Perceptions and Predictions with School Climate: Analyzing the Comprehensive School Climate Inventory

Danielle Cimorelli

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PERCEPTIONS AND PREDICTIONS WITH SCHOOL CLIMATE: ANALYZING THE COMPREHENSIVE SCHOOL CLIMATE INVENTORY

A Dissertation
Submitted to the School of Education

Duquesne University

In partial fulfillment of the requirements for
the degree of Doctor of Philosophy

By
Danielle M. Cimorelli

August 2017
PERCEPTIONS AND PREDICTIONS WITH SCHOOL CLIMATE: ANALYZING THE COMPREHENSIVE SCHOOL CLIMATE INVENTORY

By

Danielle M. Cimorelli

Approved June 5, 2017

Scott L. Graves, Jr.
Associate Professor of School Psychology
(Committee Chair)

Tammy L. Hughes
Chair, Department of Counseling, Psychology, and Special Education
(Committee Member)

Launcelot I. Brown
Chair, Department of Educational Foundations and Leadership
(Committee Member)
ABSTRACT

PERCEPTIONS AND PREDICTIONS WITH SCHOOL CLIMATE: ANALYZING THE COMPREHENSIVE SCHOOL CLIMATE INVENTORY

By

Danielle M. Cimorelli

August 2017

Dissertation supervised by Dr. Scott L. Graves, Jr.

Through multiple regression and analysis of variance, data from the Comprehensive School Climate Inventory was used to understand the following: 1.) the predictive ability of student perceptions of safety on overall school climate; 2.) the relationship between geographic location and school climate; and 3.) the predictive ability of geographic location and school type on overall school climate. Participants were elementary school students, grades PreK through 8, from 30 elementary schools across the country, with approximately 4,500 student responses. Results showed that students’ perceptions of school safety predicted 80% of the variances in connection to ratings of school climate. There was also a significant relationship between geographic location and ratings of school climate, as students from suburban schools tended to rate their climate as more positive than students from urban or rural schools. Lastly, the results
showed that together, school type and geographic location are not able to sufficiently predict ratings of school climate, only explaining 4% of the variance in school climate ratings.

*Keywords*: Perceptions of school climate, Comprehensive School Climate Inventory (CSCI), School safety, Geographic location, School
AUTHOR NOTE

A special thank you to the National School Climate Center for their dedication to research and willingness to assist with this project.
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First, I thank God, my rock for giving me the strength and purpose to persevere despite obstacles and setbacks. With God, anything is possible! To my mom and dad, who have always taught me to work hard, to do more than what I think I can, and to always work with purpose—you are the best role models I could ever hope for. To my husband Steve, who has been with me through some pretty ugly moments and yet loved and supported me anyway, you are my anchor when I feel like it is too much and I cannot do anymore. I could not have done this without you. To my advisor, Dr. Graves, who has taught me so much over the years and shown me who I can be and what I am capable of achieving. I am so blessed by my friends and family who have encouraged and supported me. I am so grateful for the many people I have in my life. Thank you for everything.
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Chapter 1

A safe school environment has become a priority for many school administrators and communities, with an emphasis on prevention and early intervention (Kilian, Fish, & Maniago, 2007). There does not appear to be any single factor that causes antisocial behaviors in children and adolescents; many risk factors contribute to the development of these behaviors, such as the individual characteristics of the child. However, it has been suggested that the child's environment can shape and maintain these behaviors. Social environments such as home, school, and peer interactions are important to consider when identifying possible causal factors in school violence and school safety, as well as attempting to implement effective interventions to keep schools safe (Kilian et al., 2014).

Although school climate has been a well-recognized concept in education for about one hundred years, only in the past 60 years has this concept been studied more intently, and thus spawned the development of research-based assessment tools aimed at investigating the quality and character of school life, and how this affects students, school personnel, families, and the greater community (Cohen, 2009). School climate is generally defined as the character and quality of the school culture, and can be considered the milieu of the school (Espelage, Low, & Jimerson, 2014). This culture of a school often consists of various factors, such as the values, norms, goals, expectations, teaching practices, leadership, and structure of the school (Espelage et al., 2014) and it is considered to be an important factor that influences academic achievement, youth development, teacher satisfaction, and the retention of school personnel (Cohen, 2009).

School climate can be created through students' and teachers' values, goals, expectations, teaching and learning practices, as well as the organizational structure of the school itself, and may have different dimensions. These dimensions, including safety, teaching, relationships, and
the physical environment may be both positive or negative, and are key factors in understanding the influence of student outcomes (Espelage et al., 2014). Additionally, school climate can include the school's mission and its common purpose, as well as consistency of rule enforcement, level of parental involvement, and the presence of supportive and meaningful student-teacher and peer relationships. The presence of these positive factors has been found to be negatively associated with bullying behaviors at school (Turner, Reynolds, Lee, Subasic, & Bromhead, 2014).

Research into school climate began in the early 1900's, with Perry and Dewey in 1908 and 1916, respectively, recognizing that culture in a school can have an effect on the students and their ability to learn, and in the 1960's, Durkheim also began to study this concept (Thapa, Cohen, Guffey, & Higgins-D'Alessandro, 2013). After the idea of organizational climate became a priority in the 1980's, the translation of the culture and climate of a workplace to the culture and climate of a school came more systematic and empirical. Within the last thirty years, the study of school climate and the implications of its impact on students has become more prominent (Thapa et al., 2013). Common domains of school climate, as found in the literature can include order, safety and discipline, academic outcomes, social relationships, school facilities, and school connectedness, which offer more information regarding the norms, values, and expectations of the social and emotional development of students while protecting their safety both socially and physically (Zullig, Koopman, Patton, & Ubbes, 2010).

Researchers have found that students' perceptions of their school environment can have important effects on their psychosocial development, as well as their academic achievement. Four broad dimensions of school climate have been recognized as having strong effect on individuals' perceptions of school climate: safety, teaching and learning, relationships, and
characteristics of the physical environment (White, La Salle, Ashby, & Meyers, 2014). In 2009, Cohen and his colleagues suggested that the school climate can be defined as the quality and character of school life, based on patterns of experience in the schools, and reflects a school’s norms, goals, values, relationships, learning practices, and organizational structures. Cohen also related school life to the safety level of the school, the quality and types of relationships that exist, and the physical environment of the school as a whole (Cohen, McCabe, Michelli, & Pickeral, 2009). The 2007 National School Climate Council recommended that school climate be addressed as a school-based intervention, and a positive and sustained school climate be defined as patterns of people's experiences of school life, and reflects the norms, goals, values, interpersonal relationships, teaching, and learning practices and organizational structures of the school (Thapa et al., 2013).

**Broadening the Focus**

With the rise of high-stakes testing, teacher accountability, and the increase in standards and expectations on academic standards, much attention has been paid to reorganizing the educational practices and assessment systems of educational systems in many states. Under No Child Left Behind (NCLB), states were required to develop strict content standards under the core subjects of language arts and mathematics, and the annual assessment of these skills was to be tied in with federal financial aid for the schools. However, despite the increased levels of scrutiny and the implementation of systems of rewards and punishments tied into student performance on these standardized tests (Pazey, Heilig, Cole, & Sumbera, 2015), the reality is the many students who live in poverty, receive special education services, or have minority status are still at-risk, and there have been questions regarding the over-emphasis on standardization for schools with different populations and levels of need (Pazey et al., 2015).
As the focus on academic achievement and on student performance on standardized testing has increased, schools have found themselves in the position to consistently improve student outcomes, or face the loss of federal funding (Pazey et al., 2015). It may seem counterintuitive to focus on areas of the school other than core academic subjects, like reading, mathematics, and science. However, the improvement of aspects of a school that are seemingly unrelated to academics, such as student behaviors, may actually help to improve student learning, outcomes, and performance.

Interventions and school-based programs that focus on the improvement of students’ negative behaviors and teachers’ feelings of self-efficacy have been linked to an improved perception of school climate, and thus, positive student outcomes (Bradshaw, Koth, Thornton, & Leaf, 2009). Interpersonal relationships can have an effect on one’s sense of well-being and competency, and can lead to more thorough implementation of school-wide interventions (Bradshaw et al., 2009). Additionally, it is well understood that schools do not exist in a vacuum, and can be affected by individual and systemic factors from various sources. Thus, developing an understanding the perspectives of other individuals in a school environment, such as teachers and other staff, as well as parents, may have a useful impact on understanding the factors that influence school climate.

Factors Influencing School Climate

Student Perceptions of School Safety

In order for students to be able to learn while at school, they need to feel safe at school. For schools to be safe, one must understand the various components that contribute to a safe learning environment. The Office of Educational Research and Improvement, as cited in Kitsantas, Ware, and Martinez-Arias (2004), suggested three internal elements that contribute to
a safe school environment: a strong academic mission, clear disciplinary standards that are fairly and consistently enforced, and a climate that guides interpersonal relationships at school (Kitsantas, Ware, & Martinez-Arias, 2004).

The level of safety within a school is often considered to be one of the paramount priorities for administrators to address when attempting to improve school climate. Schools have attempted to address security risks in schools by implementing safety plans, hiring school resource officers, providing counseling, and encouraging students to be aware and to report violence. These policies are often based upon recommendations by government organizations, such as the Centers for Disease Control, in order to improve school climate (Kitsantas et al., 2004).

How safe students feel while they are at school is considered to be an essential part of a school's culture. Although addressing school safety when attempting to improve school climate may seem obvious, it is equally important for researchers and schools to understand that different groups within the school may have very different perceptions of safety and climate. There has been a question in the research as to whether student perceptions of school climate can have an effect on safety strategies in the school. Additionally, research has suggested that there is a connection between school climate and feelings of safety. Many aspects of schools are related to perception, especially by students. Student perceptions of particular behaviors may have an influence on how students behave, such as aggression being perceived as masculine and necessary to engage in to promote one's masculinity (Kitsantas et al., 2004).

However, it is not just the school buildings or playgrounds that need to be considered safe. A 2010 study by Milam, Furr-Holden, and Leaf investigated the effects that school and community violence can have on student academic performance. Through survey methods, they
found that when students perceived a higher degree of violence in surrounding neighborhoods, student achievement in math and reading decreased. Conversely, students’ perceptions of increased safety in surrounding areas were associated with significant increases in student academic achievement (Milam, Furr-Holden, & Leaf, 2010). Therefore, it is necessary to consider outside influences on students and how safe they feel, which can impact their development and their academic achievement.

**Physical Safety.** The physical environment of a school can have a strong impact on students' perceptions, in that schools that are in poor condition can lead to reduced learning, and poorly managed schools can lead to lower academic achievement (Kutsyuruba, Klinger, & Hussain, 2015). Physical aspects of a school building, such as quality of facilities, poor lighting, and air quality can affect student behaviors as well, having an influence on behaviors such as absenteeism, vandalism, violence, and smoking or drug use (Kutsyuruba et al., 2015). This link clearly points to the fact that students’ perceptions of their physical environment can have an effect on their behaviors, leading to either a more positive environment, or one in which students may feel unsafe.

**Social-Emotional Safety.** Schools with a positive school climate are characterized by positive social interactions, high quality administrators and teachers, and a sense of community between staff and students (Kutsyuruba et al., 2015). Students are not only working to achieve academic or professional goals while at school; they are also learning how to interact with others, and how to express their needs and their feelings, and how to get their needs met in a prosocial way. When students have positive relationships with each other, and with their teachers, they are more likely to feel safe. Indeed, when students and teachers are connected, the probability of school violence is decreased. When students feel supported, either by peers, teachers, or parents,
they are more likely to feel safe while at school and achieve academic success. Strong, consistent support may help students feel safer, and may help to prevent aggressive or antisocial behaviors (Kutsyuruba et al., 2015).

**Geographic Location**

Research indicates that the areas in which children live and attend school can have an impact on how they perceive school climate (Hong & Eamon, 2012). Some studies suggest that urban and rural students are more likely to perceive school safety as a problem than those students in suburban areas. Often, research posits that students in suburban-area schools tend to live in safer areas with more resources (Hong & Eamon, 2012). Urban schools are located within an area that has a population over 100,000, are located within a principal city, and are located within an urbanized area (has at least 50,000 people). Suburban schools are located in areas that are outside of principal cities, but can be within an urbanized area, and can have populations over 100,000. Lastly, rural schools are located in areas that are at least five miles from an urbanized area, and at least 2.5 miles from an urban cluster.

Considering schools and students' academic performance through an ecological lens, the surrounding community and neighborhoods that the school's students come from can have an effect on school climate (Keiser & Schulte, 2009). Children from urban environments are often faced with struggles that their suburban and rural counterparts are not aware of. Urban youth are exposed to violence through media, as well as community-level and school-level violence. Because of this difference in experiences of violence, varying by urbanicity, children from urban, rural, and suburban schools may have very different experiences in schools as well (Milam et al., 2010). One aspect of living in an urban area that may have an impact on students' academic performance and social-emotional development is the presence or lack of violence and crime in
the neighborhoods surrounding schools. When students are fearful and concerned about their safety, both in school and when going to and from school, they are not as focused on their school performance. It must also be considered that neighborhood violence is tied directly to economic disadvantages and poverty, yet another potential aspect of study for student academics and school climate.

Various physical aspects of a school's environment can vary due to the geographic location of these schools. Fencing, metal detectors, and school resource officers are more likely to be present in urban and suburban schools, which may have an impact on perceptions of school climate (Shelton, Owens, & Song, 2009). Although the intent of these security measures is to better manage school violence and crime, and to reduce risk, these measures may have an impact on how safe students feel in school, as well as how adults involved with the school perceive its climate. Schools in more urban areas may tend to emphasize security measures that prioritize protecting students from community-based risk factors, due to the higher rates of criminal activity in the surrounding communities (Shelton et al., 2009). Schools with students who reported higher safety during their travels to and from school tend to have higher performance on standardized tests, supporting the idea that perceptions of neighborhood safety can have an effect on students' academic performance (Milam et al., 2010).

Staff perceptions of school climate have been found to differ throughout grade levels, across urban, suburban, and rural areas; staff in schools that are in larger cities tend to perceive a less positive school climate than their counterparts in suburban and rural areas (Jain, Cohen, Huang, Hanson, & Austin, 2015). When considering the location and surrounding neighborhood of a particular school, teachers' personal opinions about the level of urbanicity of their students may lead to a self-fulfilling prophecy with regard to student academic achievement, as well as
student behaviors (Keiser, & Schulte, 2009). Additionally, these adult perceptions from parents and school staff can impact the implementation of interventions aimed at improving school climate; when accurate, it may be assumed that a school’s climate will not change. However, if these perceptions are inconsistent with those of the students, the neglect of helping students improve their sense of community may have negative effects on student outcomes (Keiser & Schulte, 2009).

**School Type**

Despite the overarching goals of all schools to help their students learn, the experiences in public, private, and charter schools can be very different. Due to federal legislation, if their child's school is performing poorly, parents have the right to move their child to a different public school, such as a charter school. The system of vouchers for parents to move their child to another school, or the increase in numbers of charter schools was meant to spur low performing schools into innovation and improvement (Lubienski, Lubienski, & Crane, 2008).

In the 1980's, studies involving the High School and Beyond (HSB) data set found that students at private schools had higher academic achievement than their public school counterparts. Indeed, these studies suggested a more productive and respectful academic environment, especially in private Catholic schools (Lubienski et al., 2008). Private schools tend to be somewhat smaller than public schools, which can be associated with higher school performance. Due to their smaller size, it can be said that private schools may potentially have a more engaged and nurturing academic environment than public schools (Lubienski et al., 2008).

Another major difference between charter schools and traditional public schools is that charter schools must market themselves in order to maintain their funding. Because a charter school receives funding based on the number of students enrolled, they must be more responsive
to the needs of the local community and the students who are interested in enrolling (Ni, 2012). Although charter and private schools are not required to abide by all of the regulations imposed by states or districts, their teachers are often not as protected, in terms of workload, salary, benefits, and due process. This lack of oversight may translate into differences in school climate perceptions (Ni, 2012).

**Research Questions and Hypotheses**

The purpose of the following study was to investigate the following questions:

1. How do students’ perceptions of safety predict overall perceptions of school climate? It is hypothesized that students’ positive perceptions of social-emotional safety will predict a more positive school climate, and that physical safety will also predict a more positive school climate, but to a lesser degree. Additionally, it is hypothesized that students’ perceptions of rules and norms will not predict school climate.

2. How is geographic location, as defined by the National School Climate Center, related to students’ perceptions of school climate? It is hypothesized that students in suburban areas will rate school climate as more positive than students in either rural or urban areas.

3. How does school type (public, private, or charter) and geographic location predict students’ ratings of school climate? It is hypothesized that students in public, private, and charter schools from suburban and rural areas will rate school climate more positively than those in urban areas. It is also hypothesized that students from charter and private schools will rate school climate more positively than public school students, across geographic locations.
Chapter 2

Historical Overview

Early American Schools

Schools in the early years of the United States education system were founded and run by local community members, and focused on teaching younger children basic literacy and mathematics skills (Grant, 1993). At this time, teachers were housewives, clergymen, and missionaries who taught in their spare time, with very few resources and little oversight by a larger authority. Some larger cities in early America, such as Boston, Massachusetts, provided more structure and resources for their schools. Education in these primary schools focused primarily on basic literacy, religion, mathematics, and ancient languages. Helping students achieve literacy, an understanding of religion, and basic laws of the colonies was the extent of most early public education services in the United States (Grant, 1993).

From the late 1800’s until the 1950's, American public schools were fully segregated by race, with significant differences in the resources allotted for Black students as compared with White students, in terms of teachers, materials, facilities, and quality of education. During the 1950’s and 1960’s, the Civil Rights movement was in full swing, and many individuals, as well as Civil Rights groups, advocated for the full integration of American public schools (Smith & Kozleski, 2005). Beginning in 1952, the Supreme Court began reviewing cases from Kansas, Delaware, South Carolina, and Virginia, all of which had challenged the constitutionality of racial segregation in public schools. These cases were consolidated under one name: Oliver Brown et al. v. the Board of Education of Topeka. This resulted in the landmark Supreme Court decision which came to be known as Brown v. Board of Education of Topeka, Kansas, and this served as the catalyst for the desegregation movement for public school students in America (Smith & Kozleski, 2005).
Post-segregation, student enrollment rates in American schools have fluctuated throughout the years. However, on average, about half of all 5 to 19 year olds were enrolled in school from 1850-1991, with White students attending school at a much higher rate than their minority counterparts throughout most of U.S. history. By 1970, enrollment for both Black and White students rose to about 90%, and has remained relatively stable since then. In mathematics, science, and reading, there have been few changes in level of educational proficiency, as noted by the National Assessment of Educational Progress (NAEP). Overall, most students appear to master low-level academic skills, as well as the basics of math, science, and reading; however, few demonstrate sophisticated skill competency in these areas (Grant, 1993).

**Social and Emotional Learning.** Schools have traditionally focused almost exclusively on helping students to master academic skills, sometimes at the expense of other important developmental skills (Lane, Givner, & Pierson, 2004). Recent research suggests that schools should also focus on improving students’ social and emotional skills. In order for students to benefit from academic instruction, they must already have some basic skills, such as being able to express themselves verbally, understand directions, and reading at a basic level when they enter school. Additionally, children are expected to be able to comply with basic requests, to problem solve, and to adequately relate to peers. Those students who do not have adequate prerequisite skills required to be successful in school may be held to lower standards, and may be more likely to be referred for special education services (Lane et al., 2004).

Many factors can have an effect on students’ academic achievement, including individual and structural variables that interact in a complex manner (Patton, Wooley, & Hong, 2012). Bronfenbrenner's Ecological Systems Theory (1979) can help explain how interrelated social structures, ranging from the individual, peers, home, school, and community all interact, and
influence an individual's behavior. In studying the ecological factors that contributed to the academic success of African American high school students, Stewart (2007) found that school attachment and school commitment are positively correlated with higher academic achievement. Positive peer associations and parent-child discussions were also positively correlated with high academic achievement, which supports the philosophy that a positive, safe school environment is conducive to the academic achievement, as well as the social and emotional well-being of its students (Stewart, 2007).

The assertion that a school's environment can have a considerable effect on its students has been thoroughly researched and supported (Johnson, Burke, & Gielen, 2011). As such, many interventions and teaching techniques have been tailored to fit individual schools’ needs, both school-wide and in more individualized settings. It is important to note that school environments have been both directly linked with students' academic success in terms of how these students learn and the best methods to foster learning, as well as being indirectly linked to the manner in which the behaviors of students and adults in the school may affect learning. The level of violence that sometimes occurs in school is an environmental variable that may have an extremely detrimental effect on students in terms of their education, their psychological well-being, and their social development. Violence in the schools affects not only those directly involved in the act, but also affects every individual exposed in some way, as the school’s environment becomes more negative, and students and staff may feel unsafe and apprehensive about attending school. This may result in negative outcomes for large numbers of students and school employees alike (Johnson et al., 2011).
School Climate

A safe school environment has become a priority for many school administrators and communities, with an emphasis on prevention and early intervention (Killian, Fish, & Maniago, 2007). There does not appear to be any single factor that causes antisocial behaviors in children and adolescents; many risk factors contribute to the development of these behaviors, such as the individual characteristics of the child. However, it has been suggested that the child's environment can shape and maintain these behaviors. Social environments such as home, school, and peer interactions are important to consider when identifying possible causal factors in school violence and school safety, as well as attempting to implement effective interventions to keep schools safe (Kilian et al., 2014).

Researchers have found that students' perceptions of their school environment can have important effects on their psychosocial development, as well as their academic achievement. Four broad dimensions of school climate have been recognized as having strong effect on individuals' perceptions of school climate: safety, teaching and learning, relationships, and characteristics of the physical environment (White, La Salle, Ashby, & Meyers, 2014). In 2009, Cohen, McCabe, Michelli, and Pickeral suggested that the school climate can be defined as the quality and character of school life, based on patterns of experience in the schools, and reflects a school’s norms, goals, values, relationships, learning practices, and organizational structures. Cohen also related school life to the safety level of the school, the quality and types of relationships that exist, and the physical environment of the school as a whole (Cohen, McCabe, Michelli, & Pickeral, 2009). The 2007 National School Climate Council recommended that school climate be addressed, and a positive and sustained school climate be defined as patterns of people's experiences of school life, and reflects the norms, goals, values, interpersonal
relationships, teaching, and learning practices and organizational structures of the school (Thapa, Cohen, Guffey, & Higgins-D’Alessandro, 2013).

Common domains of school climate, as found in the literature, include order, safety and discipline, academic outcomes, social relationships, school facilities, and school connectedness, which offer more information regarding the norms, values, and expectations of the social and emotional development of students while protecting their safety both socially and physically (Zullig, Koopman, Patton, & Ubbes, 2010). The examination and investigation of school climate truly began in the 1950's, with the advent of organizational climate research for professional and workplace climates. By the 1970's, school climate was being linked by researchers to student outcomes, where the greatest indicator of student achievement was the way the students felt about their school's social environment (Zullig et al., 2010). By the mid-1990's, research focused on individual classes and teachers, with the understanding that when classes are in different rooms with different teachers, the unit of school climate is that of the school as a whole entity, and the individual classroom is the appropriate measurement unit where students spend the majority of their day (Zullig et al., 2010).

According to the National School Climate Center (NSCC), school climate refers to the quality and character of school life and is based on patterns of students', parents' and school personnel's experience of school life and reflects norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures. A positive school climate fosters children’s and youth’s development and the ability to learn and become a productive, contributing member of society. This positive school climate includes norms, values and expectations that support social, emotional and physical safety, as well as the engagement and mutual respect of individuals. All individuals in a school’s community, including students,
family members, and educators work together to develop, live and contribute to this positive, engaging school climate. Specifically, educators model and help develop in their students those attitudes that emphasize the benefits and satisfaction one can gain from learning. Each individual involved in the school community is responsible for helping contribute to the school’s operations and caring for its physical environment (National School Climate Council, 2007).

**Contributions to School Climate.** Many students may have difficulties managing themselves and their behaviors and social interactions with peers (Killian et al., 2007). Prerequisite social skills, such as listening quietly, following directions, speaking nicely, and ignoring distractions, are generally taught to children in the elementary school setting. However, these skills may not be internalized by some children, and thus, do not become a part of these children’s behavioral repertoires. When this internalization does not occur, children experience difficulty in learning more advanced interpersonal skills, and are unable to wait their turn, are less likely to interrupt others in a polite manner, do not ask for permission, and are unable to join a social activity in a prosocial way. This inability to interact with others in a socially acceptable manner often leads to more serious difficulties with peers and adults, and may result in the child developing internalizing symptoms, such as anxiety and depression (Killian et al., 2007).

The level of care and consideration that school administrators and teachers give to student concerns and problems can be an important factor that contributes to a school's climate. Additionally, the manner in which adults at the school, most especially school administrators, treat particular groups of students can have an effect on school climate (Hurford et al., 2010). When it is evident that an administrator prefers one group of students over another and treats them more favorably, some groups of students feel less important and perceive their treatment as unfair. This difference in behavior is often clearly conveyed to students, a situation which can
create dissonance and resentment. Although bullying is generally seen as an act of interpersonal aggression between students, adults can oftentimes also engage in bullying behaviors. School administrators and teachers may overtly engage in bullying, or may tend to tolerate bullying as a normal behavior. Students who felt that some groups of individuals at the school received preferential treatment tended to feel unsafe, experience bullying, and report being threatened with a weapon at school. This demonstrates the need for school personnel to treat all students with respect and to be aware and cognizant of their potential biases and behaviors toward students (Hurford et al., 2010).

Disciplinary practices of schools and of individual teachers can sometimes lead to the development of more issues with student behaviors and school climate, especially if students feel untrustworthy and disrespected by school personnel (Hurford et al., 2010). Research regarding discipline suggests that school rules and discipline policies should be implemented at a universal, school-wide level, with more specific rules implemented in individual classrooms. These policies should utilize positive reinforcement strategies and recognition for prosocial behaviors to increase the likelihood of students continuing to engage in these positive behaviors and serve as models for other students (Silvia et al., 2011). Additionally, expectations of student behaviors should be clearly expressed and explicitly taught to students, in order to ensure comprehension and increase communication between school personnel and students (Silvia et al., 2011). Because of the way in which school climate can affect students, families, and the surrounding community, it is important to consider how best to improve a school’s overall climate, in order to help improve student outcomes, staff and parent involvement, and, by extension, the overall community.
Underlying Characteristics of School Climate

When attempting to understand school climate and how to improve it, it is important to investigate that factors that could have a strong influence on school climate. If the underlying characteristics of a school’s climate are known, they can become intervention targets at a system-wide level, which may help improve student outcomes such as academic performance and school completion (Gage, Sugai, & Lewis, 2013). How students perceive their school and its climate, the location of the school, and school type can all have an impact on school climate.

Student Perceptions of School Safety

For students to be able to be successful, both academically and socially, they need to feel safe while at school. For schools to be considered safe, various components must be explored that may be contributing to the perceptions of a learning environment. For instance, clear and consistent rules, a strong academic focus and mission, and an environment that promotes prosocial behavior and strong interpersonal relationships have been shown to contribute to a safe and positive school climate (Kitsantis et al., 2004).

Student safety while at school is often considered to be one of the most important factors for administrators to address when attempting to improve school climate. Personnel have attempted to address potential safety and security risks in schools by implementing safety plans, hiring school resource officers, providing counseling, and encouraging students to be aware and to report violence, policies which are often recommended by government organizations (Boreen et al. 2011). However, there is no set method for addressing school safety, and no overarching policy recommended for every school. This means that schools must look to the research to investigate what might work for their schools and their student populations.

School safety is often considered to be directly related to school climate. A school may not be considered to have a positive climate if students feel unsafe (Boreen et al., 2011).
Typically, in order to investigate school safety, concrete characteristics are measured, such as the presence of security, police reports from the school, discipline referrals, or suspensions and expulsions (Bosworth, Ford, & Hernandez, 2011). Indeed, many students report that they feel physical security makes a school feel safe (Bosworth et al., 2011). However, these characteristics may not always capture the necessary information regarding how students actually feel at school, and how those feelings and perceptions can affect students’ social and emotional well-being and academic achievement. Indeed, identifying a school as "safe" is not simply the presence of absence of weapons or physical violence; social and emotional aspects of safety are just as important as those physical factors (Bosworth et al., 2011).

Perceptions of a given construct, such as school safety, have previously been measured, and although these perceptions may not directly correlate with the statistics of that construct, these studies provide valuable information on the influence that perception can have on outcome variables, such as student achievement and school climate (Bosworth et al., 2011). Additionally although there is growing interest in the perceptions of children regarding their schools, there have been a relatively small number of empirical studies focusing on this perception and its potential impact on psychological and behavioral adjustment (Way, Reddy, & Rhodes, 2007). Children's perceptions of school climate have been found to be dynamic, and can shift with peer relationships, the relationships between students and teachers, as well as other small events, that can affect school climate perceptions (Way et al., 2007). Thus, constant exploration of this information, especially as children transition from elementary to middle to high school, can help schools stay up to date with regard to their efforts at improving school climate, and the interventions necessary to do so.
In addition to the growth of students and their transitions to other schools, student-level factors can also affect perceptions of various school constructs. Individual factors, such as gender, ethnicity, and age can all have an effect on perceptions of school climate. For instance, minority students tend to report less favorable attitudes toward academics, and female students often report more consistency and fairness of school rules. (Mitchell, Bradshaw, & Leaf, 2010). In order to understand how student perceptions can affect a school’s functioning, these individual factors should be taken into consideration, not only to predict perceptions, but also to develop a better understanding of students’ needs and where interventions would be best applied.

How safe students feel while they are at school is considered to be an essential part of a school's culture (Boreen, Handy, & Power, 2011). Although addressing school safety when attempting to improve school climate may seem obvious, it is equally important for researchers and schools to understand that different groups within the school may have very different perceptions of safety and climate (Boreen et al., 2011). There has been a question in the research as to whether student perceptions of school climate can have an effect on safety strategies in the school. Additionally, research has suggested that there is a connection between school climate and feelings of safety. Many aspects of schools are related to perception, especially by students. Student perceptions of particular behaviors may have an influence on how students behave, such as aggression being perceived as masculine and necessary to engage in to promote one's masculinity (Boreen et al., 2011).

However, it is not just the school buildings or playgrounds that need to be considered safe. A 2010 study by Milam, Furr-Holden, and Leaf investigated the effects that school and community violence can have on student academic performance. Through survey methods, they found that when students perceived a higher degree of violence in surrounding neighborhoods,
student achievement in math and reading decreased. Conversely, students’ perceptions of increased safety in surrounding areas were associated with significant increases in student academic achievement (Milam et al., 2010). Therefore, it is necessary to consider outside influences on students and how safe they feel, which can impact their development and their academic achievement.

In the research, school-level factors, such as student mobility, the ration between students and faculty, and principal mobility, have been found to affect students' perceptions of school climate, as opposed to classroom factors. This indicates that students may be more affected by larger scale factors than smaller, localized factors (Mitchell et al., 2010). There are also potential mediating factors in terms of school climate and feelings of safety, such as parental involvement in school and role models (Boreen et al., 2011), which indicates that the various factors that may have an influence on school climate should be explored prior to implementing interventions aimed at improving safety and school climate.

Rules and Norms. School climate is related to rates of dropout, absenteeism, truancy, suspension, drug use, and violence/aggression (Bradshaw, Waasdorp, Debnam, & Johnson, 2014). As such, school climate has become an intervention target in order to help improve outcomes for students. Many aspects of school climate, such as positive relationships between students and school staff, as well as feelings of safety in the school, have been identified as areas for intervention. Some intervention approaches focus on order, safety, and discipline within the schools, including perceived safety, identified incidents of aggression, and knowledge and fairness of disciplinary policies (Bradshaw et al., 2014). Environmental factors were used in a study by Bradshaw and her colleagues (2014), wherein they investigated how various factors influenced school climate. These environmental factors included physical comfort, support,
disorder, and rules and consequences. These areas of school climate relate to the norms of the school, specifically how teachers and students understand, follow, and enforce rules, as well as the degree or order or disorder in the school related to student behavior and rule-breaking. In this study, school environment was noted to be an important component of a school's climate, which demonstrates that providing students with school-wide expectations of behavior and consistent behavioral consequences for infractions can create a supportive school environment. Further, schools that implement systematic behavioral programming related to rules and behavioral norms demonstrate significant declines in Office Disciplinary Referrals (ODRs) and suspensions, and can help to increase students' academic achievement (Bradshaw et al., 2014).

In a study by Caldarella et al. (2011), school-wide positive behavior support (SWPBS) was investigated as a means to determine how SWPBS affected school climate and student outcomes at the middle school level (Caldarella, Shatzer, Gray, Young, & Young, 2011). The components of SWPBS that were investigated include universal instruction in social skills, teacher praise notes for students, posting school roles, and proactive screeners for students at risk for emotional and behavioral disorders. The found statistically significant reductions in student tardiness, unexcused absences, and office discipline referrals, as well as improvements in teacher ratings of school climate (Caldarella et al. 2011). The results from this study, and others like it, provide support for the assertion that when schools are proactive, rather than reactive, the educational setting is less disrupted, students are less likely to fail, and valuable instructional time is less interrupted. When students are taught from the beginning what expectations the school has with regard to behavior and student conduct, students spend less time in the office and spend more time in the classroom, learning and participating in educational activities. When schools provide explicit, simple directives that everyone is expected to follow, as well as explicit
teaching of social skills and reinforcement of positive skills, students are more likely to behave in a prosocial manner that is conducive to a positive learning environment, and thus increases positive student outcomes across the board (Caldarella et al., 2011).

Fan, Williams, and Corkin (2011) investigated how individual-level variables and school-level variables affected perceptions of school climate, gathering information from students, parents, teachers, and administrators. Perception of school climate was measured using components such as order, safety, and discipline; fairness and clarity of school rules; and teacher-student relationships. Through the principal component analysis (PCA) of their school climate scale, they found that order, safety, and discipline had an alpha of .73, teacher-student relationships had an alpha of .71, and fairness and clarity of school rules had an alpha of .67 (Fan et al., 2011).

They found significant variation in student perceptions of school climate, both at the individual level and at the school level. Most of the variance (over 80%) was explained by individual-level factors. With regard to the fairness and clarity of rules scale, two significant interactions were reported: students’ having behavior problems at school differed between students who changed schools and repeated a grade, which suggests that the negative effect of a student’s behavioral problems at school on student perceptions of fairness and clarity of rules in school was smaller for students who changed schools or repeated a grade, who tended to feel more favorably toward the rules (Fan et al., 2011).

Past research has shown that students' perceptions that school rules are not fairly and consistently administered are related to student behaviors and suspensions (Haynes, Emmons, & Ben-Avie, 1997). This may be especially important for students of color, as well as students of low socioeconomic status (SES), in that research has indicated that a positive school climate is
especially important for black and low SES students, and minority and urban students are more likely to be suspended than white and suburban students (Haynes et al., 1997). Factors such as order and discipline increase the knowledge of appropriate student behaviors in the school setting; additionally, student-teacher relations and caring and sensitivity can increase students’ perceptions of positive school climate, as they feel that the adults in the school care about them and there is a level of trust between students and school staff (Haynes et al., 1997).

Physical Safety. A school’s physical grounds and environment can impact how students perceive the school, in terms of safety and feelings of belonging. Schools that are in disrepair, or have unsafe areas, such as broken objects, can lead to reduced learning, and poorly managed schools can lead to lower academic achievement (Kutsyuruba, Klinger, & Hussain, 2015). Physical aspects of a school building, such as quality of facilities and the absence of good lighting and air quality can affect student behaviors as well, having an influence on behaviors such as absenteeism, vandalism, violence, and smoking or drug use (Kutsyuruba et al., 2015). This link clearly points to the fact that students’ perceptions of their physical environment can have an effect on their behaviors, leading to either a more positive environment, or one in which students may feel unsafe.

Areas in a school that have little supervision from adults, poor lighting, or that are secluded may be areas in which students can engage in violent or unsafe behaviors, such as drug use and aggression (Kitsantas et al., 2004). These areas, such as bathrooms in which teachers cannot hear or see into, as well as dimly lit hallways, may be areas in which students aiming to engage in aggressive or antisocial behaviors are drawn to, and may be an area for school administrators to target for intervention.
When there are areas or facilities of a school that are not well cared for, such as areas that are not well cleaned, that have graffiti and other forms of vandalism, or that otherwise appear to be neglected, this may contribute to students’ believing that the school is not a safe place (McCoy, Roy, & Sirkman, 2013). This feeling of an unsafe environment based on external characteristics can be generalized to the greater community as well. When there is a high level of crime or danger in a community, many individuals feel unsafe and are uncomfortable with being in that environment (Anderson, 2016).

Safety measures in school may help to prevent outward instances of violence and crime, but may also increase perception of an unsafe school environment. Measures such as school police, metal detectors, bag and locker searches, and security cameras can potentially increase students’ fear, apprehension, and perception that their school may not be a safe place (Kitsantas et al., 2004). When inside the school building weapons are searched for, guards walk the halls, and there are bars on the windows, students may not feel like they are in a safe learning environment (Kitsantas et al., 2004). Children who live in areas where this is common may not be consciously aware of how these security measures affect their perceptions of their school’s climate. However, the research indicates that when the school environment appears more focused on addressing potential violence and crime than promoting students’ education and social-emotional well-being, students, parents, and other community members often do not feel welcomed and safe in the school building (Kitsantas et al., 2004).

**Social-Emotional Safety.** Schools with a positive school climate are often characterized by positive social interactions, high quality administrators and teachers, and a sense of community between staff and students (Kutsyuruba et al., 2015). Students are not only working to achieve academic or professional goals while at school; they are also learning how to interact
with others, and how to express their needs and their feelings, and how to get their needs met in a prosocial way. When students have positive relationships with each other, and with their teachers, they are more likely to feel safe. Indeed, when students and teachers are connected, the probability of school violence is decreased. When students feel supported, either by peers, teachers, or parents, they are more likely to feel safe while at school and achieve academic success. Strong, consistent support may help students feel safer, and may help to prevent aggressive or antisocial behaviors (Kutsyuruba et al., 2015).

In order to help students feel safe, schools often implement "zero tolerance" policies in order to combat violence, drugs, and other unsafe behaviors that may occur at school. Zero tolerance policies often state that any student caught engaging in a particular behavior, such as bringing a weapon to school, will be punished, and the punishments are always consistent and fair (APA, 2008). However, these policies that punish students for actions without taking context into consideration, and punitive measures often create an environment of systemic violence in the schools. Indeed, in schools where zero tolerance is affected, students may not feel a sense of belonging or safety at school (Kitsantas et al., 2004).

**School Geographic Location**

A school may be classified as urban, suburban, or rural, depending on its population and proximity to a major city. Urban schools are located within an area that has a population over 100,000, are located within a principal city, and are located within an urbanized area (has at least 50,000 people). Suburban schools are located in areas that are outside of principal cities, but can be within an urbanized area, and can have populations over 100,000. Lastly, rural schools are located in areas that are at least five miles from an urbanized area, and at least 2.5 miles from an urban cluster (U.S. Census Bureau, 2012).
Historically in the United States, schools located in urban areas have been characterized by a larger population of low-income students, larger class and school sizes, greater numbers of minority students, and greater numbers of students from non-English backgrounds (Wang, Walters, & Thum, 2013). Many of these student and school demographic factors that can be used to characterize urban schools have also been associated with lower school achievement (Wang et al., 2013). Researchers have long asked why schools located in urban areas may have lower student achievement, and what factors could be influencing the students, teachers, and larger school community.

Schools in urban areas are often housed in buildings that are at least 17 years older than suburban schools and 12 years older than rural schools across the United States (Shelton, Owens, & Song, 2009). This can impact perceptions of a positive physical school environment, and can also affect more practical measures of school safety and school climate. For instance, a school building in an urban area may be less likely to focus on internal measures of safety, such as fire alarms, and may be more likely to focus on community factors. Because urban schools are more likely to be located in an area with higher rates of crime and lower socioeconomic statuses, there may be activities and individuals in the surrounding community that may pose a threat to the school. Therefore, urban schools may be more likely to focus their efforts on measures designed to protect students from activities in the surrounding community, such as school fencing, security guards, and visitor sign-ins (Shelton et al., 2009).

Community-level variables are often important to consider when examining a school’s climate; for example, the research shows that students often generalize behaviors that they see and experience within their communities into the school. This may be positive in some communities, where positive and prosocial actions are often observed. However, this could
potentially lead to problems at school if children are being exposed to violence and crime in their home neighborhoods and communities. Neighborhood conditions, such as high rates of crime, poverty, and population transience are strongly predictive of school violence, as these experiences with community violence happen much more often than first experiences with violence in the school (Kitsantas et al., 2004). Students who reported feeling safe during their travels to and from school tend to perform at a higher level on standardized tests, which provides support that perceptions of neighborhood safety and the safety of one’s school in the community can have impact students' academic performance (Milam et al., 2010).

School geographic location is a potential contextual variable that may be considered in terms of additional risk for students, such as chronic poverty and exposure to violence in the community, as well as racial disparities in achievement and behaviors (Bradshaw et al., 2013). Indeed, a school’s proximity to urban areas can increase the risk for youth to be involved with gang membership, which in turn is associated with greater likelihood of being involved with violence, carrying weapons, and substance use (Bradshaw et al., 2013). These factors, although they may be considered community factors, can also influence the behavior of the students when they are at school, and may translate into school-based issues and conflicts. These community characteristics can have a powerful impact on school climate. Indeed, early exposure to violence is connected with future crime, physical and mental health problems, and poor academic performance (Milam et al., 2010), supporting the need for research and school practitioners to consider urbanicity and the surrounding community when determine effective interventions and practices for students.

Although it is important for school administrators to take steps to protect students from violence, these efforts may appear different, depending on the surrounding community of the
school. Many physical characteristics of a school's environment can vary due to geographic location. Fencing, metal detectors, and school resource officers are more likely to be present in urban and suburban schools, which may have an impact on perceptions of school climate (Shelton et al., 2009). Schools that have a greater number of students from ethnic and language minority backgrounds may have less security than schools with a greater majority population, but appear to require more need for security measures (Shelton et al., 2009). Additionally, school staff members who work in larger cities tend to view their school’s climate as less positive than those staff in suburban and rural areas (Jain et al., 2015). The presence or lack of security measures, as well as feelings of safety in the school and the surrounding community may have an impact on perceptions of school climate, potentially for students, staff, and parents alike.

School Type

During the years since No Child Left Behind was passed, schools have been held to a higher standard of academic achievement for their students and a higher level of accountability for school personnel. However, when schools do not perform at the expected level, there can be sanctions, which may further affect schools’ performance. Thus, various options for families have become available for them to choose from: public school, private school, or a charter school (Lubienski et al., 2008).

The atmosphere and environment can be different, not only between school types (e.g. public, private, charter), but also from individual school to school. Teachers' working conditions have become a focus for researchers seeking to understand more of the potential factors that can influence student achievement (Ni, 2012). Additionally, student achievement has also been thought to be different, especially between public and private schools (Lubienski et al., 2008). The positive or negative perceptions of a school based on its status as public, private, or charter
is thought to have an impact on the students who choose to attend these schools, as well as the atmosphere that is created by the students, staff, and family members of the school. Factors such as student demographics, faculty turnover, student-teacher ratios, and sector have all been considered important in terms of the study of student perceptions of school climate (Fan, Williams, & Corkin, 2011).

Private schools have typically been an alternative for parents and family members who are not satisfied with their child’s public school, or who wish to have their child attend a school affiliated with a religious organization, such as the Catholic Church (Choy, 1997). 80% of students who attended a public school in the late 1990’s were assigned their school placement based on residence; however, over half of students in public schools attended an assigned school that their parents chose (Choy, 1997).

Although charter schools are publicly funded schools, much like their typical public schools, they operate independently from local school districts in the area. Students are enrolled in these schools by the choice of their parents or family members; zones and residential areas are not a consideration for charter school enrollment. Because of the lack of conventional hierarchical structure of a district, charter schools tend to operate with somewhat more independence and autonomy, and have a greater level of control over the school environment and working conditions for their employees (Ni, 2012).

Charter schools are different from public schools in that charter schools must market themselves in order to maintain their funding; private schools generally rely on tuition and other fees from their students, as well as fundraising efforts, as their main source of funding (Choy, 1997). Because a charter school receives funding based on the number of students enrolled, they must be more responsive to the needs of the local community and the students who are interested
in enrolling (Ni, 2012). Although charter and private schools are not required to abide by all of the regulations imposed by states or districts, their teachers are often not as protected, in terms of workload, salary, benefits, and due process. This lack of oversight may translate into differences in school climate perceptions (Ni, 2012).

Although charter and private schools may appear to be a better option for students, especially those who attend lower performing schools, recent studies using the National Assessment of Educational Progress data (NAEP) indicate that academic achievement, particularly in mathematics, is similar or slightly higher in non-charter public schools (Lubienski et al., 2008). However, many of the differences between public and private schools may be attributed to student population differences, such as socioeconomic status, cultural and linguistic backgrounds, and personal and family attributes; thus, many of the differences seen between public and private school students are the most relevant differences found between public and private schools and their climates (Choy, 1997). In order to understand what factors may have an influence on a school’s climate, it may be useful to better understand the individual factors that differentiate public, private, and charter schools.

**Theoretical Framework**

**Ecological Systems Theory**

During the 1970s, Urie Bronfenbrenner proposed a theory of human development, which he called the Ecological Theory of Human Development (Pressley, 2007). This theory was based on ecology, the branch of biology concerned with interrelationships between organisms and their environment, and it came about in response to the very restrictive laboratory-based developmental theories of the time, and examined the effects that multiple factors and interactions of those factors that impact our development. Bronfenbrenner focused on the
subsystems of an individual’s ecological environment, and how those subsystems can interact and influence each other, and the individual himself (Pressley, 2007).

Bronfenbrenner's Ecological Theory of Human Development can be used to help explain how interrelated social structures, ranging from one's own self, to peers, home, school, and community all interact and influence an individual's behavior (Pressley, 2007). The ecological systems model has consistently been used as a framework with which to examine the multiple factors that can contribute to perceptions of unsafe environments at schools. These factors can range from socio-cultural demographics of an individual, to home influences, to broader environmental factors in the neighborhood and community. Understanding these factors, and how they influence the behaviors of individuals and the perceptions of students regarding their school environments, is paramount to understanding the climate of a school, to implementing effective interventions and making schools safer for students and adults alike. Bronfenbrenner's model can be used to infer that student perceptions of an unsafe school environment result from the mixture of family and individual characteristics, along with interactions between the five subsystems of the Ecological Systems Model: microsystem, mesosystem, exosystem, macrosystem, and chronosystem (Bronfenbrenner, 1992; Pressley, 2007).

The individual characteristics of a student, including his or her socio-demographic characteristics, which include age, ethnicity, and gender, as well as family characteristics such as parental marital status, education level, and socio-economic status can have a significant impact on the home, school settings, and neighborhood settings (Pressley, 2007). These effects can also impact the students' perceptions of school safety. Bronfenbrenner's microsystem contains physical features and interactions between the individual and others in the environment. Parent-child interactions at home and at school, as well as the social and physical environment of the
school, may influence students' perceptions of safety. Specifically, students who have strong attachments with their parents learn trust and are less threatened by aversive events. However, those individuals without strong, positive attachments to their parents were more fearful of victimization at school (Pressley, 2007).

The mesosystem takes into account the interactions between two or more Microsystems, such as the interactions between the home and the school (Pressley, 2007). Students whose parents are more involved in their school and social life generally feel that their education is valued and they gain additional support from this partnership. Additionally, there is greater continuity between the home life and school life, causing the student to feel more comfortable in both. The exosystem can include both the formal and informal social structures that influence or contribute to the settings in which the individual lives. Neighborhood conditions, whether positive or negative, can predict the likelihood of school violence occurring. Factors such as a high rate of poverty and crime, as well as an individual's perceptions of unsafe and disordered communities can contribute to students' feeling unsafe while at school (Hong & Eamon, 2012).

Bronfenbrenner's model can be applied to more thoroughly understand the different environmental and individual factors that relate to and affect bullying and aggressive behaviors in schools. Children are seen as the center of their individual world, with the other systems surrounding them (Bronfenbrenner, 1992). The microsystem is the pattern of activities, roles, and relationships that the child experiences. The mesosystem is the relationship between two or more Microsystems, such as relationships between parents, teachers, or the community. The exosystem is the social setting in which children can be influenced, but in which the student does not necessarily directly participate. The macrosystem is the consistencies of one's culture, including belief systems, norms, and ideologies (Bronfenbrenner, 1992; Pressley, 2007).
All of these systems can have an impact on the way an individual behaves, both in a general sense, as well as more specifically, in interpersonal relationships. In measuring the various systems of Bronfenbrenner's ecological model to apply to bullying behaviors, Lee (2010) broke the systems down into more specific variables and surveyed the participants using various instruments with high reliability that were sometimes modified to more strongly apply to the variables measured. Lee found that individual traits, such as the individual's tendency to engage in aggressive and fun-seeking behaviors, have a very important influence on bullying behaviors. Prior bullying victimization and fun-seeking tendency were highly predictive of bullying behaviors (Lee, 2010).

Because all of the systems in the ecological model are inter-related, an individual’s tendency to engage in certain behaviors can influence peer interactions, which in turn then influence school climate. In a circular manner, school climate is an important factor that can influence bullying behaviors. Lee found that individual tendencies can positively affect group tendencies for identical behaviors, which negatively affects school climate. Although Lee did not find a strong relationship between teacher interactions and bullying behaviors, it has been found that teacher interactions and perceptions have an influence on school climate; this combination of factors, although indirect, can affect students' behaviors (Lee, 2010). Additionally, positive family experiences were found to be highly positively correlated with bullying behaviors, which is inconsistent with previous findings. Lee suggests that individuals with less authoritarian parents and less exposure to domestic abuse generally have higher levels of self-esteem, which can be associated with bullying. However, this type of family situation is also related to a lower likelihood of a child being victimized (Lee, 2010).
Children’s negative experiences can impact the relationship between the home, school, and community, even if these experiences are historical or not directly related to the current population of students and families (Smith et al., 1997). Parental beliefs regarding the value of education are associated with positive beliefs regarding the value of being involved in the child’s education; parents' level of education, a two-parent family structure, and income were also related to positive perceptions of neighborhood and school climate (Smith et al., 1997). A positive school climate encourages parents to be involved, with fewer barriers and more school and home involvement. In these environments, teachers also encourage parents to be involved, and there is a positive home-school environment. Although family structure is associated with income, neighborhood, and school climate, there was not much influence on parents' level of involvement. However, a higher level of parental education is associated with a more negative perception regarding teacher efforts to encourage parental involvement. These parents were able to overcome their negative perceptions and remain involved in their child's school life (Smith et al., 1997).

Consistency in maintaining a relationship with the family and thus maintaining the ecology of the home-school environment is extremely important in providing support between the child’s family and educators. The school's climate, its leadership, and support can help shape an environment where parents feel comfortable and welcome being involved (Smith et al., 1997). Schools have the potential to act as a go-between to help reach students and their families, to provide support and to help strengthen families and build stronger communities. Although schools have the potential to exert an influence on the community, the community can also have an impact on the schools, and they can be markers of opportunities for children's education and success. When parents are involved in their children's education, they can do so in a variety of
ways, such as volunteering, implementing home-learning activities, and being involved in advocacy or governing roles. Research shows that parental involvement in their child's education can have many positive effects on the child, such as higher academic achievement and higher sense of competency. Recently, research on parental involvement has been influenced by changing views of schools' roles and family demographics, more focus on the ecology of schools, and the growing desire to promote healthy partnerships between the home and school settings to help improve children's cognitive, social, behavioral, and emotional development (Smith et al., 1997).

**Behavioral and Social Effects of School Climate**

Students who are victimized or who are perpetrators of aggressive acts at a young age are often forced into negative situations and are made to deal with many serious stressors which can disrupt coping and lead to negative interactions with peers and adults. Pouwels and Cillessen (2013) found that the prevalence rates of aggression are higher among low-income urban youth, and the consequences for these youth can be severe. Children who engage in aggressive behaviors have poor relational skills, and may feel rejected by peers. These children do not display positive behaviors as compensation for their aggressive behaviors, which may perpetuate the cycle of aggression (Pouwels & Cillessen, 2013). Some youth who are seen as popular by their peers may also use aggression as a method to maintain social status and a position of power over other students. Direct aggression, however, is associated with emotional dysregulation and few or no prosocial behaviors. Students who are victimized often experience similar behavioral outcomes, such as poor relational skills with others and social rejection; however, victimization can also lead to various internalizing behaviors, such as withdrawal, loneliness, anxiety, depression, and suicidal ideation (Pouwels & Cillessen, 2013).
When students feel as though they are being treated unfairly by adults in their school, such as a teacher or administrator, this can lead to feelings of resentment, anger, and anxiety (Hurford et al., 2010). As a result, these students may have a diminished level of interest or motivation in participating in school activities, they may become depressed or have issues with anxiety, and they may not feel safe. These situations can create a school climate in which students feel victimized and unsafe, which may lead to other issues and long-term problems for school personnel, students, and families (Hurford et al., 2010).

**Current Research on School Climate**

Existing research on school climate strongly suggests that many factors, such as teachers’ attitudes, their classroom practices, as well as the school’s environment at large play an important role in student behavior, such as rates of aggression, bullying behaviors, and victimization (Espelage et al., 2014). However, this research base is largely focused on one dimension of school climate, or an individual perspective, rather than utilizing information from multiple sources (e.g. students, parents, and teachers). This approach limits current research, and as school climate is a multidimensional construct, it is important to understand the most salient aspects of the school climate that are most associated with students aggression and victimization in order to understand how to successfully address those problems and develop effective solutions (Espelage et al., 2014).

The Authoritative School Climate Survey was evaluated by Konold et al., 2014, at both the individual student level and at the school level. This study is unique, as it was the first study to do so. Konold and his colleagues utilized an exploratory factor analysis, as well as a confirmatory factor analysis using a multilevel structural approach to model the statistical
nesting of students within schools. Convergent and concurrent validity was established, and the effects were found to be valid across gender (Konold et al., 2014).

Turner and her colleagues (2014) focused on the importance of school climate in terms of bullying perpetration and peer victimization. School-based factors of school climate, which included academic support and group support, as well as school identification, which is the extent to which students feel as though they belong or are connected to their school, are two distinct but related constructs which can have an effect on a school's overall climate. This study found that academic support and group support were the strongest predictors of a change in bullying or victimization. An inverse relationship between school identification and bullying was found, in that when students felt more connected to their school, bullying behaviors were found to decrease. Increases in depression or anxiety were predictive of an increase in bullying and victimization over time. This study provides additional support that interventions that target school climate, social identity with one's school, and psychological well-being of the individual student may be helpful to improve student outcomes (Turner et al., 2014).

Low and Van Ryzin (2014) found that school climate has a moderating effect on the impact of bullying prevention programs implemented in schools. A positive school climate was found to be inversely related to bullying-related attitudes and behaviors (Low & Van Ryzin, 2014). Without considering the effects of standalone interventions, these results support the notion that a positive school climate is the first step in helping students learn and grow while at school. However, coupling the effects of a positive school climate with additional interventions specific to bullying prevention, the likelihood of a student engaging in bullying behaviors at a school with these interventions in place is much lower than in schools without a positive school climate (Low & Van Ryzin, 2014). Despite the increased public focus of bullying in the schools
and laws enacted to prevent bullying and other forms of school violence, it is important to understand the actual frequency of such situations and thus, formulate a plan of action to address them.

**School Climate and Youth Violence in the United States**

According to the Centers for Disease Control (CDC), youth violence can be an extremely damaging occurrence. Although rates of youth homicide have decreased since the mid-1990’s, it is still a leading cause of death among youth aged 10-24 years old (Centers for Disease Control, 2014). Violence is also a prominent source of nonfatal injuries among children and adolescents; in 2011 alone, over 700,000 youth were treated in emergency rooms for assault-related injuries. Among youth aged 10-14 years in 2010, homicide was the fourth leading cause of death in the United States; for 15-19 year olds, it was the second leading cause of death. From 1994 to 2010, rates of homicide deaths among youth age 10-24 have decreased from an average of 15.2 per 100,000 to 7.5 per 100,000 people. However, homicide death rates for this age group have been consistently higher than among all ages combined (CDC, 2014).

Youth violence can have a profoundly negative effect on those involved, both directly and indirectly. When youth engage in violence, they are more likely to continue to engage in those aggressive and violent behaviors through adulthood. The second leading cause of death for adolescents and young adults aged 15 to 24 is youth violence, with 4,828 individuals aged 10 to 24 victims of homicide in 2010 alone. Those young people who experience non-fatal injuries due to violence may require emergency medical care, lasting rehabilitation and counseling, as well as disruptions in their academic and social lives. Communities are affected as a result of rising health care costs, lower property values, and the disruption of social services. Youth homicides
and assault-related injuries cost approximately $16 billion in medical costs and the cost of work loss (CDC, 2014).

**Student Violence and Aggression.** School violence is defined as violence perpetrated by youth that happens on school property, while commuting to and from school, or at school sponsored events, and can include bullying, hitting, gang violence, assault with a weapon, and other such actions (CDC, 2014). Although school-associated deaths are rare, 17 homicides of 5 to 18 year olds occurred at school during the 2009-2010 school year. Additionally, approximately 828,000 nonfatal victimizations occurred among middle and high school students in 2010, and one out of five students in middle and high school reported the presence of at least one gang at their school in 2009 (CDC, 2014). Investigations of school violence have shown that bullying acts and lesser forms of aggressive acts between students can precipitate more serious forms of violence, such as school shootings (Hurford et al., 2010).

The National Center for Education Statistics (NCES) conducted a Survey on Crime and Safety to investigate crime and violence in United States Public Schools during the 2009-2010 school year (Neiman & Hill, 2011). As part of a nationally representative random sample, 3,476 public schools were surveyed, with 2,648 schools returning usable questionnaires. Results indicate that the highest number of violent incidents against students occurred in middle schools, with 40 of 1,000 students experiencing some form of violence, which may include sexual assault and battery, being attacked or involved in a physical fight, threat of attack, or robbery. Thirty-nine% of middle schools also reported regular bullying (at least once per week, as compared to 20% of elementary and high schools that reported regular bullying (Neiman & Hill, 2011).

City schools, those in larger urban areas, reported the most gang activity (10%) compared with 5% of suburban and 2% of rural schools, and they also experienced less preparation in the
form of drills in the event of a school shooting (49%) when compared to suburban schools (58%). About one quarter of schools reported at least one incident of illegal drug distribution, possession, or use, and 14% reported the distribution, possession, or use of alcohol. Exposure to violence can have a severely negative impact on youth, especially African American youth who are living in low-income communities (Neiman & Hill, 2011). Violence exposure can include the youth witnessing, experiencing, or hearing about violent acts with the school or neighborhood microsystems. Using the Phenomenological Variant of Ecological Systems Theory (PVEST) to conceptualize these experiences, Patton, Wolley, and Hong (2012) emphasized individual experiences in a broad ecological context, with connections to risk and stressors, coping responses, and identity. Some factors that can affect the environment in which children and families live and function include socioeconomic status, ethnic heterogeneity, and residential mobility. Having low economic status, high ethnic heterogeneity, and high rates of mobility among families are linked to high rates of infant mortality, low birth weight, disease, and physical abuse. Negative conditions such as these, which can lead to violence risk factors, may explain why urban environments may have higher rates of violence (Patton et al., 2012).

**Risk and Protective Factors.** Current research is beginning to turn to the anticipation of youth violence and aggression using risk and protective factors as predictors of violent behaviors in order to determine what kind of prevention and intervention programs may be most effective if implemented in the schools (Solberg, Carlstrom, Howard, & Jones, 2007). Risk factors are those that may indicate a higher likelihood of committing violence, while protective factors may help guide individuals away from violence. Psychosocial risk factors can result in a greater vulnerability to experiencing violence and aggression, and can include individual factors, such as infant temperament, early initiation of delinquent and violent behavior, cognitive deficits, gender,
and race or ethnicity (Le, 2011). Family variables may also have a substantial impact, such as a family history of criminal behavior and substance abuse, family management problems, family conflict, and favorable attitudes toward crime and substance by parents, among many others (Kashani, Jones, Bumby, & Thomas, 1999).

Due to the high occurrence of deficit-based research, protective factors are not as commonly researched as risk factors (Solberg et al., 2007). However, some research is beginning to investigate strength-based interventions that are founded on promoting those protective factors that may already exist for many students and families. For instance, multiculturalism in the school was found to be supportive of positive youth development and academic outcomes when studied by Le in 2011. In an ethnically diverse sample of middle school students, it was found that the more youth felt and thought that their teachers and their schools supported and provided activities for diversity, the less likely the youth were to engage in interpersonal violence. The relationship between school multiculturalism and interpersonal violence was also strongly affected by positive peer interactions and civic engagement, which may indicate that school multiculturalism may be an important protective factor against youth violence (Le, 2011).

Individual protective factors may include self-efficacy, flexible coping strategies, and a sense of autonomy and responsibility (Kashani et al., 1999). Also included are relational factors, such as positive peer relationships and positive interactions between the child and his or her parents and family members. Social support resources, such as having at least one caring adult in one’s life, stable and consistent care, structure and supervision, as well as a connection to teachers who provide guidance and act as role models, are also often included as protective factors (Solberg et al., 2007).
The Centers for Disease Control report that there are many factors that can have an impact on the likelihood of a student engaging in violent acts at school or against other students. Those students who have a prior history of violence or who use tobacco, illicit drugs, or alcohol may be at greater risk for aggressive and violent behaviors (CDC, 2014). Additionally, students who demonstrate low academic performance, experience poor family functioning or live with poverty in their community are at potential risk for violent behavior. However, these risk factors are not always a clear predictor of violence, and several types of interventions have been researched and found to be effective at reducing children and adolescent engagement in violent behaviors, such as universal prevention programs that teach students about emotional regulation and self-awareness, positive social skills, conflict resolution, and teamwork (CDC, 2014).

Crises in the Schools

According to Caplan (1964), a crisis is a challenge to an individual's coping resources and can jeopardize his or her sense of emotional balance and stability. They become unable to deal with the crisis situation and its effects, and are under psychological distress. Problem solving and logical thinking become extremely difficult, if not impossible (Caplan, 1964).

In a school setting, these effects manifest themselves in different ways, due to the unique social makeup and community involvement of a school (Allen et al., 2002). Crises in the schools mean chaos, and both students and adults feel unsafe, threatened, and traumatized. They lose their sense of security and sense of power over their own lives. Types of crises that individuals may face in a school setting can include suicide, school shootings, gang activity, natural disasters, effects of drug abuse, physical or sexual abuse, and medical emergencies or long-term illness (Allen et al., 2002).
Crisis Intervention and School Climate. Researchers, school personnel, and United States legislators in the United States have begun to focus on how schools can prepare for crises, as well as prevention, response, and recovery from school crises (Brock, Nickerson, Reeves, Savage, & Woitaszewski, 2011). However, most schools are still struggling to ensure that they are meeting this need at the same time as they are able to adequately educate their students. Additionally, there is no federal law that directs how schools should include crisis prevention into their policies, and so most schools do not have such plans in place. Most school psychologists, who are often the school professionals put in charge of planning and implementing a crisis plan, have not been able to take a course on crisis intervention and prevention (Brock et al., 2011).

Although many individuals in the professional, public, and political spectrum have demonstrated interest and suggested potential crisis intervention and prevention strategies and practices, these strategies are not thoroughly researched or evidence-based (Brock et al., 2011). Some strategies, however, are consistent across publications, such as a comprehensive crisis management plan, a crisis response team comprising individuals from multiple disciplines and levels, as well as crisis drills for students and faculty members at school. Many schools use a "zero tolerance" approach to weapons and violence on school grounds, which has been criticized for a lack of empirical support and the potential for negative consequences. Although there is more support for educational approaches, such as violence prevention and peer mediation, there is some conflicting information as to their effectiveness (Brock et al., 2011).

The American Psychological Association (APA) created a task force, which investigated the literature on zero tolerance policies in schools (APA, 2008). Zero tolerance policies have been implemented for more than twenty years, but despite the high degree of the existence of
these programs, there is very little evidence to suggest that they are effective at increasing students' behaviors. Indeed, the opposite has actually been suggested, in that the use of these policies may affect students' relationship with the juvenile justice system in a negative way, and have negative effects on students' education (APA, 2008). Some controversy associated with zero tolerance policies, in relation to school safety and violence, suggest that even students who are not intending to commit a violent or aggressive act are unfairly punished under these rules, such as students who are expelled from school due to the presence of a small knife in the lunch bag for the use of cutting an apple at lunch (APA, 2008). It is clear that schools have the responsibility to implement programs and policies to protect their students; however, what is unclear is the best practice schools should follow to do so. Additionally, the leadership role of such an undertaking has long been contested, and school-based mental health professionals, such as school psychologists, are often asked to assume this role (Nickerson & Zhe, 2004).

Although much of the media focus in the last twenty years has been on school violence and tragedies, such as shootings and other such incidents, very little of the information that is disseminated is empirically based. The nature of school violence and crises makes this difficult, as these events are unpredictable and difficult to study; however, many are in agreement that schools must plan ahead for such occasions, and do their best to train their teachers and staff how to deal with crises and intervene appropriately to best help students (Adamson & Peacock, 2007). In 2003, there were nearly two million nonfatal crimes against middle and high school students; 150,000 were serious violent crimes such as rape, sexual assault, robbery and aggravated assault. Violence against students is only one type of crisis American school children may experience as part of an educational system. Unexpected deaths of teachers, staff, and students, as well as
violence and aggressive acts can have a significant effect on school climate (Adamson & Peacock, 2007).

Johnson and Johnson (1995) suggested principles to help schools become orderly and peaceful places in which high-quality education can take place, by teaching students to learn to manage conflicts without physical or verbal violence. Schools should go beyond violence prevention and conflict resolution training that stems from interventions that are poorly targeted, provide materials but do not focus on implementation, and do not fully comprehend social forces that push children toward violence (Johnson & Johnson, 1995). Attempting to eliminate all conflicts may also be problematic, as some conflicts may have positive outcomes, such as increased achievement, motivation to learn, higher level reasoning, long term retention, healthy social and cognitive development and fun students have in school. Conflicts may also enrich relationships, clarify personal identity, increase ego strength, promote resilience, and clarify how one needs to change. Interventions should create a cooperative context to resolve conflicts in a constructive way, foster communication and trust. Decreasing in-school risk factors should also be a priority, as factors such as academic failure, alienation from peers, and a high degree of poor psychological health can all contribute to school violence (Johnson & Johnson, 1995).

**School Climate Change and Interventions**

Amanda Cohen (2009), in order to make a real difference in American K-12 schools is to think and work in a transformative manner; that is, to work toward an emergent process that can result either in a new or restructured organization. This transformative process can involve individuals, groups, and organizations, and should result in profound changes for everyone involved. Although school climate has been a well-recognized concept in education for about one hundred years, only in the past 60 years has this concept been studied more intently, and thus given rise to the development of research-based assessment tools aimed at investigating the
quality and character of school life, and how this affects students, school personnel, families, and the greater community (Cohen, 2009).

Specifically, in the last twenty years or so, several universal preventive programs have been developed and implemented as a measure of intervention for a whole school, rather than for a smaller group of students. Programs have focused on many areas of child development and education, such as bullying prevention, academic achievement, and positive growth and development, and taken a preventive, rather than reactive, approach to school-based issues (Bradshaw, Koth, Thornton, & Leaf, 2008). Despite the fact that these programs and interventions appear to address very different areas of the school community, they all aim to change the context and environment of the school in order to have an influence on the behaviors and academic performance of the students in the school. Although many of these programs, strategies, and interventions have an evidence base and are widely implemented, there is wide variation with respect to the fidelity of implementation and the full integration of the program into the culture and context of the school (Rhodes, Camic, Milburn, & Lowe, 2009).

Bradshaw and her colleagues sought to understand the association between Positive Behavior Interventions and Supports (PBIS), school climate, and the quality of intervention implementation, through randomized controlled effectiveness trial (Bradshaw et al., 2008). A prerequisite for inclusion that the majority of school staff displayed a willingness and commitment to adopting a PBIS program, and thirty-seven schools in Maryland participated. 21 schools were randomized to the intervention, or PBIS, condition, and 16 were assigned to a comparison condition, in which the schools agreed not to implement a PBIS program during the study. The 21 PBIS schools created teams of core members (teachers and administrators), who received a two-day training. Topics included the formation and functioning of a PBIS team,
technical assistance from a behavioral support coach, creating clear definitions for positive student behavior expectations, and defining which expectations would be taught to all students. Additionally, training covered the development of a school-wide system to reward students for positive behaviors, agreeing upon a system to respond to negative behaviors, and the development of a system to collect, analyze, and utilize disciplinary data.

Bradshaw and her colleagues collected information using multiple methods and resources. Information regarding staff characteristics and demographic information was collected using a brief questionnaire, while information pertaining to school and student characteristics was collected from the state's Department of Education. The Organizational Health Inventory (OHI) for Elementary Schools was used to measure five aspects of a healthy functioning school, including institutional integrity, staff affiliation, academic emphasis, collegial leadership, and resource influence. The School-Wide Evaluation Tool was used to assess the implementation quality of the universal PBIS program. All data collection methods were used to collect baseline data, as well as data during the study. The analyses conducted by the research team indicated that PBIS training was associated with improvements in overall OHI, specifically in resource influence, staff affiliation, and academic emphasis. The intervention effects on the growth of the schools' organizational health were significant by the third year of implementation, with moderate effect sizes (.24 to .34). Based on the results of their study, Bradshaw et al. concluded that schools that implement a PBIS program may see initial benefits and improvements in school climate, but may also need to implement a secondary- or tertiary-level system of intervention to meet the needs of students who do not respond to the universal PBIS program (Bradshaw et al., 2008). This corresponds with the Response to Intervention framework, wherein schools
implement a multi-tiered system of supports and interventions for students at various levels of need (Sayeski & Brown, 2014).

Another study, conducted by Caldarella, Shatzer, and their colleagues in 2011, investigated the effects of school wide positive behavior supports (SWPBS) on the school climate and student outcomes of middle schools (Caldarella, Shatzer, Gray, Young, & Young, 2011). Student outcomes included student behaviors and academic achievement, as measured by grade point average (GPA). Data was collected from two middle schools, with over 300 teacher responses and 10,000 student responses. One school implemented a positive behavior support program in their school over a four-year period, while the other school did not implement a program. Caldarella et al. hypothesized that school climate and student outcomes would both demonstrate improvements as a result of the four-year implementation of SWPBS.

In this study, the SWPBS program included a multi-tiered system of supports, with components across a continuum, including universal, targeted, and individual behavioral interventions (Caldarella et al., 2011). In the school that implemented the SWPBS program, a team was formed and was responsible for training teachers and other school staff on the implementation of a school-wide intervention. Initial training was conducted over three half-days, with monthly meetings throughout the first year of implementation and biannual training for faculty for the last three years of implementation. The school’s SWPBS team was responsible for the procedures and practices to be used to define and teach the expectations of student behavior, reinforcement of those behaviors, data-based decision making, and school-wide screenings. Two measures of school climate were completed by teachers: the PBS-Supplemental Questionnaire (PBS-SQ) and the Indicators of School Quality (ISQ). School-wide data, such as
GPA and student behavior variables, such as tardiness, disciplinary referrals, and truancy, were also collected throughout the study (Caldarella et al., 2011).

The results of this study indicate that there was a statistically significant downward trend for the SWPBS school in terms of office referrals, tardiness, and truancy, although effect sizes were relatively small (.21 and under). However, effect sizes for the changes in school climate, as measured by the PBS-SQ, were moderate to high, with the largest effect showing that students had increased ability to learn and utilize prosocial behaviors (Cohen’s $d=1.51$). These results suggest that there is indeed a connection between the implementation of a school-wide positive behavior support program, and the improvement in a school’s climate and the behaviors of the students. Due to the high variability of the implementation of these school-wide intervention programs from school to school, however, it is necessary to conduct more studies that compare demographically similar schools that implement the same interventions with high treatment fidelity to ensure more descriptive and generalizable results (Caldarella et al., 2011).

Cohen (2009) states that school climate is a factor that influences academic achievement, youth development, teacher satisfaction, and the retention of school personnel (Cohen, 2009). Indeed, Caldarella et al. state that school climate is known in the research to have an impact on very nearly every aspect of a school, influencing students, teachers, school administrators, and major stakeholders, such as parents, family members, and community leaders (Caldarella et al., 2011). Measuring school climate can help school personnel and researchers develop a better understanding of what is important in a school, and what needs may need to be addressed (Cohen & Hamilton, 2009). Data on school climate can help inform changes that need to be made in the schools, including academic and nonacademic aspects of the school's climate. This data can provide in-depth information on the social and emotional state of the students and school staff, as
well as point out discrepancies between how the school is represented and how students or teachers personally feel, which can influence changes and inform goal setting (Cohen & Hamilton, 2009). It is necessary to take a comprehensive approach to help address students' needs and the needs of the school as a whole, and use the understanding of those needs to shape and formulate goals for school-based change (Cohen and Hamilton, 2009). Although not traditionally a primary focus of most schools, it is important to address social, emotional and ethical learning, in addition to primary academic skills because of the enormous impact that elements of school climate have been found to have on student achievement (Gregory, Henry, & Schoeny, 2007), mental health, and social-emotional development (Hong & Eamon, 2012), as well as teacher self-efficacy and staff retention (Espelage et al., 2014).

Measures of School Climate

In the schools, student demographics can be linked to differences in student perceptions of school climate. Boys are more likely than girls to display disruptive and physically aggressive behaviors, and they are also more likely to perceive their school environment as less safe. Additionally, younger students tend to feel more positively about their school's climate, a perception which changes and becomes more negative over time (White et al., 2014). Research since the 1990’s has supported the fact that students’ perceptions of their environment, especially in middle school, during adolescence, can have a strong impact on their development, as well as academic achievement, which is something that must be considered when investigating interventions and programs aimed at improving student behavior and academic achievement (White et al., 2014). Because of the strong impact that school climate can have on student outcomes, quality of education, as well as student and staff health, the Centers for Disease Control (CDC) recommends school climate reform as a data-driven strategy that promotes healthy relationships, school connectedness, and dropout prevention (CDC, 2009). However,
because of the lack of consistency, different states, school districts, and even school buildings may use different measures of school climate (Bear, Yang, & Pasipanodya, 2015)

**Authoritative School Climate Survey**

The Authoritative School Climate Survey is one that consists of items that assess school disciplinary structure and student support, which are two characteristics of school climate which have been linked to student engagement and the prevalence of teasing and school-based bullying (Espelage et al., 2014). The Authoritative School Climate Survey, created by Cornell in 2013, was designed to identify important aspects of school climate, as conceptualized by the authoritative discipline theory, which involves two key dimensions of school climate. (Konold et al., 2014).

**Comprehensive School Climate Inventory (CSCI)**

The National School Climate Center supports the use of a School Climate Improvement Process, which is based on a cyclical and continuous process to prepare, evaluate, understand findings, and formulate a plan of action. Then, the plan is put into place, and re-evaluated, with a continuous cycle of improvement (NSCC, 2015). This process has five goals:

1. Share a vision and plan for promoting, enhancing, and sustaining a positive school climate with the school community
2. Setting policies that specifically promote the development and continuous use of social, emotional, ethical, civic and intellectual skills, knowledge, dispositions and engagement, and a system to address barriers to learning and teaching, in order to encourage disengaged students to re-engage with their school
3. The school community has clearly identified, supported, and prioritized practices that promote the learning and positive social, emotional, ethical and civic development of
students, enhance engagement in teaching, learning, and school-wide activities, address barriers to learning and teaching and reengage those who have become disengaged, and develop and sustain an appropriate operational infrastructure and capacity building mechanisms for meeting this standard.

4. To create an environment where all members are welcome, supported, and feel safe, socially, emotionally, intellectually, and physically

5. To develop meaningful and engaging practices, activities, and norms that promote social and civic responsibilities and social justice

These goals are noteworthy, and appear comprehensive and strength-based, rather than focusing purely on the negative aspects of schools that need to be addressed in order to keep students safe. However, the question remains of how to measure these aspects of school climate. The Comprehensive School Climate Inventory is potentially a highly useful tool to help inform researchers, school-based professionals, and school employees about the needs of their schools, and what specific aspects of their school should be addressed.

The National School Climate (previously the Center for Social and Emotional Education) created the Comprehensive School Climate Inventory, which is a 64-item survey that was developed in 2002. This survey was developed to help provide information about a school’s climate and how parents, students, and school personnel perceive their school’s climate. Researchers have the option to use the CSCI either as a needs-assessment tool to help provide information to inform interventions, as well as a pre-post-test measure of change within a school over time (National School Climate Center, 2015).

The CSCI is available for use in elementary, middle, and high schools (Clifford, Menon, Gangi, Condon, & Horning, 2012) and respondents generally take approximately twenty minutes
to complete each survey. Students as well as parents and teachers are surveyed, with four core school climate dimensions measured: Safety, Teaching and Learning, Interpersonal Relationships, and Institutional Environment, as well as Leadership and Professional Relationships included in the school staff version of the CSCI (Clifford et al., 2012).

The first version of the CSCI was piloted to colleagues at the National School Climate Center, and was then piloted in 2003 with staff at Columbia University. A series of eight workshops were conducted, and teachers, principals, superintendents, and school mental health providers discussed and selected items from a pool created from a comprehensive literature search (Guo, Choe, & Higgins-D’Alessandro, 2011). Additionally, more items were suggested with a number of statements that related to important school climate areas, and eventually the survey was shortened and items were more operationalized for greater clarity. After more pilot surveys and revisions, in 2005, the second version of the survey was created. In late 2008, a third version of the study, which could be completed in less than twenty minutes and measures ten dimensions of school climate, was developed. This version has been administered to hundreds of schools and is part of the foundation of state measures for investigating and conceptualizing school climate. Although the survey is being continually administered, it is also being altered according to research and administrative feedback. However, the CSCI is one of the most recognized and comprehensive measures of school climate in existence, and is a scientifically reliable and valid tool that has been used by thousands of individuals in schools and in state Departments of Education (NSCC, 2012). Based on an investigation through Fordham University in 2011, the Comprehensive School Climate Inventory is considered one of the most useful school climate assessment instruments, given the results of its factor analyses, coefficient alphas for all three respondent group scales, and strong internal consistency (Guo et al., 2011).
Although school-based professionals, parents, community members, and government agencies believe school climate to be an important assessment and intervention focus, there is not one single, reliable tool that should be used across the country and that is available as such. It is debatable whether there should in fact be one tool for every school in the nation, considering differences in environment, demographics, and culture, and so the development and use of reliable, valid tools to measure school climate for smaller groups, such as states, counties, or school districts becomes even more important. This is the manner in which school psychologists, social workers, principals, parents, and politicians can inform their practices and interventions, the laws and policies that guide the way our schools are run, in order to create a safer, more enjoyable school experience for students, in which they will learn, develop, and become academically, socially, and emotionally capable individuals.

**Research Questions and Hypotheses**

The purpose of the following study was to investigate the following questions:

1. **How do students’ perceptions of safety predict overall perceptions of school climate?**
   
   It is hypothesized that students’ positive perceptions of social-emotional safety will predict a more positive school climate, and that physical safety will also predict a more positive school climate, but to a lesser degree. Additionally, it is hypothesized that students’ perceptions of rules and norms will not predict school climate.

2. **How is geographic location, as defined by the National School Climate Center, related to students’ perceptions of school climate?** It is hypothesized that students in suburban areas will rate school climate as more positive than students in either rural or urban areas.

3. **How does school type (public, private, or charter) and geographic location predict students’ ratings of school climate?** It is hypothesized that students in public, private,
and charter schools from suburban and rural areas will rate school climate more positively than those in urban areas. It is also hypothesized that students from charter and private schools will rate school climate more positively than public school students, across geographic locations.
Chapter 3

Methods

Although school climate has been a focus of educational research since the 1960's, there has been a renewed interest among educators, researchers, and policy makers with regard to indicators of students' academic and social-emotional development (Bear et al., 2015). As a result of this, school climate has become a new focus of federal and state government initiatives as well. School climate is often targeted in programs that are aimed at promoting the social, emotional and academic development of students, as well as to prevent problematic student behaviors (Bear et al., 2015).

Study Rationale

School climate can have an effect on the outcomes of the students in school, such as academic achievement, socialization, and personal and physical safety. Researchers have found that students' perceptions of their school environment can have effects on their psychosocial development, as well as their academic achievement (White et al., 2014). Although student perceptions of school climate are often assessed, the results are not always used as a target for interventions (Mitchell, Bradshaw, & Leaf, 2010).

The purpose of this study was to determine how students’ perceptions of safety, both physical and social-emotional, geographic location, and school type can affect ratings of overall school climate. Existing data from the Comprehensive School Climate Inventory (CSCI), collected by the National School Climate Center was used to determine if perceptions of school safety and school type were predictive of school climate. Additionally, the data was used to determine if urban, rural, or suburban geographic location had an effect on school climate ratings.

Specifically, the following questions were investigated:
1. How do students’ perceptions of safety predict overall perceptions of school climate? It is hypothesized that students’ positive perceptions of social-emotional safety will predict a more positive school climate, and that physical safety will also predict a more positive school climate, but to a lesser degree. Additionally, it is hypothesized that students’ perceptions of rules and norms will not predict school climate.

2. How is geographic location, as defined by the National School Climate Center, related to students’ perceptions of school climate? It is hypothesized that students in suburban areas will rate school climate as more positive than students in either rural or urban areas.

3. How does school type (public, private, or charter) and geographic location predict students’ ratings of school climate? It is hypothesized that students in public, private, and charter schools from suburban and rural areas will rate school climate more positively than those in urban areas. It is also hypothesized that students from charter and private schools will rate school climate more positively than public school students, across geographic locations.

Participants

The participants of this study were part of a national representative sample of elementary schools in the United States. The Comprehensive School Climate Inventory was administered to students, parents, and school staff to assess school climate. Thirty elementary schools responded to the 2011-2012 Comprehensive School Climate Inventory, with an average of 150 student responses, 70 parent responses, and 50 school staff responses collected from each school. The approximate total number of participants is 4,500 students, 2,100 parents, and 1,500 school staff,
totaling 8,100 responses altogether. Only the responses from student respondents are included in this study.

Student achievement and/or demographic data were collected by many of the participating schools, as part of the requirements of No Child Left Behind (NCLB). This data was provided to the National School Climate Center by seventeen of thirty schools; however, some schools did not provide any information, or provided limited information. Grades ranged from PreK to eighth grade; however, the majority of the schools that participated in the study served grades three through five. Three schools did not report the grades served. The average number of students in each school was 367, with 50% male and 50% female students, on average. Approximately 43% of students surveyed, averaged based on the number of schools that provided student demographic information, identified as African American, Asian, American Indian, Pacific Islander, or Latino. Twelve schools were located in urban areas of the United States, eleven in suburban areas, and seven in rural areas.

**Geographic Location**

According to the Census Bureau, there are two types of urban areas. The first, Urbanized Areas (UAs), are those that have at least 50,000 people. Urban Clusters (UCs) have between 2,500 and 50,000 people. Rural can encompass all population, housing, and territory that is not included within an urban area (US Census Bureau, 2012). The National Center for Education Statistics definition for school locale types was used to define participant schools' urbanicity. With the Census Bureau, definitions were revised and an "urban centric" classification system is now used, rather than a "metro centric" system. Four main locale categories are used: city, suburban, town, and rural (NCES, 2006). A city is classified as a territory located within an urbanized area and inside a principal city, and can be classified as
large, midsized, or small, and has a population over 100,000. Suburban areas are located outside of principal cities, but within urbanized areas, and can have population over 100,000. A town is classified as a territory inside an urban cluster that is located as little as ten miles or more than thirty-five miles from an urbanized area. Lastly, a rural territory is one that is at least five miles from an urbanized area and at least 2.5 miles from an urban cluster (NCES, 2006).

**School Type**

In this sample, the majority of school participants were public schools (18), with six each private and charter schools. Locations of the schools include Connecticut, Virginia, Utah, New York, Illinois, Washington, D.C., Ohio, Pennsylvania, and New Jersey. The data was collected over the course of the 2011-2012 school year.

**Measure: Comprehensive School Climate Inventory**

The Comprehensive School Climate Inventory is a 64-item survey that was developed in 2002 by the Center for Social and Emotional Education (CSEE), which is now the National School Climate Center. This survey was developed to help provide information about a school’s climate and how parents, students, and school personnel perceive their school’s climate. The CSCI can be used either as a needs-assessment tool that provides information to inform interventions or as a pre-post measure of change within a school over time (National School Climate Center, 2015).

There are versions available of the CSCI for use in elementary, middle, and high schools (Clifford, Menon, Gangi, & Horning, 2012), which take approximately twenty minutes to complete. Students are surveyed, as well as parents and teachers, with four core school climate dimensions measured: Safety, Teaching and Learning, Interpersonal Relationships, and Institutional Environment, as well as Leadership and Professional Relationships included in the school staff version of the CSCI (Clifford et al., 2012).
Content validity was established by way of an extensive literature review as well as workshops to develop specific survey items. Teachers, principals, school superintendents, and school mental health professionals participated in these workshops in order to assist in the development of the items. The survey’s construct validity was established through a confirmatory factor analysis (CFA), and there were significant correlations with various other measures of nonacademic risk, academic performance, and graduation rates, which supports the CSCI’s convergent validity. The original reliability for the CSCI is .94 for elementary schools, and .95 for middle and high schools (Clifford et al., 2012).

**Research Design**

A quantitative research design was used to further explore the differences that exist between geographic locations with regard to students’ perceptions of school climate, and the ways in which students’ perceptions of safety and the school type can predict school climate ratings.

**Dependent Variables**

The dependent variables for this study were the dimensions of school climate, as measured by the Comprehensive School Climate Inventory will include Safety, Teaching and Learning, Interpersonal Relationships, and Institutional Environment. Respondents used a 5-point Likert scale of Strongly Disagree, Disagree, Neither Agree nor Disagree (Neutral), Agree, and Strongly Agree, which indicated their level of personal agreement with each of the statements on an individual basis.

**Safety Composite**

**Rules and Norms.** Measurement consisted of six questions that queried whether school rules about physical violence, verbal abuse, harassment, and teasing are clearly communicated and consistently enforced, with norms for adult intervention. Reliability of this dimension; for
student data was .83. Some questions include: “In my school, there are clear rules against hurting other people”; “Adults in the school are fair about making sure that all students follow the rules against insults, teasing, and making fun of others”; and “Adults in the school will stop students if they see them hurting each other”.

**Sense of Physical Safety.** Measurement consisted of five questions which queried respondents about the sense of safety of students and adults in the school. Reliability of this dimension for student data was .73. Some questions for this scale reference physical fights (“I have seen students being hurt at school more than once by other students”), as well as physical aspects of the school environment (“I feel safe in all parts of the school”).

**Sense of Social-Emotional Security.** Measurement consisted of nine questions which queried respondents about students’ feelings of safety from verbal abuse, teasing, and exclusion. Reliability of this dimension for student data was .79. Regarding social-emotional safety, questions included the following: “Many students at my school go out of their way to treat other students badly”; Most students in my school are sensitive to the feelings of other students”; and “I have seen other students insulted, teased, or made fun of more than once in this school”.

**Teaching and Learning Composite**

**Support for Learning.** Measurement consisted of ten questions which queried respondents about the use of supportive teaching practices, such as constructive feedback and encouragement, opportunities to demonstrate skills and knowledge, and academic challenges. Reliability of this dimension for student data was .83. Specific questions included: My teachers help me to try out new ideas and think for myself”; My teachers give me individual attention on schoolwork; and “In my school, I feel challenged to do more than I thought I could”.
Social and Civic Learning. Measurement consisted of nine questions, which queried about the support for development of civic and social knowledge, skills, and dispositions, which include effective listening, problem solving, personal responsibility, and ethical decision making. Reliability of this dimension for student data was .83. Regarding Social and Civic Learning, questions such as “In my school, we have learned ways to solve arguments so that everyone can be happy with the result”, “I feel that I am better at working with other people because of what I learn in my school”, and “In my school, we talk about ways to be a good person”.

Interpersonal Relationships Composite

Respect for Diversity. Measurement consisted of four questions which queried respondents about mutual respect for individual differences, such as gender, race, and culture, at all levels of the school (student-student, adult-student, and adult-adult). Reliability of this dimension for student data was .72. Questions regarding this concept include: “Students in this school respect differences in other students (for example, if they are a boy or girl, where they come from, what they believe)” and “Students in this school respect differences in adults (for example, if they are a man or woman, where they come from, what they believe)”, as well as how adults behave.

Social Support- Adults. Measurement consisted of eight questions which queried respondents about the patterns of supportive and caring adult relationships for students, which included high expectations for student success, willingness to connect with students, and personal concern for students’ problems. Specific questions, such as “I feel that I am better at working with other people because of what I learn in my school”, “Adults who work in my school treat one another with respect”, and “If students need to talk to an adult in school about a
problem, there is someone they trust who they could talk to” were asked. Reliability of this dimension through for student data was .83.

**Social Support- Students.** Measurement consisted of five questions which queried respondents about patterns of supportive peer relationships for students including friends for socializing, problems, academic help, and for new students. Some of the following questions were included in this composite: “Students have friends at school they can trust and talk to if they have problems”; “Students try to make new students feel welcome in the school”; and “Students work well with other students in class even if they are not in the same group of friends”. Reliability of this dimension for student data was .67.

**Institutional Environment Composite**

**School Connectedness/Engagement.** Measurement consisted of eight questions which queried respondents about positive identification with one’s school and norms for broad participation in school life for students, family members, and school staff. Reliability of this dimension for student data was .78. Questions regarding school connectedness included the following: “I feel like I belong at my school”; “My parents and family members feel comfortable talking to my teachers”; and “My school tries to get students to join in after school activities”.

**Physical Surroundings.** Measurement consisted of six questions which queried respondents about cleanliness, order, and the appeal of facilities and adequate resources and materials for students. Reliability of this dimension for student data was .74. Specific questions related to schools’ physical environments included: “My school building is kept clean”; “We have space and equipment for after-school activities at my school”; and “My school building is kept in good condition.”
**Independent Variables**

Three independent variables were evaluated. For question one, students’ perceptions of safety within the school, as measured by the CSCI’s Safety composite, was evaluated as independent variables. This composite consisted of three subscales: Rules and Norms, Physical Safety, and Social-Emotional Safety. Question two utilized the independent variable of geographic location of the schools (urban, suburban, or rural), and question three utilized the type of school (public, private, or charter), as well as the geographic location of the school.

With regard to geographic location, the school responses were either classified as urban, suburban, or rural. Based on information and classification from the NSCC, urban schools are located within an area that has a population over 100,000, are located within a principal city, and are located within an urbanized area (has at least 50,000 people). Suburban schools are located in areas that are outside of principal cities, but can be within an urbanized area, and can have populations over 100,000. Lastly, rural schools are located in areas that are at least five miles from an urbanized area, and at least 2.5 miles from an urban cluster. Lastly, schools are grouped by type according to the manner in which they reported their status to the CSCI. Thus, there were three potential groups: public, private, and charter schools.

**Procedures**

The aim of the CSCI is to support schools’ ability to formatively evaluate and improve the climate for learning. The initial unit of measurement for the CSCI surveys was the individual respondent from each of the three populations. The final unit of analysis is the school, with individual responses aggregated at the school level by survey dimension (subscale). Eventually, scores and score profiles aggregated at the school level will be used by the NSCC to prepare reports and make normative inferences about where individual schools stand on the array of school climate constructs.
For this study, 30 elementary schools from various states and geographic locations (urban, rural, and suburban) were recruited to participate in the 2011-2012 Comprehensive School Climate Inventory, which was provided to schools in paper form. Students completed the survey in their classrooms, while parents and teachers were provided the survey and allowed to complete it individually. Although parent and teacher responses are valuable to the literature, these data are not included within this study.

**Data Analysis**

Question 1 was answered utilizing a multiple regression analysis. A multiple regression is done in order to predict scores on one variable (criterion) from the scores on multiple other variables (predictors). The independent variable for Question 1 included ratings of overall safety, specifically focusing on Rules and Norms, Physical Safety, and Social Emotional Safety. The dependent variable was overall School Climate, as rated by elementary school students.

Question 2 was answered utilizing a one-way analysis of variance (ANOVA). The ANOVA statistical test is used to determine whether there are any statistically significant differences between the means of three or more independent (unrelated) groups. Specifically, it tests the null hypothesis: $H_0: \mu_1 = \mu_2 = \mu_3 = \ldots = \mu_k$ where $\mu$ = group mean and $k$ = number of groups. If, however, the one-way ANOVA returns a statistically significant result, the alternative hypothesis ($H_A$) will be accepted, which is that there are at least two group means that are statistically significantly different from each other. Through preliminary data analysis, the assumptions of a one-way ANOVA were assessed: normality, homogeneity of variance, and independence.

Question 3 used the independent variables of school type (public, private, or charter) and geographic location (rural, urban, suburban), with ratings of school climate, as rated by elementary school students, as the dependent variable. Each independent variable was dummy
coded, as school type and geographic location are both categorical variables with more than two levels. This was done to ensure that the results are interpretable. Table 1 and Table 2 provide a breakdown of how the variables were dummy coded.

For Question 1 and Question 3, the following regression equation (main effects model) was used: \( y = b_1 \times x_1 + b_2 \times x_2 + b_3 \times x_3 + \ldots + c \); where \( Y \) = estimated dependent variable, \( c \) = constant (which includes the error term), \( b \) = regression coefficients and \( x \) = independent variables.

Standard multiple linear regression—the enter method—was used. The standard method enters all independent variables (predictors) simultaneously into the model. Unless theory sufficiently supports the method of entry, the standard multiple regression is the appropriate method of entry. Variables were evaluated by what they add to the prediction of the dependent variable which is different from the predictability afforded by the other predictors in the model. The F-test was used to assess whether the set of independent variables collectively predicts the dependent variable. R-squared, the multiple correlation coefficient of determination, was reported and used to determine how much variance in the dependent variable can be accounted for by the set of independent variables. The \( t \) test was used to determine the significance of each predictor and beta coefficients will be used to determine the extent of prediction for each independent variable. For significant predictors, every one unit increase in the predictor, the dependent variable will increase or decrease by the number of unstandardized beta coefficients.

Through preliminary analysis, the assumptions of multiple regression—linearity, homoscedasticity and absence of multicollinearity—was assessed. Linearity assumes a straight line relationship between the predictor variables and the criterion variable, and homoscedasticity
assumes that scores are normally distributed about the regression line. Linearity and homoscedasticity were assessed by examination of a scatter plot. The absence of multicollinearity assumes that predictor variables are not too related and will be assessed using Variance Inflation Factors (VIF). VIF values over 10 suggest the presence of multicollinearity.

The purpose of the following study was to investigate the following questions:

1. How do students’ perceptions of safety predict overall perceptions of school climate?
   It was hypothesized that students’ positive perceptions of social-emotional safety will predict a more positive school climate, and that physical safety will also predict a more positive school climate, but to a lesser degree. Additionally, it was hypothesized that students’ perceptions of rules and norms will not predict school climate.

2. How does geographic location, as defined by the National School Climate Center, affect students’ perceptions of school climate? It was hypothesized that students in suburban areas will rate school climate as more positive than students in either rural or urban areas.

3. How does school type (public, private, or charter) and geographic location predict students’ ratings of school climate? It was hypothesized that students in public, private, and charter schools from suburban and rural areas will rate school climate more positively than those in urban areas. It was also hypothesized that students from charter and private schools will rate school climate more positively than public school students, across geographic locations.
Chapter Four

Results

This chapter provides the results that were generated from the methodological design used to investigate the three research questions. The descriptive statistics and correlations are presented for all variables; the multiple regression analyses are presented for questions one and three, along with the ANOVA results for question two.

Descriptive Statistics

Information about the CSCI and its items, as well as Cronbach’s alpha values are reported in Table 1 below. For the overall sample for school climate (N=3015), and for each of the three independent variables (the scales of the Safety Composite, School Type, and Geographic Location) the descriptive statistics and correlations are presented in Table 2. The ratings of overall school climate for the sample ranged from 98 to 342 (M=266.36, SD=38.03), with higher scores indicating a more positive rating of school climate.

Correlations

Geographic Location. The three groupings of geographic location were correlated, with the urban group negatively correlated with the rural group (r=-.46; p < .01) and negatively correlated with the suburban group (r= -.48; p < .01). Additionally, the suburban group was negatively correlated with the rural group (r= -.56; p < .01).

Safety Composite. The composite of Safety was comprised of three dimensions: Rules and Norms, Sense of Physical Safety, and Sense of Social-Emotional Safety. The Rules and Norms dimension was positively correlate with Sense of Physical Safety (r=.33; p < .01) and with the Sense of Social-Emotional Safety dimension (r=.46; p < .01). Additionally, the dimensions of Sense of Physical Safety and Sense of Social-Emotional Safety were positively correlated (r=.64; p < .01).
School Type. The Public School grouping was negatively correlated with both the Charter School group ($r = - .86; p < .01$) and the Private School group ($r = - .42; p < .01$). The Private and Charter groups were somewhat negatively correlated ($r = - .11; p < .01$).

Research Question 1 Results

*How do students’ perceptions of safety predict overall perceptions of school climate?*

A multiple regression was conducted in order to determine if three components of the Safety Composite of the Comprehensive School Climate Inventory were able to predict overall school climate ratings of elementary school students.

Descriptive Statistics. The descriptive statistics for the three subscales of the Safety Composite (Rules and Norms, Sense of Physical Safety, and Sense of Social-Emotional Safety) are presented in Table 3. The mean Rules and Norms Score indicates that children rated a generally positive perception of rules and behavioral expectations at their schools ($M = 25.36$, $SD = 4.42$), as well as positive perceptions of their sense of physical safety at school ($M = 25.24$, $SD = 5.61$). Students’ ratings of their sense of social-emotional safety was somewhat lower ($M = 18.64$, $SD = 4.88$). The skewness and kurtosis was examined for each variable, and for Sense of Physical Safety and Sense of Social-Emotional Safety, there were no values greater than an absolute value of one, suggesting reasonably normal distributions. However, for Rules and Norms, the absolute values of skewness and kurtosis were just over 1, suggesting a somewhat positively skewed distribution. Because multiple regression is robust to violations of normality (Osborne & Waters, 2002), and the sample size for this group was large ($N = 3015$), the analysis was continued.
No extreme cases were discovered by using the Malahanobis’ distance, and homoscedasticity was examined utilizing several scatterplots, which indicated reasonable consistency of spread throughout the distributions.

The correlations between the three subscales of the Safety dimension were examined, and were found to be positive, and were small to moderate, ranging from .33 to .64. This indicates that multicollinearity is unlikely to be problematic. Additionally, the Variance Inflation Factor (VIF) values for all of the variables included in the analysis are under 10, which indicated that multicollinearity is not likely to be a problem. The correlations between the three subscales and the dependent variable, Overall School Climate, were all positive and indicate high correlations, ranging from .58 (Sense of Physical Safety) to .80 (Rules and Norms). This indicates that the data is suitably correlated with the dependent variable for examination through a multiple linear regression to be reliably undertaken.

The three Safety variables produced an adjusted $R^2$ of .80 ($F(3011) = 4101, p = .001$) for the prediction of overall School Climate. Together, these three predictors shared 80% explained variance. The strongest predictor was Rules and Norms ($\beta = .57^*$), followed by Sense of Social-Emotional Safety ($\beta = .33$), and then Sense of Physical Safety ($\beta = .18$) (see Table 5).

**Research Question 2 Results**

How does geographic location, as defined by the National School Climate Center, affect students’ perceptions of school climate?

There was a statistically significant difference between the groups, as determined by the One-Way ANOVA ($F(2, 3012)= 47.24, p=.000; r = .17$). However, the Levene’s test of Homogeneity of Variance was violated ($p < .05$); this indicates that the variances of the three comparison groups are statistically significantly different. Therefore, the ANOVA table was not
used for interpretation. Rather, the Robust Tests of Equality of Means, using the Welch test, was interpreted. In this case, Welch’s $F(2, 1905.66)=51.10, p<.05$. This indicates that there is still a significant difference between the group means, despite the violation of the Homogeneity assumption. The estimated omega squared ($\omega = .17$) indicated that although there were statistically significant differences between the group means, the effect size was small (Field, 2013). Therefore, practical utility of this analysis is limited.

Because equal variances could not be assumed, the Games-Howell comparisons test was used for post-hoc testing. The Games-Howell method is used in ANOVA to create confidence intervals for differences between the mean of each factor level, and does not assume equal variances and sample sizes. The Games-Howell test is performed on the ranked variables similar to other nonparametric tests, and since it does not rely on equal variances and sample sizes, it is often recommended over other approaches. These results indicate that students from suburban areas have a significantly more positive average rating of school climate (M, SD) than students from either urban (M, SD) or rural schools (M, SD), with an effect size of .17.

**Research Question 3 Results**

*How does school type (public, private, or charter) and geographic location predict students’ ratings of school climate?*

A multiple regression utilizing dummy variables was conducted in order to determine if school type (public, charter, or private) and geographic location (suburban, rural, or urban) was able to predict overall school climate ratings of elementary school students. Dummy coding was utilized due to differences in group sizes, in order to ensure that the results would be interpretable.
**Descriptive Statistics.** The descriptive statistics for the three school types are presented in Table (B). The mean score for Public schools indicates that children in a public school setting rated a generally positive perception of school climate ($M = .77$, $SD = .42$). Students from Charter schools had a somewhat lower score ($M = .18$, $SD = .39$), as did students from Private schools ($M = .05$, $SD = .22$). Students in Urban areas ($M = .28$, $SD = .45$) rated school climate as somewhat less positive than students in either Suburban ($M = .37$, $SD = .48$) or Rural ($M = .35$, $SD = .48$) areas.

Skewness and kurtosis was examined for each variable, and for the Suburban group and the Rural group, there were no skewness values greater than an absolute value of one, suggesting reasonably normal distributions. However, for the Urban, Public, Charter, and Private groups, the absolute values of skewness and kurtosis were over 1, suggesting both positively and negatively skewed distributions. Because multiple regression is robust to violations of normality, and the sample size for this group was large ($N = 4141$), the analysis was continued.

No extreme cases were discovered by using the Malahanobis’ distance, and homoscedasticity was examined utilizing several scatterplots, which indicated reasonable consistency of spread throughout the distributions.

The correlations between the three groups of School Type, and between the three groups of Geographic Location were examined, and were found to be negative, and were small to large, ranging from -.11 to -.86. The correlations between the different groups and the dependent variable, Overall School Climate, were both positive and negative, and was relatively small, ranging from -.07 (Urban; Private; Charter) to .17 (Suburban). The Variance Inflation Factor (VIF) values for all of the variables included in the analysis are under 10; this indicates that multicollinearity would not likely be a problem.
Two variables, one from each group, were excluded from the analysis as a constant; the two variables excluded were the Suburban group and the Public group, as they had the largest N (Field, 2013). The two remaining School Type variables, Charter and Private, and the two remaining Geographic Location variables, Rural and Urban, produced an adjusted $R^2$ of .04 ($F^{(3010)} = 35.11, p = .001$) for the prediction of overall School Climate. Together, these four predictors shared 4% explained variance. The strongest predictor was Rural ($\beta = -.21^*$), followed by Charter ($\beta = -.11^*$), then Private ($\beta = -.10^*$), and then Urban ($\beta = -.09^*$) (see Table 11).
Chapter 5

Discussion

Research Question 1 Discussion

A regression analysis was conducted in order to determine if student perceptions of safety could be used to predict overall perceptions of school climate. It was hypothesized that students’ positive perceptions of social-emotional safety will predict a more positive school climate, and that physical safety will also predict a more positive school climate, but to a lesser degree. Additionally, it was hypothesized that students’ perceptions of rules and norms will not predict school climate.

In all, the regression model significantly predicted school climate, with the three predictor variables accounting for 80% of the shared variance in perceptions of school climate. However, contrary to the stated hypotheses, Rules and Norms was the highest predictor, followed by Social-Emotional Safety, and then by Physical Safety.

Because the Safety composite was looked at by itself, there was no correlation between this composite and any of the others, nor between the Safety composite and other potential aspects of school climate, such as school type. These results support assertions in the research that a positive school climate is often strongly influenced by the behavioral expectations for students, along with clear and consistent guidelines for behaviors and consequences. Indeed, in a multilevel analysis of student perceptions of school climate, it was found that behavioral expectations or rules that were even somewhat unclear could have a negative effect on some students’ perceptions of overall school climate, and that students who were classified as having behavioral problems at school often perceived rules as less fair or clear (Fan et al., 2011). This
type of ambiguity with regard to behavioral and academic expectations can have a significant impact on how students behave and how they think about their schools.

In general, students who perceive their school’s disciplinary policies as fair and who are held to high expectations perceive a more positive school climate than students who believe their school to have unfair or inconsistent discipline and who are not challenged (Kitsantas et al., 2004). Often, schools that have challenging or difficult climates have a disorderly school environment in which school rules are vague and behavioral expectations for students are not clearly or consistently conveyed (Kutsyuruba et al., 2015). Students are also not always held to a high academic standard and they may not be taught prosocial behaviors, which can lead to a highly disruptive school environment in which students do not feel safe and able to learn. For many years, studies have identified factors related to school and organizational rules, orderliness, and school policies as related to the learning climate of a school and often even teachers and other adults in the school perceive behavioral aspects of students, such as orderly behaviors, as pertinent to a positive school climate (Kutsyuruba et al., 2015). Discipline and organization of a school are often identified as two components that may determine perceptions of safety, and therefore the school’s climate (Bosworth, Ford, & Hernandez, 2011).

**Research Question 2 Discussion**

With regard to differences between groups of geographic locations, it was hypothesized that students in suburban areas would rate school climate as more positive than students in either rural or urban areas. As determined by the one-way ANOVA, there was a significant difference between the three group means, and the comparison was significant regarding the comparisons between suburban and urban groups, as well as between suburban and rural groups. These results indicate that students who attend schools in suburban areas tended to rate their schools’ climates
as somewhat more positive than students in either urban or rural areas. However, there was no significant comparison between the urban and rural groups, which indicates that students from both geographic areas may rate their schools’ climates as somewhat less positive than students in suburban areas. Although schools in urban and rural geographic areas are by definition quite opposite, they share the similarity of dealing with unique challenges for their students, such as exposure to violence, criminal activity, and lack of resources.

Exposure to violence in one's typical environment, such as the neighborhood, is believed to cause decreases in academic achievement, and there are several studies that support the link between school success and violent environments. Schools located in neighborhoods that have high levels of crime (particularly violent crime) often result in students experiencing decreases in social-emotional learning and feelings of safety (McCoy, Roy, & Sirkman, 2013). Unfortunately, exposure to crime and violence is often a fact of life for many children, especially in urban areas, (McCoy et al, 2013). Research has found significant decreases in academic achievement when neighborhood violence increased, while increased perceived safety is associated with increases in academic achievement (Milam et al., 2010).

Although it may not be assumed that rural areas have the same level of crime that urban areas experience, there are many concerns that are unique to rural life. Rural schools are often located in small communities, remote from large metropolitan areas, and are often affected by the local economy, which may consist of agriculture or other place-based economy system (Hardré, 2012). Often, students in these areas live in families with incomes below the national average, which may affect their motivation to attend and do well in school.

Additionally, many rural school districts do not receive adequate funding, and serve additional roles, beyond simple providing education to children. Often, schools and districts in
rural areas provide jobs for a majority of the population, and they are the foundations of the community in terms of socialization, recreation, and culture. As an added challenge, many school-based professionals who work in rural areas are often isolated from colleagues and do not have regular access to professional development opportunities, and they must serve a student body that may be geographically widespread or difficult to access (NEA, 2017). If schools and districts in rural areas are not receiving the same level of support that a school in either a suburban or urban area might receive, it is likely that students are being underserved and under-resourced.

Affecting lasting change in schools that are either plagued by crime, low-income, underfunding, or overcrowding may not be a simple task; but understanding the aspects of these schools that students perceive as important, that may be operationalized and better understood, can help understand these schools’ climates and what their individual needs may be. School climate, although it can be broken down into specific components, is not a “one size fits all” concept. Each school’s climate is as unique as the schools themselves, and they require individualized strategies to help their students succeed.

**Research Question 3 Discussion**

A regression analysis was conducted in order to determine if school type and geographic location could be used to predict overall student perceptions of school climate. It was hypothesized that students in public, private, and charter schools from suburban and rural areas will rate school climate more positively than those in urban areas. It was also hypothesized that students from charter and private schools will rate school climate more positively than public school students, across geographic locations. The results from this analysis indicate that together, school type and geographic location are not able to sufficiently predict overall school climate. In
all, the four dummy-coded predictor variables (Charter, Private, Rural, and Urban) only accounted for 4% of the shared variance in overall school climate. Rural was the strongest predictor variable, followed by charter, private, and lastly private. All of the relationships between the independent variables and the dependent variable (overall school climate) were statistically significant; however, the relationships were relatively small, which indicates that these relationships are not clinically or practically, significant.

Because there is no “blueprint” for either grouping, different types of schools can look very different from place to place, and geographic location does not always determine population, level of funding, and other variables that may affect a school’s climate. Students in any geographic location, in a private school or a public school, all have different needs and expectations for school; they have their own family culture that helps shape their world, and they have different aspirations and goals. These individual differences can have an important impact on a student’s perception of their school’s climate, as has been shown in the research (Bradshaw et al., 2015; Cohen & Hamilton, 2009; Johnson et al., 2016).

**Implications for Educational Outcomes**

School climate has long been linked to outcomes for students. Schools with more positive and inclusive school climates often have students that perform higher academically, and who have more positive social and emotional growth (Cohen, 2009). These students tend to perform better on standardized tests and are able to meet and exceed adult expectations for their academic achievement (Milam et al., 2010; Patton et al., 2012). Additionally, in schools with a positive school climate, students are explicitly taught that they have value, and that other people have value as well; these values and norms help students engage with their schools and feel respected,
increasing their confidence levels and positive development of social and emotional skills in children (Cohen, 2009).

**Implications for Teachers and Administrators**

For students to do well in schools, change often must come from the top and make its way down to individual school buildings. Administrators have the responsibility of supporting schools and the personnel within to develop and promote positive school climate efforts, and to help ensure that schools are enforcing rules and providing for students’ needs within the academic, social, and emotional contexts. However, in order for school climate efforts to be successful, detailed research must be done for individual settings to help determine how and why a particular program may work for each environment and student population (Beets et al., 2008).

In order for a program to be considered effective, it must be delivered with fidelity; this type of commitment is often one that teachers feel ill-prepared for, especially in schools with high behavioral needs. However, teachers are often the most effective, as their consistent interaction with students in the classroom is a prime opportunity to teach and reinforce concepts that can help improve school climate (Beets et al., 2008). Therefore, it is extremely important for teachers, school personnel, and school administrators to understand how their own ideas, values, and behaviors can affect overall school climate, and their students’ perceptions, in order to truly be able to effect lasting positive change for students (Powell, Powell, & Petrosko, 2015).

**Study Limitations**

This study contributed to the literature in a unique way, with its focus on determining how identified aspects of school climate (safety, geographic location, and school type) can be used to further examine school climate as a concept, and how to best predict and understand school climate. However, it is important to note some limitations of this study. First, the analyses
that were conducted have their own limitations. The ANOVA test assumes equal variances between groups; this assumption was not met, although ANOVA is considered robust to violations of homogeneity (Field, 2013). There was also a great difference in standard deviations for Question 2, which meant that the ANOVA table was unable to be used; instead, the Welch test was interpreted.

This study used data that had been collected several years ago, which already contained specific scales and limited the variables that could be investigated for the study. Additionally, although parent and school personnel data was also collected, the three groups of survey participants were not able to be compared, as there was no grouping variable. Because the student data set contained the majority of cases, it was chosen for analysis; therefore, the results of this study represent only one group’s ratings of school climate.

**Future Research**

Future studies that utilize the data from the National School Climate Center should consider investigating both parent perceptions and school personnel perceptions of school climate, whereas this study only focused on student perceptions. Investigating the link between school climate and academic achievement, as well as the link between school climate and behavioral outcomes, would add much to the literature. Additionally, future studies may choose to consider alternative variables that may be used to predict school climate, such as specific location (i.e. state) and the specific laws that govern that school in order to determine how state educational laws and policies can affect a school’s climate.

The current body of research posits that school climate is an important factor to consider when providing an education to children. Teachers, school administrators, and other school personnel, as educators, are responsible for providing for the academic needs of the students in
their schools. However, they are also in a prime position to bridge the gap between social-emotional learning and more positive outcomes for their students, as well as to improve relationships between families and schools. As the research into school climate continues to progress, it will become even more important to develop a thorough understanding of the ways in which school climate affects students’ academic and behavioral learning, and how schools may be able to treat school climate as an intervention focus for systems-wide increases in positive student outcomes.
References


Table 1

Scale Information

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Subscale</th>
<th>Number of Items</th>
<th>Middle School</th>
<th>High School</th>
<th>Elementary</th>
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<tr>
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<td>.72</td>
<td>.73</td>
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<td>.67</td>
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<td>.79</td>
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<td>.87</td>
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Table 2

*Descriptive Statistics*

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<td>3. Social Emotional Safety</td>
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<td>-.02</td>
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<td>9. Charter</td>
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**p < .01
Table 4

ANOVA for the Regression Equation, Safety Composite on Overall School Climate

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<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
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<tr>
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<td>1167532.34</td>
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<td>284.63</td>
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*p < .01
### Table 5

*Summary of Simple Regression Analysis for Variables Predicting Overall School Climate (N= 3015)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rules and Norms</td>
<td>5.05</td>
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<td>.57*</td>
</tr>
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<td>Sense of Physical Safety</td>
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<td>Sense of Social-Emotional Safety</td>
<td>2.56</td>
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<td>.33</td>
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</tbody>
</table>

\[ R^2 \quad .80 \]

\[ F \quad 4101.99^{**} \]

\*p < .05  
\**p < .01
Table 6

*Dummy Coding: Geographic Location*

<table>
<thead>
<tr>
<th>Geographic Location</th>
<th>Dummy Coded Variable 1</th>
<th>Dummy Coded Variable 2</th>
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</thead>
<tbody>
<tr>
<td>Suburban** (coded as 2)</td>
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<td>0</td>
</tr>
<tr>
<td>Urban (coded as 1)</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Rural (coded as 3)</td>
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</table>

*Note.** Comparison: has the majority of cases
Table 7

*Dummy Coding: School Type*

<table>
<thead>
<tr>
<th>School Type</th>
<th>Dummy Coded Variable 1</th>
<th>Dummy Coded Variable 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public** (coded as 1)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Charter (coded as 2)</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Private (coded as 3)</td>
<td>0</td>
<td>1</td>
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</tbody>
</table>

*Note.* **Comparison: has the majority of cases**
Table 8

*Summary of ANOVA Between Overall School Climate and Geographic Location*

<table>
<thead>
<tr>
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<th>F</th>
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<td>Within Groups</td>
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<td>4359605.86</td>
<td>3014</td>
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<td></td>
</tr>
</tbody>
</table>

*p < .05
Table 9

ANOVA Comparisons of Overall School Climate and Geographic Location

<table>
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<tr>
<th>Group</th>
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<th>Mean</th>
<th>SD</th>
<th>Games-Howell Comparisons</th>
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</thead>
<tbody>
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<td></td>
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<td></td>
<td>Suburban</td>
</tr>
<tr>
<td>Suburban</td>
<td>1103</td>
<td>275.04</td>
<td>34.11</td>
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</tr>
<tr>
<td>Urban</td>
<td>848</td>
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<tr>
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<td>38.58</td>
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</tbody>
</table>

*p < .05
Table 10

ANOVA for the Regression Equation, School Type and Geographic Location on Overall School Climate

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
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</thead>
<tbody>
<tr>
<td>Regression</td>
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*p < .05

Predictors: (Constant), Urban, Rural, Private, and Charter
Table 11

*Summary of Simple Regression Analysis for Variables Predicting Overall School Climate (N= 3015)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>( \beta )</th>
</tr>
</thead>
<tbody>
<tr>
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<td>-.10*</td>
</tr>
<tr>
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<td>Urban</td>
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<tr>
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</table>

\( R^2 \) .04

\( F \) 35.11**

*p < .05
**p < .01