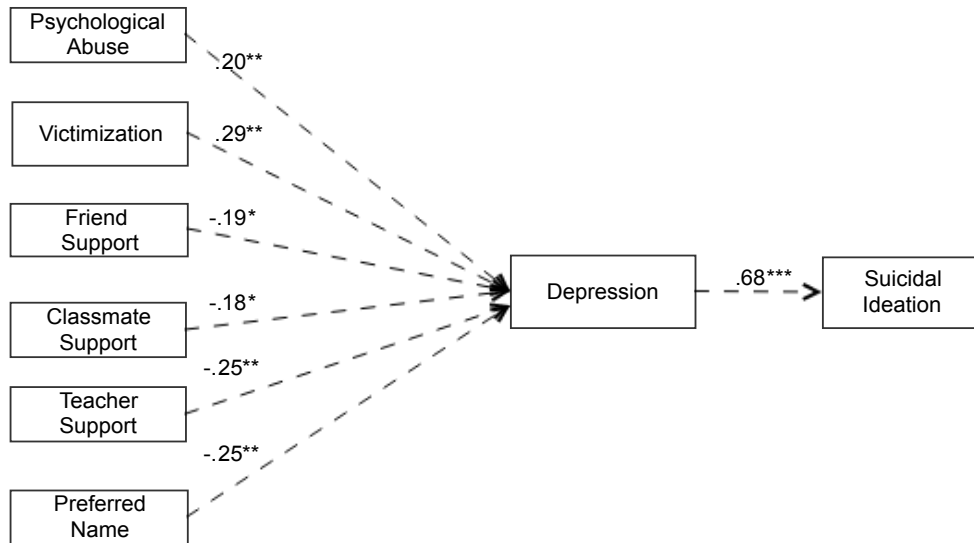


Figure 15. This figure displays the results of the path analysis including stressful life experiences and protective factors as predictors and depression as a mediating variable. Standardized path coefficients are provided. The dashed lines represent significant meditational pathways.
 $*p < .05$. $**p < .01$. $***p < .001$.

CHAPTER V

DISCUSSION

The aims of the current study were: a) to determine whether thwarted belongingness and perceived burdensomeness were related to suicidal ideation in accordance with Joiner's (2005) interpersonal psychological theory of suicide (IPTs) among transgender and gender nonconforming (TGNC) youth; b) to compare IPTs constructs (i.e., thwarted belongingness and perceived burdensomeness) to mental health indicators of minority stress (Meyer, 2003) among TGNC youth; c) to develop an understanding of how stressful life experiences are related to suicidal ideation among TGNC youth; and, d) to identify protective factors that are associated with reduced suicidal ideation among TGNC youth. Although other researchers have studied factors that relate to suicidal ideation and attempts among TGNC people, previous efforts were limited in their ability to compare the relative impact of various risk and protective factors (MacCarthy et al., 2015). Additionally, the current study contributes to the growing body of literature on TGNC youth and expands the representation of youth that have been historically hidden in previous research (MacCarthy et al., 2015). In the following sections, the researcher will highlight findings from descriptive analyses, summarize the results of analyses related to the

aims stated above, review some limitations of the current study, and present implications for clinical practice and research.

Descriptive Findings

Suicidal ideation remains a concerning outcome among the current sample of 127 TGNC youth. Descriptive findings indicate over a quarter (27%) of TGNC youth had contemplated suicide over the two-week period prior to their participation in the study. These findings are comparable to previous findings (Clements-Nolle, Goldblum et al., 2012; Marx, & Katz, 2006; Perez-Brumer et al., 2015; Reisner et al., 2015; Su et al., 2016; Toomey et al., 2010; Toomey et al., 2012, Ybarra et al., 2014), and reinforce the call for researchers to better understand risk factors for suicidal ideation among this population. By comparison with the general population, in the CDC's (2013) Youth Risk Behavior Surveillance System (YRBSS), a national survey of middle school and high school students, 17% of cisgender high school students had seriously contemplated suicide during the twelve months before they were surveyed. In another national sample of the general population, 7.4% of cisgender adults between the ages of 18 and 25 reported having suicidal thoughts during the twelve months before they were surveyed (SAMHSA, 2014).

Rates of depression are also concerning among the current sample of TGNC youth. Almost half (44%) of participants scored in the moderate to severe range on an index of depressive symptomatology. While the high rate

of depressive symptoms among TGNC youth alone is distressing, it is even more alarming given the link between depression and suicidal ideation documented among lesbian, gay, and bisexual cisgender youth (Smith et al., 2016) and transgender veterans (Lehavot et al., 2016). Furthermore, depression was identified as a risk factor for suicidal ideation in the current study, as discussed below.

With one notable exception, the rates of experiencing discrimination, harassment, and violence among the sample of TGNC youth were comparable to the rates reported by TGNC high school students in the National School Climate Survey (Kosciw et al., 2014) and by transgender adults in the National Transgender Discrimination Survey (NTDS; Grant et al., 2011). Over half (55%) of the current participants had experienced verbal harassment related to their gender identity, 46% had objects thrown at them, and 25% had been beaten, punched or kicked. Alarming, almost a quarter (23%) of the current sample of TGNC youth reported that they were sexually assaulted or raped due to their perceived gender identity. This rate is almost double the rate (12%) of TGNC students (K-12) who reported having experienced sexual violence in the NTDS sample (Grant et al.). However, the different rates may be due to the different age ranges for the two samples. It is worth reiterating that the simple act of disclosing or being perceived as having a gender identity that transgresses societal norms resulted in exposure to

physical violence for half of the sample and sexual violence for a quarter of the sample.

Summary of Analyses

As stated above, the first aim of the study was to determine whether the IPTS constructs related to suicidal ideation (i.e., thwarted belongingness and perceived burdensomeness) accounted for variance in suicidal ideation among the current sample of TGNC youth. After controlling for race, ethnicity, gender identity, and age, perceived burdensomeness was independently associated with suicidal ideation. Thwarted belongingness was not associated with suicidal ideation among the current sample of TGNC youth. When considered together, the interaction of these two variables was not associated with suicidal ideation beyond the variance accounted for independently by perceived burdensomeness. These findings contradict the hypotheses posited by Van Orden and colleagues (2010) related to the ability of thwarted belongingness and perceived burdensomeness to predict suicidal ideation among the general population. These results are similar to those presented by Hill and Pettit (2012) in their investigation of suicidal ideation among lesbian, gay, and bisexual college students. Given that thwarted belongingness was not related to suicidal ideation independently or in the context of perceived burdensomeness, questions arise about how this construct operates differently among TGNC youth compared to the general cisgender youth population. As Woodward and colleagues (2014)

noted in their analysis of thwarted belongingness and perceived burdensomeness as predictors of suicidal ideation among LGB individuals, it may be that this measure of belongingness does not capture the nuanced experiences of TGNC youth or account for the varied contexts in which TGNC youth may or may not experience belongingness. Furthermore, given it is likely that TGNC youth have felt different than their peers for the majority of their lives (Beemyn & Rankin, 2011), the feeling of thwarted belongingness may be ever-present and not a discreet stressor. Indeed, the thwarted belongingness score among the current sample of TGNC ($M = 3.42$, $SD = 1.36$) appears higher than the mean scores for a sample of heterosexual cisgender college students ($M = 2.12$, $SD = 1.21$) and gay, lesbian, and bisexual cisgender college students ($M = 2.46$, $SD = 1.23$) reported by Hill and Pettit (2012). This comparison is imperfect, however, as these differences may be due to age differences or enrollment in college. Given that the elevated rate of thwarted belongingness among this sample, it may also be that there was limited meaningful variance in this construct. Differences in thwarted belongingness for participants who are all on the high end of this scale are potentially less impactful than the differences for people with more varied experiences of belonging. The findings also raise the possibility that a sense of thwarted belongingness does not negatively impact TGNC youth to the extent to which it affects other populations. It could be that resources exist among TGNC youth that buffer against the negative impact of thwarted

belongingness, and more research is need to understand factors that promote this form of resilience. Furthermore, as reported by Van Orden and colleagues (2010), thwarted belongingness and perceived burdensomeness must be perceived as stable and unchanging in order for a desire to die to develop. Given that the data come from the first panel of a longitudinal study, it is unclear for how long levels of burdensomeness and thwarted belongingness have been elevated and whether participants are hopeful that these states will change in the future. Finally, there is a need to explore whether other risk factors than thwarted belongingness better account for variance in suicidal ideation among this population.

The second aim of the study was to compare IPTS constructs associated with suicidal ideation among the general cisgender population (i.e., thwarted belongingness and perceived burdensomeness) to mental health indicators of minority stress (i.e., self-esteem and depression). These constructs were all highly correlated with one another, indicating that there may be considerable overlap in what they are measuring. Contrary to arguments posited by Joiner (2005), thwarted belongingness and perceived burdensomeness did not account for the presence of suicidal ideation beyond depression and low self-esteem. The superior ability of the mental states of depression and low self-esteem to predict suicidal ideation suggests that these two indicators may better capture how risk for suicidal ideation develops among TGNC youth. Factor analyses should be conducted to better

understand both the common and unique factors associated among this set of variables (i.e., depression, self-esteem, thwarted belongingness, and perceived burdensomeness). If unique components of thwarted belongingness and perceived burdensomeness can be isolated, these components may be better able to explain and predict suicidal ideation among TGNC youth in the context of depression and self-esteem.

Furthermore, as newer versions of the Interpersonal Needs Questionnaire (INQ; Van Order et al., 2008), which measures thwarted belongingness and perceived burdensomeness, have been developed and published subsequent to the start of data collection for the current study (Hill et al, 2014), it may be that other versions of this scale are more reliable measures of thwarted belongingness among TGNC youth and/or more accurately reflect the diverse experiences of belonging among this population.

The third aim of the study was to determine if selected stressful life experiences faced by TGNC youth (i.e., sexual orientation- or gender identity-based victimization, psychological abuse by a caregiver, physical abuse by a caregiver, and gender-based harassment at school) were related to depression, self-esteem, and suicidal ideation among this sample. Consistent with the existing literature on these stressful life experiences among TGNC youth (Jefferson et al., 2013; Lehavot, 2016; Nuttbrock et al., 2014; Reisner et al., 2015; Testa et al., 2012; Ybarra et al., 2015), all four of the tested stressful life experiences were independently associated with depression, self-esteem,

and suicidal ideation. Notably, experiencing gender-based harassment at some point in one's lifetime was associated with these negative mental health outcomes regardless of whether the person was currently in school or not. However, when considered together with self-esteem and depression, none of the stressful life experiences were associated with suicidal ideation. Furthermore, self-esteem was no longer associated with suicidal ideation in this context. A path analysis was conducted to determine if depression mediated the impact of stressful life experiences on suicidal ideation. The results of this analysis support Meyer's (2003) minority stress model, as stressful life experiences associated with identifying as TGNC were related to higher levels of depression which, in turn, was associated with increased risk for suicidal ideation. Specifically, psychological abuse from a caregiver and sexual orientation- or gender identity-based victimization were associated directly with depression and indirectly (via depression) with suicidal ideation. In this model, gender-based harassment at school and physical abuse from a caregiver were not associated with depression or suicidal ideation. These findings do not mean that physical abuse from a caregiver or gender-based harassment at school were not associated with suicidal ideation. Rather, the relative contributions of psychological abuse from a caregiver and sexual orientation- or gender identity-based victimization on variance in suicidal ideation may have masked the contributions of physical abuse and gender-based harassment at school.

There are a number of possible explanations as to why the association between gender-based harassment at school was no longer associated with depression or suicidal ideation when considered in the context of other risk factors. The number of TGNC youth in the current sample who faced weekly or daily harassment at school was too small to maintain these categories in comparative analyses, and the decision was made to consolidate into two groups (i.e., youth who faced harassment at school and youth who did not). It is possible that grouping youth who faced harassment once per month with youth who faced daily harassment may have masked some of the mental health challenges associated with daily harassment. Additionally, given that the broader measure of sexual orientation- or gender identity-based victimization may have accounted for harassment at school, a majority of the variance in suicidal ideation associated with harassment at school may have been subsumed by the measure of sexual orientation- or gender identity-based victimization.

The fourth aim of the study was to explore whether indicators of protective factors present in Meyer's (2003) minority stress model (i.e., social support, school resources, and TGNC identity affirmation) were associated with suicidal ideation among TGNC youth. Parental support was independently associated with depression and suicidal ideation, support from classmates was independently associated with depression and self-esteem, support from a close friend was independently associated with

suicidal ideation, depression, and self-esteem, and support for teachers was independently associated with suicidal ideation, depression, and self-esteem. Additionally, the ability to use one's preferred name in all contexts (i.e., at home, at school, at work, and with friends) was independently related to suicidal ideation, depression, and self-esteem. When considered in context with risk factors identified above, none of the support variables were directly related to suicidal ideation. However, path analyses indicated that preferred name use and social support from friends, classmates, and teachers were all indirectly related to decreased risk for suicidal ideation via reduced depression. In this model, psychological abuse and sexual orientation-and gender identity-based victimization were positively related to suicidal ideation via depression. In this model, parental support was not associated with depression or suicidal ideation. The absence of an association between parental support and suicidal ideation is consistent with Poteat and colleagues' (2011) finding that, when victimization was high, parental support was not associated with decreased risk for suicidal ideation among LGBTQ youth (Poteat et al.).

Neither the presence of a GSA nor the presence of a known LGBT-related anti-bullying policy at one's current or last-attended school was associated with depression, self-esteem, or suicidal ideation among the sampled TGNC youth. Because these results appear to contradict a number of previous studies highlighting the benefits of GSAs and anti-bullying

policies (Greytak et al., 2014; McGuire et al., 2010; Kosciw et al., 2014), several potential explanations for the lack of significant findings are provided. As the presence of an anti-bullying policy was measured via self-report, it is possible that the existence of these resources was underreported and participants were unknowingly benefiting from such a policy. However, previous studies have also relied on self-report (Greytak et al., 2014; McGuire et al., 2010; Kosciw et al., 2013). Additionally, the current measure did not account for the extent to which these policies were enforced. While previous research has indicated that the presence of a GSA in one's school was associated with fewer experiences of discrimination (Greytak et al., 2014) and access to social support (McGuire et al., 2010), these associations were not demonstrated in the current sample. The absence of significant associations between these constructs may be the result of not accounting for the extent to which the GSA was supported administratively and the extent to which participants were engaged in the group. It is also unknown whether the gay-straight alliances were welcoming to TGNC youth as the name of the group (as it was measured in the survey) focuses on youths' sexual orientation. Of note, local GSA's may have more inclusive names, but this was not measured in the current study.

The current study was novel in its attempt to simultaneously explore the relative associations of risk and protective factors for suicidal ideation among TGNC youth. Based on the final model of risk and protective factors,

suicidal ideation was directly related to depression and indirectly related to psychological abuse from a caregiver, sexual orientation- or gender identity-based victimization, support from a close friend, support from classmates, support from teachers, and preferred name use (all via depression).

Participants who reported higher levels of depression were also more likely to report higher levels of suicidal ideation. Participants who faced caregiver psychological abuse and sexual orientation- or gender identity-based victimization were at a greater risk for depression and, in turn, suicidal ideation. Conversely, support from a close friend, support from classmates, and support from teachers were all associated with lower levels of depression and, in turn, lower levels of suicidal ideation when explored in the context of stressful experiences. Being able to use one's preferred name in all contexts was also associated with lower rates of depression and suicidal ideation in the context of other risk and protective factors.

Limitations

Although strategies were employed during the data collection process to increase diversity within the sample, all of the participants lived within commuting distance of three urban cities and results may not reflect the experiences of TGNC youth who live in rural areas. Similarly, these results may not capture the experiences of TGNC youth in other parts of the United States or the rest of the world. The sampling procedure may have also resulted in a bias that led to an overrepresentation of the experiences of

youth who attended community-based organizations (CBO's), had access to LGBTQ-related list-serves, or who knew earlier participants and, therefore, had a relationship with another LGBTQ individual. Consequently, the experiences of TGNC youth who are disconnected from LGBTQ-related resources and communities may be present to a lesser degree in these analyses, and findings cannot be generalized to all TGNC youth. Furthermore, the source of the sample (e.g., CBO's, LGBTQ list-serves) may have affected the youths' feelings related to their sense of belongingness. Having access to a community-based organization or LGBTQ group list-serve may provide access to social networks that are more accepting and welcoming of TGNC youth. In spite of potential rejection at school or within one's family of origin, these participants may have had access to a source of belongingness that was not captured in the measure of thwarted belongingness and is not available to youth in parts of the country with fewer resources for LGBTQ community.

Another limitation is the nature of some of the variables used to measure protective factors. Due to the number of variables studied in the larger research project, there was not space for every variable to be measured with multiple items and with multiple response options. Consequently, some variables are measured using single items with few options. Although this decision decreased the burden placed on participants and helped to promote retention in future waves, it limited the ability of the

current analyses to explore the potentially complex nature of certain variables. Furthermore, the survey method used participant self-report; consequently, data from some measures (e.g., levels of social support and victimization) are based on the participants' perspective and not based on observation or report by a neutral third party.

The current study was limited in its ability to assess for differences between different groups of TGNC youth. For instance, although analyses controlled for age, ethnicity, race, and site location, a thorough analysis of how intersecting identities affected outcomes was beyond the scope of the current study. Exposure to stressors, access to protective factors, and the impact of both on mental health may be different across age, racial, and ethnic groups. Unfortunately, the sample was too small to power meaningful cross-group analyses. Similarly, the current study was unable to explore differences across gender identity groups. The theories tested, measures used, and relationships analyzed may all operate differently for participants with non-binary gender identities relative to participants with binary gender identities or between male-identified, female-identified, and non-binary identified participants which could be examined with larger groups of each. However, many TGNC youth are “invisible” as well as “vulnerable” (Grossman & D’Augelli, 2006), making it hard to engage large numbers of TGNC youth in research.

The reader should take caution when interpreting the presented results. Although the data came from a longitudinal study, they only reflect the first panel of that study and are cross-sectional in nature. Furthermore, the methods employed in the larger SOGI-Q study were not experimental. Consequently, inferences about the direction of the relationships outlined above are not recommended. Although the minority stress theory (Meyer, 2003) suggests that negative life experiences and the absence of support and affirmation contribute to the accumulated effect of minority stress, potentially leading to depression and low self-esteem, it is also possible that participants who were more depressed had greater difficulty accessing social support and advocating for resources that may have protected them from victimization and harassment.

Implications

The current study has a number of implications for clinical practice and research which will be discussed in greater depth in the following sections. Counseling psychologists engaged in clinical practice should provide opportunities for TGNC youth to: a) use their preferred names; b) approach conceptualization and intervention from an affirming stance; c) acknowledge the role of stigma, discrimination, and other minority stressors in the lives of TGNC youth; d) assess TGNC youths' access to supportive social relationships; and, e) assess the safety of TGNC youth in schools and, when possible, advocate on their behalf. The current findings question the use of

IPTS (Joiner, 2005) and support the use of the minority stress model (Meyer, 2003) to explain and predict suicidal ideation among TGNC. Additionally, researchers should continue to explore the ways in which common predictors of suicidal ideation operate differently among TGNC youth, whether there are additional TGNC-specific risk factors that account for variance in suicidal ideation among this population, and how to increase the efficacy of school-based resources. Finally, future studies should explore differences among TGNC youth and how these relate to risk for suicidal ideation.

Clinical Implications

In its ethical guidelines for psychologists, the American Psychological Association (2010) states that psychologists should “strive to benefit those with whom they work (p. 3).” In order to help TGNC youth and prevent these young people from contemplating and, ultimately, attempting suicide, counseling psychologists need accurate information about the risk and protective factors about suicidal thoughts and behaviors among this population. The findings of the current study demonstrate the negative impact of minority stressors and lend support to the use of the gender-affirming model of care proposed by Hidalgo and colleagues (2013); the model posits that having a transgender identity is not inherently pathological, supporting and affirming diverse gender identities promotes mental health among TGNC youth, and negative cultural reactions to a

youth's transgender identity contributes to adverse mental health outcomes. In this study, the mental health of TGNC youth appears to be negatively affected by sexual orientation- or gender identity-based victimization, which puts TGNC youth at greater risk for higher levels of suicidal ideation, depression, and lower levels of self-esteem. Social support from friends, classmates, and teachers, on the other hand, is associated with decreased risk for suicidal ideation. Additionally, the findings of the current study demonstrate that the Beck Depression Inventory – Youth (BDI-Y; Beck, Beck, Jolly, & Steer, 2005) can be used as an indicator of risk for suicidal ideation among TGNC youth.

Another recommendation for practice based on the findings of the current study is that counseling psychologists and other mental health professionals invite TGNC clients to indicate their preferred-name on intake forms and to have this name used when communicating with and about these clients. Donald and Ehrenfeld (2015) argued that preferred name and pronoun use both in face-to-face communication and electronic health records reduces health disparities among transgender clients. Not only can this action serve as a source of gender affirmation and make transgender patients feel more welcome in medical and mental health settings, but it also allows for more accurate communication and understanding. The recommendation to honor transgender clients' preferred-name use is echoed by Rosendale and Josephson (2015). Although the current study does not

address preferred-name use in a medical or mental health settings, the findings suggest that this form of support is helpful and has protective benefits (i.e., promotes self-esteem and reduces risk for depression and suicidal ideation) for TGNC youth by respecting the youths' desire to be called by the name that aligns with their gender identity (Nadal et al., 2016).

The results of the current study also provide preliminary evidence to support a number of the APA's (2015) guidelines for psychological practice with transgender and gender nonconforming people. Specifically, psychologists need to be aware of how TGNC people are affected by "stigma, prejudice, discrimination, and violence" (APA, 2015, p. 838) and how mental health concerns may be related to "the psychological effects of minority stress" (APA, 2015, p. 845). The results of this study indicate that violence and harassment experienced by TGNC youth are unfortunately common and can have a significant impact on mental health. Furthermore, the findings support the use of the minority stress model (Meyer, 2003; Testa & Hendricks, 2014) to understand the varied ways in which societal reactions to TGNC identities contribute to negative mental health outcomes. The APA (2015) guidelines also call for psychologists to cultivate an understanding of how to promote resilience among TGNC people and suggest that TGNC people benefit from social support and trans-affirmative care. Indeed, the current study found that the ability to use one's preferred name and receiving social support from close friends, classmates and teachers, were

indirectly related to lower levels of suicidal ideation via lower levels of depression while controlling for risk factors, suggesting that these supportive resources help to promote resilience in the face of stressors. Therefore, counseling psychologists can help their TGNC clients by teaching skills for developing relationships with their peers and teachers and advocating to use their preferred names across contexts. Because of the emphasis interpersonal therapy for depressed adolescents (IPT-A; Mufson et al., 2011) places on interpersonal effectiveness, this approach to therapy may be well suited to meet the needs of clients who identify as TGNC.

Finally, counseling psychologists and other mental health professionals should be aware of the positive and negative impact that school experiences can have on TGNC youth. Although gender-related harassment at school was not associated with mental health outcomes in the context of other stressors, this may be due to issue with overlap and high correlations with other risk factors. Independently, gender-based harassment at school was associated with suicidal ideation, low self-esteem, and depression. Work should be done to ensure that TGNC students receive appropriate care in the face of victimization and effective policies are in place to reduce harassment. If, as the results of this study might indicate, current anti-bullying policies are not effective in reducing the frequency of gender-based harassment at schools, an effort should be made to understand why these policies are

ineffective and how to adopt policies and best implement interventions to reduce harm.

Research Implications

One of the study's primary implications for research is that a model for suicide used widely to explain the development of suicidal ideation among the general cisgender population may have limited applicability to individuals who are not cisgender (e.g., TGNC youth). Previous studies have found that the constructs proposed in Joiner's (2005) interpersonal psychological theory for suicide (IPTS) appear to operate differently among LGB people, challenging the universal applicability of this theory (Hill & Pettit, 2012; Woodward et al., 2014). The findings of the current study further indicate that the two primary constructs proposed by Joiner (2005) to predict suicidal ideation may not capture the types of risks factors impacting TGNC youth. Specifically, thwarted belongingness was not associated with suicidal ideation among the current sample of TGNC youth. It is possible that thwarted belongingness, as measured by the 5-item subscale of the 12-item version of the INQ (Van Orden et al., 2008), may reflect belongingness in one type of context (e.g., family of origin, school group), but does not account for sense of belonging in other contexts that may have special meaning for TGNC youth (e.g., online social group, LGBT community group, chosen family). Future research should be directed

toward identifying gaps in the extent to which IPTS constructs align with risk factors affecting TGNC youth.

The findings of this study also provide evidence to support the efforts of Testa and colleagues (2015) to apply the minority stress model (Meyer, 2003) to explain elevated suicidal thoughts and behavior among TGNC people. Although the current study did not include measures that fully aligned with the all of minority stress processes described by Meyer (2003) in the initial description of the minority stress model (i.e., experiences with discrimination, expectations of rejection, concealment, and internalized homophobia and/or transphobia), a number of meaningful proxies were included in the current analyses. Measures of stressful life experiences (i.e., sexual orientation- or gender identity-based victimization, caregiver physical abuse, caregiver psychological abuse, and gender-based harassment at school) were used as proxies for minority stressors. Sexual orientation- or gender identity-based victimization, caregiver psychological abuse, and gender-based harassment at school all independently predicted higher levels of depression and suicidal ideation and lower levels of self-esteem. Additionally, protective factors proposed within the minority stress framework (i.e., social support and identity affirmation) served to promote mental health (i.e., lower levels of depression and higher levels of self-esteem) among the current sample of TGNC youth. Stronger support for the use of the minority stress model with TGNC youth would come from future

research with measures that better approximate the constructs proposed by Meyer (2003). For instance, the current measure of caregiver physical and psychological abuse may include abuse that was not related to participants' transgender identity or gender non-conforming behaviors and could be tailored to better capture this form of abuse. It would also be important to include measures of other constructs present in the minority stress model as adapted by Testa and Hendricks (2014) for use with transgender people (e.g., internalized transphobia).

The current study responds to the call from MacCarthy and colleagues (2015) to address the gaps in scientific knowledge on transgender health in the United States. Specifically, this study supports the continued development of a sensitive theoretical framework for grounding research on suicide among transgender people by raising questions about the applicability of two IPTS (Joiner, 2005) constructs for identifying participants with suicidal ideation and providing evidence to support the minority stress model (Meyer, 2003). By including gender nonconforming youth in the sample and controlling for gender identity in analyses, the design of the current study also recognizes the complexity of the transgender community and works to extend the sample beyond youth whose identities adhere to a gender binary. As noted in the limitations section, however, more work is need to better understand how risk and protective factors are affected by intersecting identities and operate differently within samples of

TGNC youth. The current study also begins to address White Hughto and colleagues' (2015) concern that limited effort has been made in the existing literature to study the mechanisms through which stigma affects health among transgender people. However, as MacCarthy and colleagues (2015) noted, continued research is needed to include participants that are not typically represented in either clinical samples or convenience samples such as those recruited through community-based organizations or list-serves.

The current study serves as an important contribution to the literature on resilience among TGNC youth. As MacCarthy and colleagues (2015) noted, limited research has been conducted to understand the ways in which transgender people overcome adversity and thrive in the face of protective factors. Specifically, they call for a better understanding of strengths-based interventions that emphasize social support and affirm transgender identities (MacCarthy et al., 2015). The findings of the current study highlight the positive impact of social support from parents and close friends on mental health and the protective benefits in the face of stressors of using one's preferred name that aligns with one's sense of understanding of one's gendered self. Continued research is needed to identify additional protective factors, better understand the limits of social support, and expand our understanding of the role of identity affirmation in promoting mental health among TGNC youth.

REFERENCES

- American Psychological Association (2006). *Answers to your questions about transgender individuals and gender identity*. Available online at www.apa.org/topics/sexuality/transgender.pdf
- American Psychological Association (2010). *Ethical Principles of Psychologists and Code of Conduct*. Available online at <http://www.apa.org/ethics/code/principles.pdf>
- American Psychological Association (2015) Guidelines for psychological practice with transgender and gender nonconforming people. *American Psychologist*, 70(9), 832-864.
- Beck, J.S., Beck, A.T., Jolly, J.B., & Steer, R.A. (2005). *Beck youth inventories-second edition for children and adolescents manual*. San Antonio, TX: PsychCorp.
- Beemyn, G., & Rankin, S. (2011). *The lives of transgender people*. New York: Columbia.
- 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 Public Health*, 103(4), 943-951.
- Bulmer, M. G. (1979). *Principles of statistics*. Dover: Dover Publications.

- Boza, C., & Perry, K. N. (2014). Gender-related victimization, perceived social support, and predictors of depression among transgender Australians. *International Journal of Transgenderism, 15*(1), 35-52.
- Briere, J., & Runtz, M. (1988). Multivariate correlates of childhood psychological and physical maltreatment among university women. *Child Abuse & Neglect: The International Journal, (12)* 331-341.
- Budge, S. L., Rossman, H. K., & Howard, K. S. (2014). Coping and psychological distress among genderqueer individuals: The moderating effect of social support. *Journal of LGBT Issues in Counseling, 8*(1), 95-117.
- Centers for Disease Control and Prevention (CDC). (2010). National Center for Injury Prevention and Control: Web-based Injury Statistics Query and Reporting System (WISQARS). Retrieved from <http://www.cdc.gov/ncipc/wisqars>
- Centers for Disease Control and Prevention (CDC). (2013). *1991-2013 High School Youth Risk Behavior Survey Data* [Data File]. Retrieved from: <http://nccd.cdc.gov/youthonline/>
- Clements-Nolle, K., Marx, R., & Katz, M. (2006). Attempted suicide among transgender persons: The influence of gender-based discrimination and victimization. *Journal of Homosexuality, 51*, 53-69.
- Coolhart, D., Baker, A., Farmer, S., Malaney, M., & Shipman, D. (2013). Therapy with transsexual youth and their families: A clinical tool for

- assessing youth's readiness for gender transition. *Journal of Marital and Family Therapy*, 39(2), 223-243.
- Cresswell, J. W. (2013). *Qualitative inquiry & research design*. Washington, D.C.: Sage.
- D'Augelli, A. R., Grossman, A. H., & Starks, M. T. (2006). Childhood gender atypicality, victimization, and PTSD among lesbian, gay, and bisexual youth. *Journal of Interpersonal Violence*, 21(11), 1462-1482.
- D'Augelli, A. R., Grossman, A. H., & Starks, M. T. (2008). Gender atypicality and sexual orientation development among lesbian, gay, and bisexual youth. *Journal of Gay & Lesbian Mental Health*, 12(1-2), 121-143.
- DeSimone, J. A., Harms, P. D., & DeSimone, A. J. (2015). Best practice recommendations for data screening. *Journal of Organizational Behavior*, 36(2), 171-181.
- De Vries, A. L. C., McGuire, J. K., Steensma, T. D., Wagenaar, E. C. F., Doreleijers, T. A. H., & Cohen-Kettenis, P. T. (2014) Young adult psychological outcome after puberty suppression and gender reassignment. *Pediatrics*, 134(4), 1-9.
- Donald, C., & Ehrenfeld, J. M. (2015). The opportunity for medical systems to reduce health disparities among lesbian, gay, bisexual, transgender and intersex patients. *Journal of Medical Systems*, 39(11).
- Erickson-Schroth, L. (2010). The neurobiology of sex/gender-based attraction. *Journal of Gay & Lesbian Mental Health*, 14(1), 56-69.

Erickson-Schroth, L. (2013). Update on the biology of transgender identity.

Journal of Gay & Lesbian Mental Health, 17(2), 150-174.

Feinstein, B. A., Wadsworth, L. P., Davila, J. D., & Goldfried, M. R. (2014). Do

parental acceptance and family support moderate associations

between dimensions of minority stress and depressive symptoms

among lesbians and gay men? *Profession Psychology: Research and*

Practice, 45(4), 239-246.

Fenway Health (2010). *Glossary of gender and transgender terms*. Boston,

MA: Fenway Health.

Goldblum, P., Testa, R. J., Hendricks, M. L., Bradford, J., & Bongar, B. (2012).

The relationship between gender-based victimization and suicide

attempts in transgender people. *Professional Psychology: Research*

and Practice, 43(5), 468-475.

Grant, J. M., Mottet, L.A., Tanis, J., Harrison, J., Herman, J. L., & Keisling, M.

(2011). *Injustice at Every Turn: A Report of the National Transgender*

Discrimination Survey. Washington: National Center for Transgender

Equality and National Gay and Lesbian Task Force.

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), 45-63.

Grossman, A. H., & D’Augelli, A. R. (2006). Transgender youth: Invisible and

vulnerable. *Journal of Homosexuality, 51*, 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, 1-13.
- Grossman, A. H., D'Augelli, A. R., Howell, T. J., & Hubbard, S. (2005). Parents' reactions to transgender youths' gender nonconforming expression and identity. *Journal of Gay & Lesbian Social Services*, 18(1) 3-16.
- Gutierrez, P. M., & Osman, A. (2008). *Adolescent suicide: An integrated approach to the assessment of risk and protective factors*. DeKalb, IL: Northern Illinois University Press.
- Han, B., Compton, W. M., Gfroere, J., McKeon, R. (2015). Prevalence and correlates of past 12-month suicide attempt among adults with past-year suicidal ideation in the United States. *Journal of Clinical Psychiatry*, 76(3), 295-302.
- Hendricks, M. L., & Testa, R. J. (2012). A conceptual framework for clinical work with transgender and gender nonconforming clients: An adaptation of the minority stress model. *Professional Psychology: Research and Practice*, 43(5), 460-467.
- Herek, G. M., Gillis, J. R., & Cogan, J. C. (1999). Psychological sequelae of hate-

- crime victimization among lesbian, gay, and bisexual adults. *Journal of Consulting and Clinical Psychology*, 67(6), 945-951.
- Hershberger, S. L., & D'Augelli, A. R. (1995). The impact of victimization on the mental health and suicidality of lesbian, gay, and bisexual youths. *Development Psychology*, 31(1), 65-74.
- Hidalgo, M. A., Ehrensaft, D., Tishelman, A. C., Clark, L. F., Garofalo, R., Rosenthal, S. M., ... Olson, J. (2013). The gender affirmative model: What we know and what we aim to learn. *Human Development*, 56(5), 285-290.
- 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 Behaviors*, 42(5), 567-579.
- Hill, R. M., Rey, Y., Marin, C. E., Sharp, C., Green, K. L., & Pettit, J. W. (2015). Evaluating the interpersonal needs questionnaire: Comparison of the reliability, factor structure, and predictive validity across five versions. *Suicide and Life-Threatening Behavior*, 45(3), 302-314.
- IBM Corp. (2013). IBM SPSS Statistics for Windows, Version 22.0 [Computer Program]. Armonk, NY: IBM Corp.
- Jefferson, K., Neilands, T. B., & Sevelius, J. (2013). Transgender women of color: discrimination and depression symptoms. *Ethnicity and Inequalities in Health and Social Care*, 6(4), 121 – 136.

- Joiner, Jr., T. (2005). *Why people die by suicide*. Cambridge, MA: Harvard University Press.
- Klein, A., & Golub, S. A. (2016). Family rejection as a predictor of suicide attempts and substance misuse among transgender and gender nonconforming adults. *LGBT Health*.
- Kosciw, J. G., Greytak, E. A., Palmer, N. A., & Boesen, M. J. (2014). *The 2013 National School Climate Survey: The Experiences of Lesbian, Gay, Bisexual and Transgender Youth in Our Nation's Schools*. New York: GLSEN.
- Kosciw, J. G., Palmer, N. A., Kull, R. M., & Greytak, E. A. (2013). The effect of negative school climate on academic outcomes for LGBT youth and the role of in-school supports. *Journal of School Violence*, 12(1), 45-63.
- Lehavot, K., Simpson, T. L., & Shipherd, J.C. (2016). Factors associated with suicidality among a national sample of transgender veterans. *Suicide and Life-Threatening Behavior*, 46(1), 1-18.
- Lombardi, E., Wilchins, R. A., Priesing, D., & Malouf, D. (2001). Gender violence: Transgender experiences with violence and discrimination. *Journal of Homosexuality*, 42, 89-101.
- Lorber, J. (1994). *The Paradoxes of Gender*. New Haven, CT: Yale University Press.
- MacCarthy, S., Reisner, S. L., Nunn, A., Perez-Brumer, A., & Operario, D. (2015). The time is now: Attention increases to transgender health in

- the United States but scientific knowledge gaps remain. *LGBT Health*, 2(4), 287-291.
- Malecki, C. K., Demaray, M. K., & Elliott, S. N. (2000). *The child and adolescent social support scale*. DeKalb: Northern Illinois University.
- Mays, V. M., & Cochran, S. D. (2001). Mental health correlates of perceived discrimination among lesbian, gay, and bisexual adults in the United States. *American Journal of Public Health*, 91(11), 1869-1876.
- McCarthy, M. A., Fisher, C. M., Irwin, J. A., Coleman, J. D., & Kneip Pelster, A. D. (2014). Using the minority stress model to understand depression in lesbian, gay, bisexual, and transgender individuals in Nebraska. *Journal of Gay & Lesbian Mental Health*, 18(4), 346-360.
- McConnell, E. A., Birkett, M. A., & Mustanski, B. (2015). Typologies of social support and associations with mental health outcomes among LGBT youth. *LGBT Health*, 2(1), 55-61.
- McGuire, J. K., Anderson, C. R., Toomey, R. B., & Russell, S. T. (2010). School climate for transgender youth: A mixed method investigation of student experiences and school responses. *Journal of Youth & Adolescence*, 39, 1175-1188.
- Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychology Bulletin*, 129(5), 674-697.

- Mufson, L., Dorta, K. P., Moreau, D., Weissman, M. M. (2011). *Interpersonal psychotherapy for depressed adolescents, (2nd ed.)*. New York: The Guilford Press.
- 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.
- Nadal, K. L., Skolnik, A., & Wong, Y. (2012). Interpersonal and systemic microaggressions toward transgender people: Implications for counseling. *Journal of LGBT Issues in Counseling, 6*(1), 55-82.
- Nadal, K. L., Whitman, C. N., Davis, L. S., Erazo, T., & Davidoff, K. C. (2016). Microaggressions toward lesbian, gay, bisexual, transgender, queer, and genderqueer people: A review of the literature. *The Journal of Sex Research, 1*-21.
- National Institute for Mental Health (2012). *Suicide: A major, preventable mental health problem: Facts about suicide and suicide prevention among teens and young adults*. Online fact sheet.
http://www.nimh.nih.gov/health/publications/suicide-a-major-preventable-mental-health-problem-fact-sheet/teen-suicide_141731.pdf
- Nuttbrock, L., Bockting, W., Rosenblum, A., Hwahng, S., Mason, M., Macri, M., & Becker, J. (2014). Gender abuse and major depression among

- transgender women: A prospective study of vulnerability and resilience. *American Journal of Public Health*, 104(11), 2191 – 2198.
- Nuttbrock, L., Bockting, W., Rosenblum, A., Mason, M., Macri, M., & Becker, J. (2012) Gender identity conflict/affirmation and major depression across the life course of transgender women. *International Journal of Transgenderism*, 13(3), 91-103.
- Nuttbrock, L., Hwahng, S., Bockting, W., Rosenblum, A., Mason, M., Macri, M., & Becker, J. (2010). Psychiatric impact of gender-related abuse across the life course of malt-to-female transgender persons. *The Journal of Sex Research*, 47(1), 12-23.
- Perez-Brumer, A., Hatzenbuehler, M. L. , Oldenburg, C. E., & Bockting, W. (2015). Individual- and structural-level risk factors for suicide attempts among transgender adults. *Behavioral Medicine*, 41(3), 164-171.
- Poteat, V. P., Mereish, E. H., DiGiovanni, C. D., Koenig, B. W. (2011). The effects of general and homophobic victimization on adolescents' psychosocial and educational concerns: The importance of intersecting identities and parent support. *Journal of Counseling Psychology*, 58(4), 597-609.
- Qualtrics [Computer Software] (Version 6348130). (2016). Provo, UT. Retrieved from www.qualtrics.com.

- Ray, N. (2006). *Lesbian, gay, bisexual, and transgender youth: An epidemic of homelessness*. New York: National Gay and Lesbian Task Force Policy Institute and the National Coalition for the Homeless.
- Reisner, S. L., Greytak, E. A., Parsons, J. T., & Ybarra, M. L. (2015). Gender minority social stress in adolescence: Disparities in adolescent bully and substance use by gender identity. *The Journal of Sex Research*, 1-14.
- Reisner, S. L., Vettes, R., Leclerc, M., Zaslow, S., Wolfrum, S., Shumer, D., Mimiaga, M. J., (2015). Mental health of transgender youth in care at an adolescent urban community health center: A matched retrospective cohort study. *Journal of Adolescent Health*, 56, 274-279.
- Rood, B. A., Puckett, J. A., Pantalone, D. W., & Bradford, J. B., (2015). Predictors of suicidal ideation in a statewide sample of transgender individuals. *LGBT Health*, 2(3), 270-275.
- Rosendale, N., & Josephson, S. A. (2015). The importance of lesbian, gay, bisexual, and transgender health in neurology. *JAMA Neurology*, 72(8), 855.
- Rosenberg, M. (1989). *Society and the adolescent self-image (rev. ed.)*. Middletown, CT England: Wesleyan University Press.
- Rosseel, Y. (2012). lavaan: An R Package for Structural Equation Modeling [Computer Program]. *Journal of Statistical Software*, 48(2), 1-36. URL <http://www.jstatsoft.org/v48/i02/>.

- Rotondi, N. K. (2014). Depression in trans people: A review of the risk factors. *International Journal of Transgenderism*, 13(3), 104-116.
- RStudio Team (2015). RStudio: Integrated Development for R [Computer Program]. RStudio, Inc., Boston, MA URL <http://www.rstudio.com/>.
- Smith, B. C., Armelie, A. P., Boarts, J. M., Brazil, M., & Delahanty, D. L. (2016). PTSD, depression, and substance use in relation to suicidality risk among traumatized minority lesbian, gay, and bisexual youth. *Archives of Suicide Research*, 20(1), 80-93.
- Stotzer, R. L. (2009). Violence against transgender people: A review of United States data. *Aggression and Violent Behavior*, 14, 170-179.
- Su, D., Irwin, J. A., Fisher, C., Ramos, A., Kelley, M., Rogel Mendoza, D. A., & Coleman, J. D. (2016). Mental health disparities within the LGBT population: A comparison between transgender and nontransgender individuals. *Transgender Health*, 1(1), 12-20.
- Substance Abuse and Mental Health Services Administration (SAMHSA). (2014). Results from the 2013 national survey on drug use and health: Mental health findings. *NSDUH Series H-49, HHS Publication No. (SMA) 14-4887*. Rockville, MD: Substance Abuse and Mental Health Services Administration.
- Testa, R. J., & Hendricks, M. L. (2014). Suicide risk among transgender and gender-nonconforming youth. In P. G. Goldblum, D. L. Espelage, J. Chu, & B. Bongar (Eds.), *Youth Suicide and Bullying: Challenges and*

Strategies for Prevention and Intervention (pp. 121-133). Oxford: Oxford University Press.

- Testa, R. J., Jimenez, C. L., & Rankin, S. (2014). Risk and resilience during transgender identity development: The effects of awareness and engagement with other transgender people on affect. *Journal of Gay & Lesbian Mental Health, 18*(1), 31-46.
- Toomey, R. B., McGuire, J. K., & Russell, S. T. (2012). Heteronormativity, school climates, and perceived safety for gender nonconforming peers. *Journal of Adolescent, 35*, 187-196.
- 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.
- Van Orden, K. A., Witte, T. K., Cukrowicz, K. C., Braithwaite, S., Selby, E. A., & Joiner, T. E. (2010). The interpersonal theory of suicide. *Psychological Review, 117*(2), 575-600.
- Van Orden, K. A., Witte, T. K., Gordon, K. H., Bender, T. W., & Joiner, T. E., Jr. (2008). Suicidal desire and the capability for suicide: Tests of the Interpersonal-Psychological Theory of Suicidal Behavior among adults. *Journal of Consulting and Clinical Psychology, 76*, 72-83.
- White Hughto, J. M., Reisner, S. L., & Pachankis, J. E. (2015). Transgender stigma and health: A critical review of stigma determinants,

mechanisms, and interventions. *Social Science & Medicine*, 147, 222-231.

Woodward, E. N., Wingate, L., Gray, T. W., & Pantalone, D. W. (2014).

Evaluating thwarted belongingness and perceived burdensomeness as predictors of suicidal ideation in sexual minority adults. *Psychology of Sexual Orientation and Gender Diversity*, 1(3), 234-243.

Ybarra, M. L., Mitchell, K. J., & Kosciw, J. (2014). The relation between suicidal ideation and bullying victimization in a national sample of transgender and non-transgender adolescents. In P. G. Goldblum, D. L. Espelage, J. Chu, & B. Bongar (Eds.), *Youth Suicide and Bullying: Challenges and Strategies for Prevention and Intervention* (pp. 134-145). Oxford: Oxford University Press.

Ybarra, M. L., Mitchell, K. J., Kosciw, J. G., & Korchmaros, J. D. (2015).

Understanding linkages between bullying and suicidal ideation in a national sample of LGB and heterosexual youth in the United States. *Prevention Science*, 16(3), 451-462.

APPENDIX A

GLOSSARY

Birth Sex

- Sex assigned at birth, usually based on external genitalia (as rule, pediatricians do not use other biological markers of a child's sex, e.g., chromosomes, hormones).
- Participants were asked to designate their birth sex as **male, female, or intersex**.

Gender Identity

- A person's internal sense of one's gender (i.e., gender identity) which may be different from the gender attributed based on one's birth sex (i.e., gender assignment) or from others' perceptions of one's gender (i.e., gender attribution), or one's gender presentation/expression.
- Youth were asked to indicate their gender identity as **woman, man, trans-woman, trans-man, or gender queer**. The focus of gender on an individual's self-concept, instead of on a person's biological sex, creates a more nuanced understanding of gender; consequently, a "write-in" space was also provided for participants to indicate their gender identity.
- The gender identity categories used in the SOGI-Q study are:
 - **Cisgender youth** -- Participants who indicate that their gender identity is aligned with their assigned birth sex

- **Cisgender male youth:** Youth who identified their birth sex as “male” and identified their gender as “man.”
- **Cisgender female youth:** Youth who identified their birth sex as “female” and who identified their gender as “woman.”
- **Transgender youth** -- Participants who indicated that their gender identity is *not* entirely congruent with their assigned birth sex and/or do not express their gender identity in ways that match the expectations of others which are based on their assigned sex at birth.
- **Gender non-conforming youth** -- Participants who do not identify with strict binary (i.e., man or woman) understanding of gender and gender identities. In order to include gender non-confirming individuals, the survey included a “write-in” for transgender youth who describe their gender in non-binary ways, e.g., gender queer, bi-gender, third gender.
- **Transgender and gender non-conforming (TGNC) youth** -- This term was used to be inclusive of all youth whose gender identity or gender expression transcends expectations based on assigned sex at birth. The following four categories of transgender and gender nonconforming (TGNC) youth emerged:
 - **Transman** -- Participants whose assigned birth sex is female and who identifies as a trans-man or man.

- **Transwoman** -- Participants whose assigned birth sex is male and who identifies as a trans-woman or woman.
- **Male to a Different Gender** -- Participants who were assigned the birth sex of male and who identified as *gender-queer* or who indicated that “their gender identity was not consistent with their birth sex” in a section of the survey designed for people who are transitioning or are trans-identified.
- **Female to a Different Gender** -- Participants who were assigned the birth sex of female and who identified *gender-queer* or who indicated that “their gender identity or was not consistent with their birth sex” in a section of the survey that designed for people who are transitioning or are trans-identified.

MtF (Male-to-Female) – Refers to a term used to describe the identities of people who transition from living as a male to living and identifying as a female. This typically is used for people who have medically transitioned or are considering medical transition, but this is not always the case.

FtM (Female-to-Male) – Refers to a term used to describe the identities of people who transition from living as a female to living and identifying as a male. This typically is used for people who have medically transitioned or are considering medical transition, but this is not always the case.

Sexual Identity

- How people *identify* themselves is based on their emotional, romantic, sexual, and affectional attraction, the group of people with whom they identify, and the people with whom they engage sexual activities. Combined, these lead people who define their “sexual identity.”
- Participants in the study were asked to indicate their sexual identities in one of the following sexual identity categories:
 - **Gay youth**
 - **Lesbian youth** (includes cisgender females who identity as gay women)
 - **Bisexual youth** -- (includes those who identified as bisexual, but mostly gay or lesbian; bisexual, equally gay/lesbian and heterosexual/straight; and bisexual, but most heterosexual/ straight). The bisexual youth category also includes those participants who identified themselves as *omnisexual* and *pansexual*.
 - **Heterosexual youth** – includes only youth who identified as transgender as well as identified as heterosexual.
 - **Questioning youth** -- Participants who selected the "questioning" option to indicate their sexual identity, indicating they have not yet determined where they identify on the sexual identity spectrum, were included in this category. (Note: None of these youth identified as transgender).

- **Sexual minority youth** – an umbrella term used to describe lesbian, gay, bisexual, and questioning youth; and when used, the youth to whom it refers should be specified, i.e., LGB or LGBTQ.

- **NOTES:**

- * **Note 1:** Cisgender participants who selected a sexual identity of *queer* were classified into the gay, lesbian, or bisexual groups based on their answers to the questions regarding birth sex, gender identity, and same sex attraction. Note also that the word *queer* was used in classifying participants with regard to their sexual identities; whereas the term *gender queer* was used with regard to participants' gender identities.
- * **Note 2:** When participants omitted a response to their *sexual identity*, their responses to questions related to *same sex attraction* were used as a proxy for sexual identity.
- * **Note 3:** The terms *bisexual*, *gay*, and *questioning* are *adjectives*, not nouns, and should always be followed by a noun. For example, "# (%) of the participants identified as bisexual male youth" is acceptable, whereas "# (%) participants identified as bisexuals" is *not* acceptable. In contrast, the term *lesbian* may be used as a noun: consequently, it is acceptable to say "# (%) of participants identified as lesbians."