Impact of LGBTQ school climate policy on rates of suicide: planning and attempt among high school populations

Patrick N. Hagan

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Patrick N. Hagan
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ABSTRACT

This study was developed to observe the correlation between the implementation of policies to improve school climate for high school students who identify as LGBTQ (Lesbian, Gay, Bisexual, Transgender, Queer), and changes in self reported suicide planning and attempts among school populations. Current academic literature notes an increase in the suicidal behaviors among LGBTQ students, and notes social and environmental factors (e.g. school climate) as potential contributing factors to suicide risk. This study compares school policy data from 49 school districts across the state of Vermont to self-reported rates of suicidal planning and attempt collected by the Vermont Department of Health and aggregated at the school level. The study hypothesized that schools with a greater number of school climate policies (e.g. gender neutral bathrooms, LGBTQ organizations, anti-harassment policy and student anti-harassment training) will exhibit lower rates of suicidal planning and attempts. The findings pointed to a slight reduction in rates of suicidal ideation and attempt among school employing three of the four interventions, as well as a negative correlation between the number of intervention implemented and the rates of suicidal planning and attempt. However, these findings lack the statistical significance required to rule out a null hypothesis. Further research is needed to exhibit a statistically significant impact, however these findings can be extrapolated to suggest that certain school policies cannot only improve students’ feelings of depression and outlook on life, but may prevent death by suicide.
IMPACT OF LGBTQ SCHOOL CLIMATE POLICY ON RATES OF SUICIDAL PLANNING AND ATTEMPT AMONG HIGH SCHOOL POPULATIONS

A project based upon an independent investigation, submitted in partial fulfillment of the requirements for the degree of Master of Social Work.

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2014
ACKNOWLEDGEMENTS

I would like to acknowledge the Smith College School for Social Work for making the thesis a cornerstone of the Master of Social Work program. This challenging experience builds on the value of a Smith College School for Social work MSW degree. I would like to thank those professors, supervisors, advisors, and mentors who have facilitated my learning and professional development before, during, and long after the publication of this work. This list includes, but is not limited to: Lynn Abelson, Leslie Aldrich, Sabrina Ferris, Fred Newdom and Laurence Cadorette

I wish to acknowledge those involved in the offering and review of the Smith College School for Social Work Alumni Association Thesis Awards, and the LGBT Thesis Awards. Your thoughtful consideration of our work motivates thoughtful and creative research throughout the program.

I wish to acknowledge and thank my parents, Dr. Joseph F. Hagan, and Joyce Hagan, LICSW (Smith SSW Class of 1974) for a lifetime of love, support, and mentorship. Dad, you’ve fostered my appreciation of the hard sciences through your example and our trips to AAP conferences. Mom, you’ve helped me to hone my writing skills through innumerable paper edits, and helped guide me, in your example, to the field of clinical social work.

I wish to extend a profound thanks to all of my friends and family, who listened, supported, and distracted me throughout this project.

Finally, I would like to acknowledge my wife, Meghan, for her love, companionship, and support, especially throughout this thesis process. Thank you for knowing when I needed guidance, space, a break, or a candy bar.
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CHAPTER I

Introduction

Suicide is the third leading cause of death among Americans ages 12-19 years (Centers for Disease Control and Prevention, n.d.). Studies note an increased rate of suicide among adolescents who identify as gay, lesbian, bisexual, transgender, or queer, compared to the entire school population (Garofalo, Wolfe, & Wissow, 1999; Remafedi, French, Story, Resnick, & Blum, 1998; Suicide Prevention Resource Center, 2008). Media reports point to a connection between bullying and suicide, and there have been calls for cultural change in communities affected by youth suicide. While adolescents receive a number of cultural messages, their lives are often organized around the culture of their high school.

This study will explore the relationship between school climate and suicide risk, with specific focus on the development of school-based policies. The present study will explore the relationship between specific lesbian, gay, bisexual, transgender, and queer (LGBTQ) school climate policy implementation and rates of suicidal planning and suicidal attempt among all students within the school population. The proposed study will analyze school policy targeted at LGBTQ students, however the study will review suicide rates across the student population. Due to low self-report and public identification as LGBTQ among adolescents, a population sample will more effectively capture the possible impact of LGBTQ school policy on suicide rates.

This correlational study will provide an empirical framework for efforts to develop more positive school environments and reduce rates of suicidal planning and attempt among high school-aged youth. Fifty-five school districts and supervisory unions
across the state of Vermont will serve as the sample, allowing for focused study of variations in school policy and health behaviors statewide. The findings of this study will have implications in the school settings and will be of interest to students, parents, teachers, administrators, and clinicians who work with adolescent students or LGBTQ identified youth. This study is particularly relevant to social work practice in schools, as social workers often address individual mental health concerns framed within the social context of the school environment.

Key Terms:

**Heteronormative:** A viewpoint that expresses heterosexuality as a given, instead of being on of many possibilities.

**LGBTQ:** An acronym used to refer to individuals who identify as lesbian, gay, bisexual, transgender, or queer. Lesbian, gay, and bisexual identity development, and all sexual identity for that matter, is a fluid and complex process (Bilodeau & Renn, 2005), therefore identities related to sexual and gender identity are best determined by an individuals personal identification within a certain group. Transgender is often used as an inclusive term for a range of gender identities that do not fit into the binary male or female gender identities (Bilodeau & Renn, 2005). Queer identity is a newly adopted term used by many within the LGBT community. The term “queer” articulates a radical questioning of social and cultural norms, notions of gender, reproductive sexuality, and the family” (Smith, 1996, p.280), furthermore, queer identity “is not restricted to gays and lesbians, but can be taken up by anyone who feels marginalized as a result of their sexual practices” (Sullivan, 2003, p.44). While each group identity is different, this collective group term is used to identify characteristics shared as members of a group that
is marginalized due to non-heteronormative or cis-gender-normative sexuality and gender expression.

**School Climate:** The National School Climate Center defines school climate as follows: “School climate refers to the quality and character of school life. [...] and reflects norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures” (National School Climate Center, n.d.). This study will look at school policies that address the aforementioned factors with the aim of improving school climate for LGBTQ youth, this definition will be further operationalized within the methodology section.

**Suicidal Planning:** Specific thoughts or planning pertaining to the taking of one’s own life. The definition is operationalized within this study as having made a plan of how one might complete suicide.

**Suicidal Attempt:** The action or actions of an individual to intentionally end their own life. Suicidal attempts can take many forms, but all include a physical action to intentionally end life. This action does not need to lead to the completion of suicide to be considered an attempt.
CHAPTER II

Literature Review

Introduction

This chapter will address the issue of suicide among LGBTQ youth, factors contributing to suicidal behaviors, and interventions employed in schools to improve school climate. A review of literature will provide a framework for this author’s investigation into the impact of school climate interventions on self-reported rates of suicidal planning and attempt among high school students in the state of Vermont. A review of literature will provide a foundation of empirical research and determine the need for additional and specific research study regarding school climate intervention, social risk factors, and suicidal behavior among high school youth, including LGBTQ students.

Suicide Among Sexual Minority Youth

Suicide is the third leading cause of death among Americans ages 15 to 19 (CDC, n.d.). Current academic literature indicates that LGBTQ students attempt suicide at higher rates than their non-LGBTQ counterparts (Garofalo et al., 1999; Remafedi et al., 1998; and Suicide Prevention Resource Center, 2008). According to the Suicide Prevention Resource Center (2008), youth who identify as Lesbian, Gay, or Bisexual are 1.5 to 7 times more likely to attempt suicide than their non-LGB counterparts. Safern and Heimberg (1999) found that 30% of LGB youth have attempted suicide in their lifetime, while only 13% of heterosexual youth attempted. Other studies show that gay and bisexual male youth attempt suicide at a rate seven times that of their non-GB male
counterparts (Remafedi et al., 1998). The variation in rates of increased suicidality among LGB youth across numerous studies points to limitations to the current research.

Research regarding rates of suicide among LGBTQ youth is limited by a couple of factors. Variability in both sample populations and inclusion criterion make it difficult to determine suicide rates across the LGBTQ population. A number of studies observe rates among gay and lesbian communities, however fewer still observe suicidal behavior among bisexual youth, and fewer still among transgender and questioning youth. Issues of inconsistent inclusion criteria across research literature are complicated by the changing and amalgamous nature of the LGBTQ community.

A person’s perceived location along the spectrum of sexual orientation or gender identity may not be a permanent or easily defined point (Ault, 1999). Furthermore, high school aged youth may be at different stages within their development of an LGBTQ identity, and may choose to express this identity differently depending on the setting or context (Bilodeau and Renn, 2005). Students may engage in same-gender sexual experiences and not identify as LGB (Blumenfeld and Raymond, 1993), or may identify without any such sexual experience (Ryan and Futterman, 1998; Savin-Williams, 1990). The complex and fluid nature of LGBTQ identity development makes it difficult to collect consistent data pertaining to behaviors of LGBTQ youth. However, in spite of the lack of consistent suicide rates across the literature, researchers consistently point to an increased rate of suicidal ideation, attempt, and completion among individuals who identify as LGBTQ compared to their non-LGBTQ counterparts (Garofalo et al., 1999; Remafedi et al., 1998; Suicide Prevention Resource Center, 2008).
The literature pertaining to the scope of LGBTQ suicide is limited by a general lack of study, limited definitions that exclude bisexual, transgender, queer, and questioning youth, and the lack of personal identification as LGBTQ among adolescent youth on self-report surveys. The research points to a number of potential environmental risk (Meyer, 2003) and protective factors (Eisenberg & Resnick, 2006; Ryan et al., 2009; and Fenaughty & Harre, 2003) that may influence suicidal behavior among students who identify as LGBTQ.

**Social factors and Suicide**

While a connection between LGBTQ identity and suicide is well documented (Garofalo et al., 1999; Remafedi et al., 1998; and Suicide Prevention Resource Center, 2008), identification as LGBTQ is not a risk factor for suicide in and of itself (Suicide Prevention Resource Center, 2011). However, increased stressors related to identification as LGBTQ in a heteronormative and homophobic environment can lead to proven risk factors such as: depression, anxiety, and substance abuse disorders, or loss of familial and social relationships (Meyer, 2003). Specifically, studies show a correlation between victimization of LGBTQ youth and increased mental health problems (D’Augelli & Pilkington, 2012; and Ploderl, Faistauer, & Fartacek, 2010). Often these risk factors are compounded by individual, social, and familial reactions to LGBTQ identity. Ryan et al. (2009) noted that LGB youth facing severe family rejection are eight times more likely to attempt suicide compared to LGB youth who received family supports. Conversely, supports such as family connectedness, family acceptance, safe schools, caring adults, high self-esteem, and positive role models can serve as protective factors against suicidal behavior (Eisenberg & Resnick, 2006; Ryan et al., 2009; and Fenaughty & Harre, 2003).
An analysis of research literature pertaining to social and environmental factors identifies factors contributing to increased suicide risk and supports the need for school programs to reduce social risk factors and develop protective supports for LGBTQ students.

**School Climate**

An ecological model of suicide assessment suggests the importance of implementing prevention strategies at the individual, micro (i.e. school), and macro level (i.e. community) (Morrison & L’Heureux, 2001). Hatzenbuehler (2011) studied the effects of community attitudes on rates of suicide attempts among lesbian, gay, and bisexual 11th grade students in Oregon. Hatzenbuehler observed social environment at the county level, determining a score for each county based on a number of social protective factors. Hatzenbuehler found that the risk of attempting suicide among LGB youth was 20% greater in communities with an unsupportive environment compared to supportive environments. Hatzenbuehler’s findings support an ecological model of suicide prevention.

Within the ecological model of suicide prevention, intervention must occur at the region, community, and school level. Kosciw, Greytak, and Diaz (2009) observed demographic factors at the region, community, and school level and compared them to self-reported rates of hostile school climates for LGBT youth. This study showed that students from rural communities with low education attainment where more likely to experience hostile school environment than students from the rest of the sample, and that school characteristics (e.g. student-teacher ratio) had little influence on students’ perceived environment (Kosciw, Greytak, and Diaz, 2009). Kosciw, Greytak, and Diaz show the influence of community characteristics on school environments, however their
observation of school characteristics does not consider the existence of interventions to 
improve a school’s climate. While Hatzenbuehler, as well as Kosciw, Greytak and Diaz, 
point to the importance community level intervention, these studies do not look at the 
potential impact of school level change.

The school environment is one of the most prominent influences on children 
throughout development (Eccles et al., 1993). Contextual factors within the school 
environement, such as school climate and homophobic bullying, increase the risk of 
negative outcomes among students who identify as LGBTQ compared to students 
identifying as heterosexual (Brikett and Koenig, 2009; D’Augelli & Pilkington, 2012; 
Espelage et al. 2008; Ploderl, and Faistauer, & Fartacek, 2010). A positive school climate, 
and lack of homophobic victimization reduced the disparity between LGBTQ students 
and heterosexual students, and served as a protective factor against negative outcomes 
(e.g. drug use, depression, and suicidality) (Brikett and Koenig, 2009; Espelage et al. 
2008).

The academic literature shows a connection between negative school climate and 
increased risk of a number of negative outcomes among LGBTQ youth, including 
suicidality. The research suggests that school climate is a portion of a larger ecological 
model which includes influences at the regional and community level. While the 
literature shows a connection between positive school climate and reduced risk, further 
study is necessary to determine the impact of school climate interventions on suicide risk.

**School Climate Interventions**

There are a number of ways to impact a school climate. Regional and community 
attitudes can have a great influence on social attitudes and climate in schools (Kosciw,
Greytak, and Diaz, 2009), however, schools can take steps to foster a more supportive environment for its students regardless of greater community attitudes. Schools are an environment designed for learning and progression, and public schools have been theaters of community change throughout history (e.g. racial desegregation). The Massachusetts Safe Schools Program (SSP) was the first state-wide educational program to improve school climate for students who identify as gay or lesbian (Szalacha, 2003), the program has since expanded to include protections for students regardless of gender identity or sexual orientation (Commonwealth of Massachusetts, 2012). The Massachusetts SSP recommendations included: the development of school anti-harassment policies; crisis and suicide intervention training for school personnel; and the development of school-based support groups (e.g. Gay-Straight Alliances) (Szalacha, 2003). The recommendations were implemented to varying degrees across the state, with school support group development as the most prevalent intervention (Szalacha, 2003).

*Gay-Straight Alliances.* School based support groups, such as Gay-Straight Alliances (GSA), play a number of roles in a school setting including: counseling and support; providing a “queer youth space;” and developing community-wide awareness raising (Griffin et al., 2003; Asakura, 2010). School based support groups go by a number of names. While GSAs are the most common name, the purpose of such alliances is to encourage inclusivity and support all students, especially those with a minority sexual or gender identity.

Asakura (2010) identifies queer youth space as an area of support and community where a student can develop a sense of safety and confidence, and serve in the place of other established protective factors, such as familial acceptance. The Asakura study
shows how the development of positive school community can meet the needs of the individual that may be unmet by family or the greater community. In addition to providing support, the GSA can be a medium for community change though youth empowerment.

Youth empowerment is identified in the research literature as a popular and effective theoretical model for developing community supports and environmental change (Craig, Tucker, & Wagner, 2008; Russell et al., 2009). Empowerment theory models of intervention focus on the development of community, such as a LGBTQ Alliance, to identify and support individual strengths. Through collective action in an alliance, youth build interpersonal and intrapsychic strengths through the accomplishment of an actionable goal (Russell et al., 2009). Empowerment models are widely studied within individual adult treatment applications; however there has been little study as to the effectiveness of macro-level empowerment initiatives with youth (e.g. school-wide, or community-wide intervention) (Craig, Tucker, & Wagner, 2008). Additional study is necessary to explore the impact of empowerment theory among youth groups, however the empowerment model serves as a theoretical support for the positive individual and school climate improvements correlated with GSA development.

The positive effects of GSA’s are well documented in the research literature. Individual benefits of GSAs to students who identify as LGBTQ include increased perception of safety in the school community (Kosciw & Diaz, 2006; Russell et al. 2006), and increased school attendance (Kosciw & Diaz, 2006). The positive effects of GSA implementation extends beyond group membership, impacting the overall school climate. Walls, Kane, and Wisneski (2009) explain that the positive outcomes associated with
GSAs for sexual minority youth are not limited to members of the alliance, and that the benefits extend throughout the school population. The implementation of a GSA in a school is associated with: a reduction of homophobic remarks (Szalacha, 2003); an increase of supportive, or positive, remarks about lesbian or gay people among teachers (Szalacha, 2003); and an increased awareness of supportive adults in the school (Kosciw & Diaz, 2006). The effects of GSA’s on improved school climate implies a connection to reduced risk factors for suicide. These findings can be extrapolated to suggest decreased risk of suicide, however the research does not show a direct study of this relationship.

Reduction of Gender Segregated Areas. Schools segregate students by gender in a number of venues (e.g. bathrooms, locker rooms, gym classes). These gendered environments conform to the concept of a gender binary, wherein it is assumed that all students conform to one of two genders: male or female. The gender binary is an aspect of heteronormativity, which supports gender conformity, heterosexuality and traditional family structures as the norm (Oswald et al., 2005). Heteromormative environments limit the complexity of gender expression and identity. Segregated gender environemnts restrict students’ ability to express or identify gender outside of this binary. These environments create the potential for increased harassment of students who express gender that may not fit within the traditional categories.

A qualitative study of the experiences of trans youth showed gender-segregated school facilities were a key concern among study participants (Sausa, 2005). Sausa (2005) found that students who do not identify or express gender within the binary gender construct face resistance and harrasment when entering gender segregated facilities such as bathrooms. The study gave the example of an angrogynous male who was assaulted in
the mens restroom, and a “butch” female who was prevented from entering the womens restroom by another student (Sausa, 2005). The availability of unisex restrooms provides students a safe alternative to gender segregated environments, where they are able to use facilities without fear of harassment. The benefits of offering gender neutral, unisex bathrooms extend beyond individual students by fostering a more accepting school climate.

A reduction of gender segregated environments, or the provision of alternative environments, contributes to school culture by reducing hostility (Greytak, Kosciw, and Diaz, 2009) and contributing to a safer and more accepting school climate. Toomey, McGuire, and Russell (2012) explore the impact of “queering” frameworks within a school environment. “Queering” frameworks expand heteronormative ideas of gender and sexuality and encourage a more fluid and complex understanding of issues of sexuality and gender (Toomey et al., 2012; and Oswald et al. 2005). The reduction of school facilities segregated along the gender binary is a visible method by which schools can utilize a queering framework to impact school climate. When schools implement policies that are inclusive of all students they increase a perception of safety for students that do not conform to traditional norms (Greytak et al., 2009; Kosciw et al., 2008; and Russell and McGuire, 2008), and support an more inclusive world view across the school population (Toomey et al., 2012).

Research is limited regarding the reduction of gender segregated areas as an intervention for improving LGBTQ school climate. Existing literature applies theoretical or qualitative study to support implementation of uni-sex bathrooms in high school.
Additional quantitative research is needed to support the efficacy and impact of this intervention, and this research will work toward that goal.

**Anti-Harrassment Policy.** The prevalence and impact of student-student harassment of LGBTQ youth is well documented (Brikett and Koenig, 2009; D’Augelli & Pilkington, 2012; Espelage et al. 2008; and Ploderl, Faistauer, & Fartacek, 2010). Anti-harassment policies contribute to a safer and more accepting school climate in a number of ways. Students report that any teacher or staff intervention in bias-related harassment leads to a greater perception of a safe school climate (Blackburn, 2007 and O’Shaughnessy et al., 2004). Students attending schools with harassment policies are more likely to feel safe and less likely to note harassment as a problem at their school, compared to students without harassment policies (GLSEN, 2005).

A national survey of high school students and teachers showed that 91 percent of schools have a harassment policy, but only 51 percent have a harassment policy that specifically mentions sexual orientation or gender identity/expression (GLSEN, 2005). This failure by schools to include such language is evidenced in the research literature (Perrotti & Westheimer, 2001; and Russo, 2006). Students in schools with LGBTQ specific harassment policies were less likely than students in other schools to report harassment for physical appearance, sexual orientation, or gender expression; however this comparative reduction in reported harassment was not noted among teachers surveyed (GLSEN, 2005). While teachers appear to report harassment at similar rates regardless of the policy, the increased awareness among the students can have a profound impact.
The research literature shows the efficacy of LGBTQ specific school policy to improve school climate, however the literature also exhibits a lack of specificity in school harrassment policy around LGBTQ students. The development of legal precedent is begining to influence changes in school policy (Bedell, 2003; and Stein, 2003), however further research is needed to support the correlation between LGBTQ specific anti-harassment policy and behavior and health indicators.

Summary

A review of academic literature supports the study hypothesis that schools with specific LGBTQ school climate interventions will exhibit lower levels of student self-reported suicidal planning and attempt. This literature review studied the scope of suicidality among LGBTQ youth, social factors that contribute to suicidal behaviors (i.e. planning, attempt, or completion), the prevalence of negative social factors within school climates, and three intervention models to improve school climate: gay-straight alliances, reduction of gender segregated areas, and anti-harassment policy.

Several studies expressed increased rates of suicidality among LGBTQ youth compared to their non-LGBTQ counterparts. While the exact figures were inconsistent, due to variations in study design, there was a consensus in the literature that students who identify as LGBTQ thought about, attempted, and committed suicide at a greater rate than their non-LGBTQ peers. Additional research explored factors that contribute to this disparity, determining that LGBTQ identity is not a risk factor for suicide, but that numerous social factors contribute to suicidality among that population. Social factors such as harassment, discrimination, and lack of support were found through the levels of LGBTQ students’ social ecology (i.e. region, community, school, and family). Reduction
of negative environmental factors and increases of social supports at all levels were shown to reduce suicide risk.

An analysis of comprehensive school climate interventions, such as the Massachusetts Safe Schools Program, revealed three interventions to improve school climate for LGBTQ youth: development to Queer Youth Space (e.g. Gay-Straight Alliances); provision of alternatives to gender-segregated school facilities (e.g. bathrooms); and specific anti-harassment policy. Further study of each intervention model showed the interventions to be effective in increasing student attitudes around school safety and support. While the research provides a number of studies regarding student attitudes, the research is limited in the study of specific behavioral outcomes such as drug use, mental health diagnoses, and suicidality. This study will combine knowledge gained from previous empirical literature to draw a connection between school climate intervention and suicidal planning and attempt.

**Conclusion**

This literature review shows logical progression suggesting the potential influence of school climate intervention on rates of suicidal planning and attempt among high school students, with special consideration to students who hold an LGBTQ identity. The study will compare fifty-five schools across the state of Vermont that have and have not implemented the three school climate interventions studied in the literature review to determine if these interventions are correlated with a significant reduction in self-reported suicidal planning and attempt. Following the review of pertinent literature, the study foundation is supported by past research, and will contribute to the field of study and advance academic discourse.
CHAPTER III

Methodology

Purpose

The purpose of this study is to determine if there is a relationship between the existence of LGBTQ school climate intervention policy and rates of suicidal planning and attempt among public school youth across high school populations in Vermont.

Method and Design

The study measured the correlation, at a fixed point in time, of certain school climate interventions and rates of suicidal planning and suicide attempts. School climate interventions were operationally defined following a review of the literature and existing instruments used to survey school climate. Specific school climate policies will be outlined in the Data Collection section of this chapter.

Rates of suicidal planning and attempt among specific school populations were measured through the analysis of publicly available school health data. The Vermont Department of Health YRBS survey defines suicide attempts as “taking some action to end [your] life” (Vermont Department of Health, 2013). The Youth Risk Behavior Surveillance Survey (YRBS) served as the primary source of youth suicide rates at the school district level (Centers for Disease Control and Prevention, 2013). This dataset is not available for cross-analysis of demographic factors, such as sexual or gender identity of individual survey respondents.

This study design was selected because it allows for the comparison of school specific interventions against a standardized, nationally accepted survey tool. While this study design can identify a correlation between school climate interventions and reduced
suicide rates, one cannot infer a causal relationship from this design. The population was limited to the state of Vermont due to the lack of publicly available YRBS data sets nationwide. This limits the generalizability of the findings beyond the state of Vermont. Furthermore, Vermont’s small size and homogeneity may not provide a broad enough diversity in terms of school climate interventions. The state of Vermont has a history of progressive policy regarding issues of sexual and gender identity. This history includes being the first state to allow same sex civil unions, and the implementation of a required anti-bullying training for all public school teachers. This lack of diversity and influence of standardized anti-bullying policy statewide could bias the research and its generalizability nationwide.

Sample

This project compared variables within individual school districts or supervisory unions in the state of Vermont. The sample was comprised of all 55 public school districts in the state of Vermont. Data collected on suicidal planning and attempt was obtained from available aggregate YRBS data at the school district level. Data collected on school policies and climate was obtained through the review of publicly available school policies. The sampling and recruitment strategies used for the collection of self-reported suicidal planning and attempt were determined by the Centers for Disease Control and Prevention and the Vermont Department of Health.

This project did not utilize a traditional probability or nonprobability sample. Rather, the sampling strategy included collection of data from the entire population of public high school districts in Vermont. Hatzenbuehler (2011) utilized a similar sampling methodology. Hatzenbuehler used a statewide survey to assess suicidality among high
school students at the county level, using a sample comprised of every county in Oregon. The sampling frame for this study was the population: all public high schools in Vermont, however the number of schools providing information regarding school policies around LGBT climate determined the final sample. The suicidal planning and attempt rate data was readily available online, however the collection of school policy data required specific outreach to district and school publications and administrations. Differences in the publication and availability of policy documents and inability to collect data at this level lead to a reduction in the sample size. For example, supervisory unions with multiple high schools containing conflicting policies were removed from the sample.

This sample did not include private high schools, however private schools make up a small percentage of high schools in the state of Vermont. While this is a population sample of Vermont public high schools, the sample is not representative of high school student’s nation wide. Vermont is considered to be progressive in terms of LGBT rights legislation and this could influence the cultural climate for LGBT youth, regardless of school policies. Furthermore, Vermont lacks cultural diversity and therefore this sample does not represent the cultural makeup of the United States. Broader research on this topic is limited by the lack of availability of suicide data in other states.

The ethical obligation to individual students was limited by the de-identification of survey data, however there are ethical implications of this research for each school community. Schools within the sample had already shared suicide rates publicly, however these statistics can have an emotional impact. Specific school districts within the study were assigned a unique numeric identifier and are identified by name in the data collection, analysis, or publication.
Data Collection

A majority of the data for this research project was already collected by the Youth Risk Behavior Surveillance Survey (YRBS) developed by the CDC and issued by the Vermont Department of Health. Among the 86 items of the 2013 YRBS, there is a 3-item subscale collecting data on feelings of depression and suicidal planning and attempt (Vermont Department of Health, 2013):

- During the past 12 months, did you ever feel so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities? (Yes or No)
- During the past 12 months, did you make a plan about how you would attempt suicide? (Yes or No)
- During the past 12 months, how many times did you actually attempt suicide? (0 times / 1 time / 2 or 3 times / 4 or 5 times / 6 or more times )

This 3-item subscale provided quantitative data on: depression, planning, and attempts. These items have been tested, implemented, and replicated for a number of years. A majority of these items require a binary response, with the exception of the question of frequency of attempts, which offers 5 numeric ranges. These data will be analyzed to determine rates of each item within each school district population. Suicide attempt data was aggregated as a binary variable, so as to present the number of students who attempted suicide at least once in the last 12 months. The aggregate district rates are published online by the Vermont Department of Health.

School climate data were collected through a review of publicly available school policies. This written policy was collected by reviewing policy online or through direct contact with the school by email or phone. Direct contact with school officials was structured to limit conversation to the location of policy documents, rather than the collection of data itself. This procedure ensured that the data collected was limited to
written school policies in order to reduce error related to the different forms of data
collection (e.g. individual interpretation of policy). This protocol reduced the potential
risk to subjects. By not collected data in this contact, the school personnel were not
research subjects. The contact served to confirm that the review of policies accurately
reflected the scope of policies available to the public.

Following an extensive review of published policies, a secondary data source was
used to confirm data collected and fill in gaps where necessary. Outright is a LGBTQ
youth support center and state advocacy group in Vermont. Outright provides support
groups and offers programming across the state (Outright Vermont, 2012). Outright is
listed in the Gay-Straight Alliance Network national directory as the organization
responsible for the local network of Gay-Straight alliances in Vermont (Gay-Straight
Alliance Network, n.d.).

As the local network of gay straight alliances, Outright publishes information
regarding the existence of gay straight alliances in the state, as well as other school
climate policies within their annual “Safeschools report card” (Outright Vermont, 2009,
2010, 2011). While the publication of this information did not come from the school or
district, the availability and reliability of the data serve a similar purpose of expressly
documenting school procedure. This publicly available resource was used to supplement
the direct collection of school policy. The secondary data used to confirm existing data,
and provide affirmative data points wherein primary documentation was not available.
Data collection protocol noted that in the event of a conflict between primary and
secondary sources, the primary source would be collected, however this issue did not
arise within the study.
School climate for LGBTQ youth was assessed by reviewing the existence of the following documented school policies.

- The school has a Gay/Straight Alliance or another type of club that addresses LGBTQ student issues.
- The school offers gender-neutral bathrooms with access to all students.
- The school has a written anti-bullying policy that specifically bans harassment based on sexual orientation or gender presentation.
- The school offers a mandatory anti-bullying and anti-harassment program to students; including trainings, assemblies, or curricula developed by the administration or facilitated by community organizations.

There are potential aspects of the data collection plan that could have created weakness. As noted above, it may be difficult to collect school policy data due to differences in publication of school policy from district to district. School districts that are unable to provide this data or supervisory unions with conflicting policy documents from school to school were removed from the sample. The small population sample size (n=49) may limit the ability to exhibit a statistically significant relationship between the variables. Therefore findings among such a sample will require a greater difference between the means to meet the statistical rigor. Additional methodological weaknesses were related to the time constraints of conducting research within a strict thesis deadline. The data collection period was designed to correlate with a time wherein schools are more available (e.g. outside of school breaks, before testing), however this flexibly was limited by the timeline and availability of the researcher within typical school hours.

**Data Analysis**

The purpose of this study is to determine the relationship between the publication and implementation of school policy and rates of suicidal planning and attempt. This
study identified four potential school climate interventions that may contribute to a reduction of suicidal planning and attempt. The data were analyzed to determine the relationship between specific interventions and rates of suicidal planning and attempt. Additionally, the data were analyzed to observe any correlation between the number of interventions present and changes in suicidal planning and attempt.

Independent analysis was conducted for each school policy variable, with separate analysis of the relationship between the policy and each dependent variable (i.e. planning and attempt). The means planning or attempt rate was calculated for schools with and without each intervention policy. These means were compared using an Independent samples t-test to determine if differences in the means were statistically significant. The threshold of statistical significance in the study was an alpha score of 0.05. If the t-test returns a \( p \)-value < 0.05, the findings are considered statistically significant, meaning that the findings are not attributed to chance. A comparison of means allows this study to determine potential correlation between the individual intervention variables and changes in suicidal planning and attempt, while ruling out a null hypothesis.

The school policy variables were combined to create a school policy criterion score, to be used for additional analysis. The score is an interval scale from zero to four, with each policy counting equally toward the school policy score. Both variables were compared using a Spearman’s rank correlation analysis to determine any relationship between the number of school policies and the change in suicidal planning or attempt. A similar methodology was utilized by Hatzenbuehler’s (2011) research on community attitudes and suicide risk in Oregon. The relationship between the school policy criterion score and each dependent variable were analyzed separately.
Correlation analysis cannot determine a causal relationship between school policies and reduced rates of sociality, however this analysis can show a positive or negative association between the variables. For example, an association between an increase in school policy scores and a decrease in suicidal attempt would show a negative or inverse correlation, indicating that the variables are related. Similar to the t-test, the correlation analysis must satisfy a statistical rigor. Following a consultation with the Smith College School for Social Work data analysis consultant, the significance level, or alpha score, for correlation analysis was set at 0.01.

The methods described in the chapter reflect an application of a review of relevant research literature. Adherence to the research protocol is necessary to reduce risk to subjects, and improve accuracy and generalizability of the findings.
CHAPTER IV

Findings

This study was designed to determine if there is a relationship between LGBTQ school climate intervention and rates of suicidal planning and attempt among youth within the state of Vermont. Following a review of literature, four interventions that were believed to impact school climate. This research hypothesized that schools with such interventions would exhibit lower rates of suicidal planning and attempt.

The research hypothesized that a review of each independent policy would exhibit a difference between self-reported rates of suicidal planning and attempt. Furthermore, this research hypothesized that schools with a greater number of these interventions would exhibit lower numbers of suicidal planning and attempt.

Following a review of self-reported survey data and written policy documents among high schools in forty-nine public school districts the data was analyzed to determine if differences exist.

Descriptive Findings

The descriptive data collected in this study helps paint a picture of suicide risk and school climate intervention in high schools throughout Vermont. Rates of suicidal planning and attempt vary across the sample, but review of sample-wide averages allows for comparison to data collected at the national level. School climate intervention data show a similar variation from district to district.

Aggregate rates of self-reported suicidal planning vary greatly throughout the forty-nine school districts in the sample. District-level rates of planning ranged from six
percent to 18.0%, with an average rate of 11.4% of students indicating suicidal planning in the past 12 months. National data from the 2013 Youth Risk Behavior Surveillance System (YRBSS) is not publicly available as of the writing of this report. However, the rate of suicidal planning across the 49 high schools is similar to the 2011 National rate of 12.8%.

Table 1.
Suicide Risk Variables

<table>
<thead>
<tr>
<th>Suicide Variable</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning</td>
<td>48</td>
<td>.114</td>
<td>.0261</td>
</tr>
<tr>
<td>Attempt</td>
<td>46</td>
<td>.05</td>
<td>.0175</td>
</tr>
</tbody>
</table>

Rates of suicidal attempt among the sample ranged from ten percent to two percent, with an average rate of five percent. The sample shows a slight increase from the 2011 statewide rate of four percent. Both rates of suicidal planning in Vermont were below the 2011 national rate of 7.8% (Centers for Disease Control and Prevention, 2012).

The sample exhibits rates consistent with previous statewide survey years. Comparison to national data suggests a lower rate of suicidal attempt among districts sampled. Further research is needed to explore this lower rate; however this finding may well increase interest in the review of school climate interventions and their possible positive impact on suicide rate and planning.

Findings regarding school climate interventions across the sample depend on the particular intervention reviewed. With the exception of one intervention, policy varied from district to district. The range of intervention implementation is best exemplified by a review of the criterion score findings.
The criterion score is the sum of the interventions noted within the school district.

Districts in the sample exhibited criterion scores ranging from the minimum zero, to the maximum four.

Table 2.
Criterion Score Distribution

<table>
<thead>
<tr>
<th>Number of Interventions Present in District</th>
<th>Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>4</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>49</td>
</tr>
</tbody>
</table>

Three districts had a criterion score of zero, however a majority (n=27) had a criterion score of three or more, with fourteen districts showing a criterion score of four. The average criterion score was 2.5. While the criterion score provides a good sense of the number of policies, analysis of specific interventions contribute further to the descriptive findings.

Table 3.
Intervention Variables

<table>
<thead>
<tr>
<th>Intervention (n=49)</th>
<th>No</th>
<th></th>
<th>Yes</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>M</td>
<td>N</td>
<td>M</td>
</tr>
<tr>
<td>LGBTQ Group</td>
<td>21</td>
<td>42.9</td>
<td>28</td>
<td>57.1</td>
</tr>
<tr>
<td>Neutral Bathroom</td>
<td>25</td>
<td>51.0</td>
<td>24</td>
<td>49.0</td>
</tr>
<tr>
<td>Harassment Policy</td>
<td>4</td>
<td>8.2</td>
<td>45</td>
<td>91.8</td>
</tr>
<tr>
<td>Harassment Programming</td>
<td>25</td>
<td>51.0</td>
<td>24</td>
<td>49.0</td>
</tr>
</tbody>
</table>

All but three schools had public policy indicating the existence of at least one of the following school climate interventions: a LGBT awareness group; gender neutral bathrooms; a policy banning harassment and bulling on the basis of sexuality and gender-
identity; and mandatory student programming or training about harassment of LGBTQ students. An active LGBTQ group was observed in 57.1% of districts (n=28) at the time of survey collection. Gender-neutral bathrooms and anti-harassment programming was found in just under half of the districts (49.0%; n=24). The most prevalent school climate intervention across the sample was a harassment policy that explicitly bans the harassment of student’s sexuality and/or gender identity. This policy was observed in 91.8% of the districts. The rates of each policy are reflective of national trends, as well as state-level pressures.

The findings noted above make sense considering the national and state climate. Gay straight alliances, or other LGBTQ groups have been gaining popularity over the past couple of decades. This trend is reflected in the findings of this study, which also suggest an opportunity for more growth statewide. The most profound finding is the rate of schools with an explicit anti-harassment policy. This elevated rate, compared to the other interventions studied, is likely attributed to legislation at the state level mandating such policies (1994 Vermont Stats, No. 162 S.313). While this law standardized bullying and harassment policy, the other three policies vary from school to school.

The sample exhibits variations in the rates of both policy interventions and rates of suicidal planning and attempt. These findings suggest the potential for a relationship between the two. Additional analysis was done to determine if the intervention variables correlated with changes in rates suicidal planning and attempt.
Relational Findings

Analysis of the relationship between the intervention variables and suicidal planning and attempt were conducted in two ways. First, a number of t-tests were conducted in order to show a difference in the mean rates of suicidal planning and attempt in district with and without each policy. Second, a Spearman’s rank correlation analysis was used to determine any relationship between the number of school policies and the change in suicidal planning or attempt. The relationship must exhibit a certain statistical significance (p< 0.05). As noted before, this is a difficult benchmark given the small sample size (n=49). While the analysis showed a slight difference in rates of suicidal planning and attempt among schools with certain policies, the difference was not determined to be statistically significant.

Independent Sample t-test. The suicide planning and attempt rates were compared to each intervention variable using an independent sample t-test. All statistical tests determined that variations in rates of suicidal planning and attempt could be attributed to chance rather than the interventions studied. However, it is important to note that all interventions, with the exception of the harassment policy, exhibited modest reductions in self-reported rates of suicidal planning and attempt. These findings are represented in Table 4.
The relational findings did not show statistical significance and are discussed only for exploratory purposes. The following findings are reflected as percentage differences, however, given the already low rates, these changes reflect an actual difference of 0.09 - 1.2 percentage points. The existence of a LGBTQ awareness group, or Gay-Straight Alliance (GSA), yielded the largest downward variance. Schools with a GSA reported rates of suicidal planning 9.6% lower than schools without such a group. The existence of a bathroom policy and mandatory anti-harassment programming yielded a 5.7% lower rate of suicidal planning respectively. Reduction in rates of planning suggested the greatest possibility for influence by intervention variables.

The difference in rates of suicidal attempt was more modest. Schools with a GSA exhibited a mean rate of suicidal attempt 5.4 percent lower than schools without a group, and schools with anti-harassment programming for students saw a similar downward variance of 5.4 percent compared to schools without such programming. The availability of gender-neutral bathrooms yielded the smallest difference, 1.8% lower than schools

Table 4.

<table>
<thead>
<tr>
<th>Mean Rates of Suicidal Planning</th>
<th>Intervention</th>
<th>No</th>
<th>Yes</th>
<th>% Difference</th>
<th>p-value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>LGBTQ Group</td>
<td>.1205</td>
<td>.1089</td>
<td></td>
<td>-9.6%</td>
<td>.132</td>
</tr>
<tr>
<td>Neutral Bathroom</td>
<td>.1171</td>
<td>.1104</td>
<td></td>
<td>-5.7%</td>
<td>.383</td>
</tr>
<tr>
<td>Harassment Policy</td>
<td>.0950</td>
<td>.1155</td>
<td></td>
<td>21.6%</td>
<td>.136</td>
</tr>
<tr>
<td>Harassment Programming</td>
<td>.1171</td>
<td>.1104</td>
<td></td>
<td>-5.7%</td>
<td>.383</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mean Rates of Suicidal Attempt</th>
<th>Intervention</th>
<th>No</th>
<th>Yes</th>
<th>% Difference</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LGBTQ Group</td>
<td>.0511</td>
<td>.0485</td>
<td></td>
<td>-5.4%</td>
<td>.634</td>
</tr>
<tr>
<td>Neutral Bathroom</td>
<td>.0500</td>
<td>.0491</td>
<td></td>
<td>-1.8%</td>
<td>.863</td>
</tr>
<tr>
<td>Harassment Policy</td>
<td>.0425</td>
<td>.0502</td>
<td></td>
<td>15.3%</td>
<td>.404</td>
</tr>
<tr>
<td>Harassment Programming</td>
<td>.0509</td>
<td>.0483</td>
<td></td>
<td>-5.4%</td>
<td>.619</td>
</tr>
</tbody>
</table>

*Findings with p-value > .05 are not statistically significant.
without a gender-neutral bathroom. These findings, while not statistically significant, point to the potential positive impact of LGBTQ awareness groups, gender neutral bathrooms, and anti-harassment training for students as suicide interventions.

One intervention deviated from the findings noted above. The existence of an explicit anti-harassment policy yielded a statistically insignificant difference in suicidal planning (21.6%) and attempt (15.3%). While all intervention variables yielded a statistically insignificant result, the practically uniform implementation of this policy across the sample, made comparison especially difficult. The non-intervention category was much smaller (n=4) compared to other intervention variable groupings. Additionally, this intervention has been mandated statewide for 20 years; therefore it is possible that districts in the non-intervention group were incorrectly categorized due to variances in policy publication.

Spearman’s Rank Correlation. Similar to the findings above, the criterion score findings lacked a statistically significant result, failed to disprove the null hypothesis. A Spearman’s rank correlation coefficient test indicated that any correlation between the number of interventions and rates of suicidal planning or attempt could be attributed to chance, rather than the interaction between the variables.

While these findings fail to disprove the null hypothesis, they do not indicate that a relationship does not exist. Therefore, further study is necessary to provide statistically robust results. A review of the results shows a slight, and statistically insignificant, negative correlation between the criterion score and suicidal planning ($r(46) = -.214, p >.01$), as well as a much smaller correlation between the criterion score and suicidal attempts ($r(44) = -.022, p > .01$). A strong negative correlation would suggest that an
increase in interventions is correlated with a decrease in self-reported rates of suicidal planning and attempt. These findings lack statistical significance, and fail to show a strong correlation between the criterion score and suicide variables, however the negative skew of the correlation suggests the possibility for a more significant relationship in further study.

**Design Ramifications**

The statistically limited findings are not totally surprising given a number of factors related to study design. The small sample size made it very difficult to show a statistically significant relationship. The use of district-level aggregate data, rather than student level responses, made for a much smaller sample, and ultimately limited the findings. Additionally, this study implemented a correlational study design. In the event that a significant correlation was found, this would not show a causal relationship. Therefore, the purpose of this study was always to encourage further and more rigorous study of this relationship.

Additional unexpected factors contribute to the limited findings. The sample was more standardized than previously expected. The analysis of the anti-harassment variable noted above is a good example of how a practically uniform variable limits findings. Additionally, issues in data collection arose around the tabulation of procedural interventions that were not reflected in policy. The decision was made, per research protocol, to only count districts with an expressed policy, rather than a self-reported procedure. The merits of this decision will be explored further in the discussion section. These additional factors presented a challenge to the research, but did not limit the findings of the research with respect to the greater purpose of the study.
The generalizability of these findings are first limited by the statistical insignificance of the findings. Broader study of this topic, with a larger, more representative sample would yield greater generalizability. However, a comparison of suicidal planning and attempt in the sample population to parallel national figures shows a similar scope of the problem, suggesting generalizability. A review to school intervention policies in other states could improve generalizability of the findings as well. This topic will be explored further in the discussion section. This study raises the need for further study, both to increase statistical significance and to expand generalizability to a national population.

While the findings show a modest relationship, this cannot be attributed to the research variables with statistical confidence. However, a null hypothesis does not indicate that there is no relationship. The findings relate to the greater purpose of the research by encouraging further research and conversation regarding the potential impact of school climate intervention on suicide risk.
CHAPTER V
Discussion

Introduction

This research was designed to observe the relationship between LGBTQ school climate interventions and self-reported rates of suicidal planning and attempt among high school students in Vermont. The study hypothesized that the implementation of school policies that help LGBTQ youth feel safe, supported, and welcome in their schools would be correlated with a reduction in suicidal behaviors across the student population.

The findings of this research point to a potential correlation and the need for further study. The modest findings suggest slightly lower rates of suicidal planning and attempt among students in schools with three of the four interventions studied. Additionally, the research shows a moderate negative correlation between the higher numbers of interventions and lower rates of suicidal planning and attempt. While all findings lack statistical significance, they support the need for further research and allow for reflection on the design and implementation of this study.

Location in Literature

This research design was developed following an extensive review of the literature. With little study of the impact of school climate interventions on suicide risk, this study sought to provide a contribution to the research literature. The research sought to broaden the academic discourse and encourage further study on this relationship. It is the hope of the researcher that this study impacted current and future research literature pertaining to school climate intervention, suicide risk, and the interaction of the two.
Suicide Risk. A review of academic literature shows extensive study of suicide risk, especially among high school students for whom suicide is the third leading cause of death (CDC, n.d.). Additionally, there is a wealth of research regarding rates of suicide among LGBTQ youth. Research studies overwhelming suggest higher rates among students who identify as LGBTQ (Garofalo et al., 1999; Remafedi et al., 1998; and Suicide Prevention Resource Center, 2008). While this research study did not observe rates of suicide among a specific LGBTQ student population, the research focused on the impact of school policy interventions targeting this population. The application of existing research knowledge allows for an extrapolation of findings derived from the general school population, to students who identify as LGBTQ.

The study found rates of suicidal planning and attempt consistent with national averages. These rates reflect and entire student populations. However, current literature would suggest that the rates of suicide and attempt are 1.5 to 7 times higher among LGB students within the sample (Suicide Prevention Resource Center, 2008; Remafedi et al., 1998). The application of those findings to this research suggest that marginal reductions in suicide rates among the entire population would show a greater change among students who identify as LGBTQ. Current literature can be applied to this study to build on the existing findings and support further research of the effect of school climate interventions on suicide risk among LGBTQ students.

School Climate. A literature review helped identify four initial school climate interventions: gay straight alliances, gender-neutral bathrooms, anti-harassment policy, anti-harassment programming. Current research shows the impact of interventions on a
number of suicide risk factors, however the connection between these interventions and suicide risk has not been studied. This study begins to form the link between school climate and suicide risk.

Research pertaining to social factors and suicide risk provided the theoretical and empirical bridge between school climate and suicide risk for this study. Identification as LGBTQ is not, in and of itself a risk factor for suicide, (Suicide Prevention Resource Center, 2011). However, increased stressors related to identification as LGBTQ in a heteronormative and homophobic environment can lead to proven risk factors such as: depression, anxiety, and substance abuse disorders, or loss of familial and social relationships (Meyer, 2003). Specifically, studies show a correlation between victimization of LGBTQ youth and increased mental health problems (D’Augelli & Pilkington, 2012; and Ploderl, Faistauer, & Fartacek, 2010).

Interventions to improve school climate reduce a number of the risk factors identified above. Therefore the rates of suicidal planning and attempt are likely positively correlated with these risk factors, and negatively correlated with school climate intervention. The analysis of the specific interventions as methods of improving school climate is supported by current research literature, suggesting that some have a greater effect on these risk factors than others. Perhaps anti-harassment programming is more likely to reduce victimization of LGBTQ youth than anti-harassment policy, accounting for the lower rates of suicidal planning and attempt found at schools with anti-harassment programming. This is a difficult conclusion to draw given the limitations of this research, however the questions raised by this study, within this context of current literature, create further research questions.
**Strengths**

The present research is strengthened by the collection and analysis of multiple school policy intervention variables, and the utilization of a statewide sample population which allowed for broad research within the limitations of a student research study.

The use of Vermont as the study population served as a key strength. Vermont is a small state; therefore it was feasible for one researcher to reach each of the 55 school districts. The state department of health provides an extensive district level analysis of annual YRBS data. This provided the author with a reliable and accessible data set. Without these data, the project would have been much more difficult for a single researcher.

The collection of intervention data was also facilitated by the use of Vermont as a study sample. Vermont is comprised of small school districts, compared to other states. Contacting smaller districts was easier, because of the localization of administrators and lack of bureaucratic processes. This advantage is difficult to prove without attempting data collection in other states, but I would argue that it is easier to discuss district policy with the principle of a high school in a rural school district rather than one of the numerous principles and administrators of a large metropolitan school district. The study of Vermont schools allowed the researcher to start small, providing focused research, which can be built upon with further study.

The observation of multiple school climate interventions is a key feature and strength of this study. The independent analysis of each intervention variable provided specific findings on specific interventions. Individual interventions may be more easily
replicable in schools; therefore findings among individual variables could have a more immediate impact on current school policy applications. The observation of the school climate criterion score, speaks to the broader research question: how do school climate interventions impact suicide risk? Criterion score findings support administrative efforts to create a culture of positive school climate for LGBTQ youth. Further research is necessary to strengthen the criterion score findings, and to observe the impact of additional school climate interventions not studied in this research.

The findings suggest, albeit without statistical significance, that increases in the number of school climate interventions is negatively correlated with rates of suicidal planning and attempt. In addition to suggesting the importance of implementing the intervention variables studied herein, this research supports the creative efforts of school communities to create novel school climate intervention policies. While the studied individual interventions were proven effective, it appears that schools can also reduces suicidal attempt and planning by employing a number of interventions, not limited to those four studied in this research. This research starts the conversation, and supports the hard work of districts across Vermont. Hopefully teachers and administrators can build on the strength of this study, to develop, implement, and evaluate new methods to improve school climate.

Analysis of intervention variables combined into a criterion score showed promising results, additionally the independent analysis of intervention variable showed modest results among three of four variables. However, the independent analysis of one variable led to findings contrary to the hypothesis. This finding may impact current state policy. We found that the standardized bullying policy may be less likely to reduce
suicide risk. While this finding is limited by a number of statistical factors, we can speculate the impact of this state-mandated policy. Our multiple methods of data analysis allowed us to raise questions beyond the original scope of this research: why do some interventions work and others don’t? Which is more important: the written policy or ad hoc procedure?

The present research chose to look at policy over procedure for a number of reasons. The primary rationale was that observations of procedure would be limited by human error and variations in the definition and implementation of interventions from school to school. Observation of school policies, allowed the study to capture established interventions with some legal footing in a written policy. The research discovered that school policy is dictated at multiple levels. The bullying policy was mandated by the state legislature, with little room for district level modification. Conversely, policies such as gay-straight alliances, though outlined in school documents, were often implemented as a result of community or student interest. The observation of multiple policies was a key strength of this study, encouraging new questions and further study.

This study built on previous research and applied new methods to provide a meaningful contribution to research literature. With all of the successes of this work, the research is not without its limitations. Following the completion of this study, the researcher is able to reflect on the ways in which this research and new research can improve going forward.

**Limitations**

Developing an understanding of the limitations to the study was integral to the development of a research plan, and reflections on unforeseen limitations will serve to
improve upon future research efforts. This section will explore the predictable and unpredictable limitations to the research, and continue on to explore what research might look like without such limitations.

Limitations to this study were readily apparent at the beginning of this work. The study lacked manpower, funding, and was time-limited. All of these factors relate to the fact that this study was ultimately an academic endeavor. Beyond the purpose of this research, was a secondary purpose of learning and practicing effective research. As a student researcher, I had to conduct research within a number of parameters. Working around these limitations served the academic purpose of this study, but not always the empirical purpose. While the lack of funding and limited time period impacted the scope and design of the study, the ability to create good research within strict time and funding parameters is a skill directly applicable to the world of professional grant funded research.

Aside from the predictable limitations as a student researcher, the study presented a number of limitations throughout the data collection and analysis process that were less predictable. The collection of self-reported suicide rates was well facilitated by the Vermont Department of Health. While the utilization of a canned dataset reduced data collection efforts, it also limited the capacity for a more in-depth analysis of demographic variables, and reduced the sample size from thousands of student, to 49 schools. The collection of school intervention policy data also posed challenges.

The initial phase of collecting intervention data involved the review of written policy documents online. This was a long and tedious endeavor, complicated by variations in policy documentation and reporting from district to district. While some
districts had well-organized, searchable electronic documents, others had low-resolution
scans of paper forms, requiring the researcher to read through each policy document to
find the appropriate information. A limitation of this method is that possibility that
districts with policies in place may have gone undocumented if I was unable to discover
the appropriate documentation. With respect to this limitation, this researcher attempted
to leave no stone unturned. These efforts were time-consuming and delayed the second
phase of intervention variable data collection. However, this work reduced the likely
hood of type II error, by ensuring that the research did not miss collection of the
interventions that it was designed to collect.

The second phase of collecting intervention data required outreach to schools. An
email and scripted phone call was used to inquire as to the location of necessary school
policy documents. The primary limitation to this data collection was variations in
administrator response. While some administrators provided prompt, detailed responses,
others did not return either the email or phone call. Response rate issues are to be
expected in research with human subjects, however the respondents were not subjects.
The research design did not rely on data from these direct contacts, and the review of
online policy provided enough data to conduct the research. That being said, a greater
response to my inquiry for additional policy documents would have strengthened the
research.

The lack of statistical significance warrants an exploration of additional factors
that may have contributed to the negative correlation beyond the studied intervention
variables. The statistical analysis states that chance alone may account for the slight
negative correlation between the interventions and suicidal planning and attempt.
Hatzenbueler (2011) notes the impact of community attitudes as a protective factor for LGBT suicide risk. Additional literature supports a number of additional protective factors such as family connectedness, family acceptance, safe schools, caring adults, high self-esteem, and positive role models (Eisenberg & Resnick, 2006; Ryan et al., 2009; and Fenaughty & Harre, 2003). A number of these factors are closely related to school climate, however a school can be perceived as “safe,” for example, without the existence of the intervention models studied. There is a possibility that family connectedness is more prevalent in some communities rather than others. Perhaps an unrelated community event, such as a large-scale layoff, is stressing family systems, and impacting suicide risk. This paper can speculate as to other causes, but further research is necessary to explore these factors and provide stronger support of the findings herein.

As findings from research studies are used to influence real-world application, the generalizability of those findings is always a paramount concern. The generalizability of this study is limited by a number of factors, however ultimately the findings can be used in a way that influences further research and policy development. The primary limitation to generalizability is the nature of the sample. Previous chapters have explored the influence of sampling such a small and seemingly homogenous state on the generalizability of the findings nationwide. While Vermont lacks racial and ethnic diversity, the state offers a diversity of rural and suburban school districts as well as political attitudes. The present sample allowed the collection of data from socially progressive districts as well as more conservative communities. This study did not observe the impact of such community attitudes, but its findings across this population are more generalizable as a result of this political diversity. Hatzenbuehler (2011) states,
“The social environment appears to confer risk for suicide attempts over and above individual-level risk factors.” For that reason, this researcher posits that a diversity of community attitudes may well be more important than other factors that are lacking in this sample.

Regardless of the sample population, the greatest threat to generalizability is the lack of statistical significance among the findings. Additional research is necessary to show significance. This research can improve upon the limitations presented by a small sample size, and should consider looking at interventions across communities with diverse community attitudes, such as those studied by Hatzenbuehler. Limitations are to be expected in and research, but as we explore the need for further research, one can speculate as to what this research may look like in a “perfect world.”

In a perfect world, with no limitation to funding, staffing, or time, this research could be tremendously successful. An ideal research design would employ multiple methods of data collection. Qualitative research would help identify new school climate interventions not known to current research literature, additional interviews or surveys of students would gage impressions of school climate, as well as knowledge of interventions within schools. Community-level attitudes would be analyzed to provide a social context. The sample would be expanded to included districts from across the country, representing a social, economic, cultural, racial and ethnic diversity representative of the greater national population. Data pertaining to suicidal planning and attempt would be obtained from raw data sets, allowing for the analysis of data at the student level, rather than the school level. The outcome of this research would likely yield findings with greater
statistical significance. The use of qualitative data and a broader sample would develop broad and detailed findings to inspire real-world application, rather then further study.

As this researcher reflects on strengths and weaknesses through a “perfect world” thought experiment, other researchers, administrators, school social workers, teachers, and students can use this research to build their own ideal research within their own limitations. While the study is imperfect, it has served its secondary and tertiary purposes of advancing future research and building this researchers academic skill set through the practice of empirical research in the community.

Implications

The findings of this research, and the additional questions raised herein, have implications for a number of fields. This section has elaborated on the impact of this study to future research. While further research is needed to provide statistically robust, generalizable research findings, politicians, administrators, teachers, and school social workers can begin to draw their own conclusions from this research and start to apply them in practice. Research can guide practice, but the stakeholders can also do the work on the ground and allow the researchers to follow.

Policy makers do not need a statistically robust empirical study to start making changes to improve the lives of LGBTQ youth in our schools. One does not need a statistically significant correlation to prove that these interventions, and others like them, can have a profound impact on students. This fact is evidenced by the motivating principles behind current interventions. Bullying policy is rarely moved by research literature, it is often a single motivating event such as a community tragedy that inspires new change. “The Laramie Project,” a play by Moises Kaufma (2000), later adapted to a
film (2002), is an exceptional teaching tool, screened in schools worldwide, to encourage conversations about prejudice, tolerance, and community responsibility (Elsbree, 2008). This play and subsequent educational screenings and performances was not born out of research, it was inspired by the tragic murder or Mathew Shepard and a communities response to hate. Both research literature and community-level experience show that suicide is a problem, especially among LGBTQ students. Therefore, communities have a responsibility to act. This research can help facilitate that action. Drawing a connection between school climate and suicide risk helps point to the urgency of addressing school climate in our nation’s schools.

This study showed that the most prevalent school climate interventions are those that are mandated by the state (i.e. Anti-Harassment Policy). This study also showed that mandated policies might not always be the most effective policies. Perhaps interventions dictated from the government lack community buy-in, or perhaps legislators are only able to mandate policies that “lack teeth.” It is one thing for the state to say: “you need to include this language in your student handbook,” and something completely different to require thoughtful programming, new facilities, and faculty-sponsored organizations.

Massachusetts has received recent media attention for recent amendments improving protections for LGBTQ youth within a comprehensive anti-bullying law developed in 2010 (MA, 2010). The bill was drafted following two recent suicides of young students who were being bullied. In this case, the public policy was formed out of a community response to a tragic event.

Policies within the …bill are similar to those found in the 2000 legislation in Vermont (e.g. mandated reporting; clear definition and rules regarding bullying; teacher
training). One difference is the requirement to include bullying within the curriculum at every grade level. The Vermont law outlines that bullying and anti-harassment programming for students may be developed at the discretion of the administration. This study showed that districts that chose to implement an anti-harassment intervention displayed slightly lower rates of suicidal planning and attempt. Time will tell if mandating anti-harassment programming statewide will have the same impact as it had in schools that implanted the policy by choice. As of the 2011 YRBS figures, Massachusetts high school students show slightly elevated rates of suicidal planning (12 percent MA, vs. 11 percent sample) and attempt (7 percent MA, vs. 5 percent sample) compared to the Vermont study sample.

Vermont and Massachusetts both mandated school climate policies at the state level. This study suggests that this can be an effective method for enacting these policies. However, the state is not the only mechanism for change. It is the responsibility of every school, district, and community to develop and test new methods for improving school climate. Factors contributing to school climate are not limited to the walls of the school. Hatzenbuehler (2011) suggests the importance of community attitudes as a potential protective factor for suicide risk. I posit that communities with such attitudes have the obligation to try new interventions, which can be replicated in other communities, changing attitudes in the process. Communities can influence school climate, and the results can influence other communities.

The present research suggests that interventions to improve school climate have a positive impact on the LGBTQ students, thus reducing suicide risk. As schools, communities, and governing bodies explore policy options, further study is needed to
suggest how these specific interventions impact LGBTQ students emotional well being and protect against suicide risk. The climate interventions studied herein operate within two processes: development of individual and community strengths, and reduction environmental stressors.

The theoretical underpinnings of each intervention, outlined in chapter two, provide insight into the ways in which each policy impacts school climate. For example, Asakura (2011) identified gay straight alliances and other queer youth space as an area of support where students build a sense of safety and confidence. While alliances function along the internal strengths process, anti-harassment policies and programming utilizes an environmental stressor framework to reduce the well-documented rates of bullying, harassment, and violence against LGBTQ youth (Brikett and Koenig, 2009; D’Augelli & Pilkington, 2012; Espelage et al. 2008; and Ploderl, Faistauer, & Fartacek, 2010), and increasing students’ perception of safety and positive school climate (Blackburn, 2007 and O’Shaughnessy et al., 2004).

Further research is necessary to observe these two processes of school climate intervention. How does the application of an internal strengths school climate intervention protect against suicide risk? Does the addition of an internal strengths perspective improve efficacy of an environmentally focused school climate intervention? A qualitative study of student attitudes would facilitate a more detailed study of the impact of these processes, and provide a theoretical framework for the development of new interventions.

While the statistical significance of this study is limited, the implications of the research are broad and far reaching. By beginning to draw the connection between school
climate and suicide risk, this research increases the urgency of the dialogue, and improves the likelihood of change.

**Conclusion**

In addition to answering the research question, this study’s purpose was to advance the dialogue of school climate and suicide risk both in the research literature and among community stakeholders and policy makers. While this study lacked the robust statistical significance to state the null hypothesis, it succeeded in beginning to form a connection between school climate interventions and reduction in suicide risk. When the dependent variable is the lives of young students, even the smallest amount of change is meaningful. Further study is necessary to explore this connection, and in the mean time, schools, communities, and law makers must continue the valuable work of helping students feel welcome, supported, and safe in their school climates.
References


http://www.cdc.gov/violenceprevention/suicide/statistics/aag.html#1


Vermont Stats, Act 162 S. 313. (1994)
Appendix A.

Phone Script for School Policy Inquiry

Good afternoon/morning,

My name is {name}. As part of my thesis for my Master of Social Work at Smith School for Social Work, I am doing a study that includes looking at how schools in Vermont are working to reduce anti-gay harassment amongst students. I have already reviewed the policies of your school and have found that your policies do include language about anti-bullying, and anti-gay harassment. However, as I need more information, I am calling to ask you where I might locate your school policies with details about the following:

- Policies that describe the presence of gender-neutral bathrooms within your school for use by all students.
- Policies/guidelines that ban harassment based on sexual orientation and/or gender presentation
- Policies describing mandatory anti-bullying/anti-harassment program to students.
- Policies describing how the school integrates recognition of LGBTQ issues within the over all curriculum

I appreciate your help in directing me to these policies, Thank you for your time.
Appendix B.

Email Template for School Policy Inquiry

Dear {Name},

As part of my master’s thesis for my MSW at Smith School for Social Work, I am doing a study that includes looking at how schools across Vermont are working to reduce anti-gay harassment amongst students. I have already reviewed the policies of your school online and have found that your policies do include language about anti-bullying, and anti-gay harassment. I was wondering if you could help point me to where I might locate additional school policies with details about the following:

Policies that describe presence of LGBT student groups, such as a Gay Straight Alliance.

Policies that describe the presence of gender-neutral bathrooms within your school for use by all students.

Policies describing mandatory anti-bullying/anti-harassment program to students.

Policies describing how the school integrates recognition of LGBTQ issues within the over all curriculum.

I appreciate your help in directing me to these policies!
Thank you for your time!

Regards,

{Name}

{phone number}
{email}@smith.edu
Appendix C.

Human Subjects Review Planning Form

Smith College School for Social Work
Human Subjects Review Planning Form

Student ___Patrick Hagan___________________________________   Date __10/12/13__________
Advisor _Laurence Cadorette_________________________________________

NOTE: If your project fits 1, 2, 3, or 4a, you will need to include letters documenting both the original Human Subjects Review and the authorization of your use of the data as appendices in your thesis. All students: please indicate below whether or not your thesis project will require a Human Subjects Review.

1. My project is based upon existing (but not publicly available) data with a Human Subjects Review completed by the party giving me access to the data. I have indicated below the name of the researcher or administrator giving me this access and the name and address of the agency which granted the Human Subjects Review approval:
   a) Name of person authorizing the use of the data:

   b) The name and address of the agency that gave the Human Subjects Review approval:

2. My project will require an agency Human Subjects Review. I have indicated below the name of the agency and the name of the Chair of its Human Subjects Review Board:
   a) Name and address of agency doing the Human Subjects Review:

   b) The name of the agency Human Subjects Review Board Chairperson:

3. My project will require a Smith College School for Social Work Human Subjects Review.
4. My project will not require a HSR Committee review.
   a. I am requesting a waiver from the Human Subjects Review process. Attached is a brief plan of my study for the Committee's approval.
   b. My project will not involve collection of original data from human subjects. (This includes use of publicly available "canned" data sets.)

Plan of study:

The proposed study will look at the relationship between existing school policies that encourage positive school climate for Lesbian, Gay, Bisexual, Transgender, Queer, and Questioning (LGBTQQ) youth and rates of self-reported suicidal ideation and attempt among all students.

Data collected for this study will be from two sources. The first source will be publicly available aggregated self-reported survey data from the Vermont Youth Risk Behavior Surveillance Survey. The data were collected and analyzed by the Vermont Department of Health and are available online. The data are aggregated at the school district level, therefore they not identifiable at the individual level. The second data source will be from published school policy documents. These documents will be obtained from a review school district websites or through direct inquiry to the districts themselves. This inquiry may require contact with district staff, however the inquiry will simply be for assistance in the obtainment of publicly available policy documents. Data will be collected from these documents, and not from district personnel or any human subjects.