

THE PREDICTIVE RELATIONSHIP BETWEEN SCHOOL CLIMATE AND SELF-
PERCEIVED STRESS LEVELS AMONG FOURTH- AND FIFTH-GRADE TEACHERS

by

Andrea Wood Eason

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

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APPROVED BY:

Amy Jones, Ed.D., Committee Chair

Kurt Michael, Ph.D., Committee Member

ABSTRACT

Educational research continues to show that teachers are leaving the field of education in large numbers for a variety of reasons. One documented reason for teacher attrition is job-related stress. This correlational, predictive study examined the relationships between the predictor variables of school climate (collaboration, decision-making, instructional innovation, school resources, and student relations) with the criterion variable of teacher stress among fourth- and fifth-grade public school teachers from across the United States. A convenience sample of 68 teachers participated in the study by completing the Revised School Level Environment Questionnaire (R-SLEQ), which measured school climate, and the Teacher Stress Inventory (TSI), which measured teacher stress. A multiple regression analysis was used to determine if a significant predictive relationship exists between school climate and teacher stress. Data analysis revealed a significant relationship between school climate and teacher stress. Of the five school climate factors studied, decision-making was found to be the only significant predictor. Implications of the research included the need for districts and school leaders to cultivate a positive school climate and provide opportunities for teachers to be involved in school-based decision-making as a means to reduce teacher stress.

Keywords: teacher stress, school climate, upper elementary, Revised School Level Environment Questionnaire (R-SLEQ), Teacher Stress Inventory (TSI)

Copyright Page

Dedication

I share this accomplishment with and dedicate this work to my family – Max, Annie, Luke, and the little one still growing.

Acknowledgments

All glory be to God. Finalizing this dissertation is the culmination of not only many years of hard work, but of God opening doors and providing opportunities for me to continue my education and grow my faith. May I always remember to use the gifts God has so graciously given me for His glory.

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List of Abbreviations

Job Demand-Control-Support model (JDCS)

Revised School Level Environment Questionnaire (R-SLEQ)

Teacher Stress Inventory (TSI)

CHAPTER ONE: INTRODUCTION

Overview

A school's goal is to improve the quality of teaching and learning, and teachers are a critical piece to reaching this goal. Students deserve good teachers, as teachers are the most important school-based factor contributing to students' achievement and development (Chetty, Friedman, & Rockoff, 2014; Sawchuk, 2011b; Wright, Horn, & Sanders, 1997). In the last two decades teachers are leaving the field of education in startling numbers. On average, the turnover rate in education is 13.2%, which is about 2% higher than in other professions (Bland, Church, & Luo, 2014). Novice teachers are particularly likely to leave the profession, with statistics showing between 20% and 50% of teachers leave the teaching profession within the first five years (Gray & Taie, 2015). Teacher attrition, or the voluntary exiting of the field, is problematic to the state of education because teacher retention affects student achievement (Kini & Podolsky, 2016; Young, 2018). One potential factor for the mass exit from the profession is that teaching is widely known as a challenging and stressful occupation (Kuntz, Naswall, & Bockett, 2013). To this effect, working conditions appear to be a prominent factor, even more important than wages, in the decision to remain at, or leave a given school (Bland, Church, & Luo, 2014). The purpose of this quantitative correlational study was to explore the relationship between school climate and teachers' self-perceived stress levels.

This examination of school climate and its relationship to teacher stress is significant to the field of education because it may provide insights into how to better support teachers in the classroom and decrease the number that leave the teaching profession due to work-related stress. The following sections of Chapter One will highlight important background information about

the study, as well as state the problem, purpose, and significance of the study. The chapter concludes with the research question and definitions of terms.

Background

Since Anderson's (1982) pioneering paper, "The Search for School Climate: A Review of the Research," educators and researchers alike have focused their attention on school climate. Numerous studies over the past 30 years have examined and evaluated the phenomenon of school climate and its impact on various student and teacher outcomes (Thapa, Cohen, Guffey, & Higgins-D'Alessandro, 2013). Despite the growing body of research on the topic, there is no one agreed upon definition for the term school climate. In fact, many times the terms *school climate* and *school culture* are used interchangeably, and while they are related and overlap in some ways, the two terms are independent. Van Houtte (2005) asserted that school culture is a component of climate; whereas, others posit that school climate is better understood as a level of school culture (Schoen & Teddlie, 2008). For the purpose of this study, school climate is defined as teachers' perception of the quality and character of school life, which is a reflection of a school's norms, values, expectations, interpersonal relationships, teaching and learning practices, and organizational structures ("National School Climate Center," n.d.).

Even with the general consensus that school climate is critical, problems abound. Schools are complex entities with many moving parts. Administrators, teachers, parents, community members, and students all impact the school climate and thus the capacity to fulfill the mission of the school, which is to advance student learning. Teachers are central to advancing student learning, are at the heart of student outcomes, and are in the best position to make decisions about students' needs and learning. Yet, there is a mass exodus of teachers leaving the field of education, and according to the Wallace Foundation (2013), teachers that

leave often cite poor school climate as a reason. Another confirmed contributor to turnover is teacher stress (Prilleltensky, Bessell, & Neff, 2016).

Selye (1976) was one of the first researchers to focus on stress in the 1930s. He described stress as the body's non-specific response to any demand. Stress is the result when an individual perceives a situation as threatening, and they are unable to cope. Sutton (1984) went on to describe teacher stress as any characteristic of the school environment that poses a threat to a teacher. For the purpose of this study, teacher stress is defined as negative emotions, such as depression, anger, anxiety, tension, or frustration felt by a teacher as a result of teaching and its related responsibilities (Kyriacou, 2001). Throughout the literature, teacher stressors have been studied and grouped in various ways. Sutton categorized teacher stressors into role demands, instructional problems, and interpersonal relationships. Haydon, Leko, and Stevens (2018) noted that the top four sources of stress for teachers were administrative interactions, individual student challenges, teacher perceptions, and state mandates. Another, broader way to group teacher stressors is by environmental and personal factors. Environmental factors include job related factors such as student behavior, accountability measures, and testing; whereas, personal factors include individual specifics such as personality.

The consequences of teacher stress are far-reaching and impact not only the teacher but students as well. One consequence for teachers is job burnout. Teacher stress can lead to burnout, which is the emotional, mental, and physical exhaustion that results from job-related stress (Blasé, 1982). Ultimately, prolonged stress and burnout can cause teachers to leave the profession. Compared to other occupations, the educational field has one of the highest turnover rates (Ingersoll, 2003). The repercussions of teacher turnover are widespread. For instance, districts must hire and prepare new teachers, and students fail to have experienced teachers in the

classroom. In some cases, as when a teacher leaves midyear, students' instruction is interrupted. Kini and Podolsky (2016) examined 30 studies that analyzed the effect of teaching experience on student achievement. They concluded that teacher turnover and lack of teaching experience negatively impact student learning and put students at an educational disadvantage. On the other hand, they found that teachers' effectiveness increases more rapidly when they teach in a positive work environment with conditions that support strong collegial relationships.

Guided by the Job Demand-Control-Support model (JDCS; Karasek & Theorell, 1992), this study sought to examine the relationship between teachers' self-perceived stress levels and school climate. Specifically examining the relationships between teacher stress and the five subcategories of school climate (collaboration, decision-making, instructional innovation, school resources, and student relations) adds to the existing body of knowledge and may help pinpoint areas for districts and schools to improve upon in an effort to decrease teacher stress and increase teacher retention.

Problem Statement

A recent national survey reported that 46% of teachers claim high levels of stress daily, which was found to be the highest rate, tied with nursing, of daily stress among all occupational groups (Gallup, 2014). A 2005 study examined 26 occupations and found that teaching was the second most stressful job, behind only those who work in ambulances (Johnson et al., 2005). Whether first or second, research overwhelmingly concludes that teaching, especially in today's world, is a stressful career. This is not surprising given that teachers are responsible for meeting the academic, social, and emotional needs of a diverse group of students on a daily basis, while simultaneously being inundated with a myriad of other administrative requirements.

On average, retirement accounts for about one-third of teachers who leave the field; while life changes, staffing decisions, and job dissatisfaction account for the other two-thirds of all attrition (Sutcher, Darling-Hammond, & Carver-Thomas, 2019). As a general rule, teachers are overworked and underpaid. Improving working conditions, including aspects of teaching such as teaching load, resources, administrative support, and teacher input in decision-making, may be a way to retain teachers and reduce teacher stress. Research indicates that stress has negative consequences on teachers and on students (Ingersoll, 2012; Ronfeldt, Loeb, & Wyckoff, 2013). One effect of teacher stress is that it leads to teachers leaving the profession prematurely; this is a documented and growing problem in the field of education today (Brunsting, Sreckovic, & Lane, 2014). Conservative reports note that the cost of replacing teachers in the United States is over two billion dollars (Clandinin et al., 2015). Not only is replacing teachers costly, but high teacher turnover has negative implications for the education system as a whole. One of the most significant repercussions of teacher turnover is decreased student achievement (Kini & Podolsky, 2016; Ronfeldt, Loeb, & Wyckoff, 2013). When teachers leave the classroom and there is a teacher shortage, schools and school districts are left to fill the positions and less qualified teachers are sometimes the quickest answer to the problem (Sutcher, Darling-Hammond, & Carver-Thomas, 2019). Using 2016 and 2017 data, the Learning Policy Institute (LPI) reviewed teacher workforce reports by state and found that at least 87,000 positions were not filled by a fully certified teacher (LPI, 2017).

According to a recent qualitative study examining special education teachers, stress affects teachers' physical and mental health and wellbeing (Haydon, Leko, & Stevens, 2018). Haydon, Leko, and Stevens recommended that future researchers examine a different sample of participants in order to study sources of stress. The current study sought to examine general

education teachers rather than special education teachers. Greenberg, Brown, and Abenavoli (2016) noted that school organization, job demands, work resources, and social and emotional competence were the four main sources of teacher stress. The current study built upon the existing knowledge of stress sources by examining the factors of school climate as potential stressors. More research is needed at the organizational level in order to reduce the current teacher crisis. Despite various studies on school climate and teacher stress (e.g. Akram, Shah, & Rauf, 2018; Allen, Grisby, & Peters, 2015; Wang & Degol, 2016), a gap in the literature exists on the relationship between the two factors. Additionally, more research is needed in studying school climate from teachers' perspectives (Capp et al., 2020). The problem is that large numbers of teachers continue to leave the field of education every year, and it is critical to understand the relationship between school climate and self-perceived stress in order to better understand how schools can support teachers and help them remain in the field longer.

Purpose Statement

The purpose of this quantitative, correlational study was to examine the predictive relationship between school climate and self-perceived stress. Few recent studies have looked at these two variables in conjunction and with the unique population of teachers from across the country. This study focused on whether a significant relationship existed between school climate and teachers' self-perceived stress levels in a sample of self-contained, general education, fourth- and fifth-grade public school teachers from across the United States.

In this study the predictor variable (X) was overall teacher-perceived school climate, as well as the subcategories of collaboration, decision-making, instructional innovation, school resources, and student relations. Teacher-perceived school climate is generally defined as teachers' perception of the quality and character of school life, which is a reflection of schools'

norms, values, expectations, interpersonal relationships, teaching and learning practices, and organizational structures (“National School Climate Center,” n.d.). The criterion variable (Y) was teacher stress, which is generally defined as negative emotions such as depression, anger, anxiety, tension, anger, or frustration felt by a teacher as a result of teaching (Kyriacou, 2001). The two instruments used in this study were the Revised School Level Environment Questionnaire (R-SLEQ) and the Teacher Stress Inventory (TSI).

Significance of the Study

Studies have been conducted linking teachers’ perceptions of school climate to students’ behavior (Berg & Cornell, 2016; Konold, Cornell, Shukla, & Huang, 2016), attendance (Van Eck, Johnson, Bettencourt, & Lindstrom Johnson, 2017), and academic achievement (Konold & Cornell, 2015). Research has also produced evidence that school climate is correlated to teachers’ commitment, job satisfaction, and teaching efficacy (Collie, Shapka, & Perry, 2012). There is a need for further research on school climate and teacher outcomes (Akram, Shah, & Rauf, 2018; Allen, Grisby, & Peters, 2015; Wang & Degol, 2016). The intent of this specific study was to focus on whether there was an overall significant relationship between teacher-perceived school climate and teacher stress and for the subcategories of collaboration, decision-making, instructional innovation, school resources, and student relations and teacher stress. Examining the relationships between the different subcategories of school climate and teacher stress allowed the researcher to understand which factors of school climate most impact teacher stress. These findings can be useful for improving school climate and reducing teacher stress. Additionally, this study included teachers from across the United States rather than from one singular district in an effort to make findings more generalizable. Specific school districts often have unique mandates and initiatives that could potentially impact teachers’ perceptions

when assessing school climate. The population for this study was drawn from teachers across the United States from a multitude of school districts.

Research Question

RQ: How accurately can teachers' stress be predicted from a linear combination of teachers' perceived school climate indicators for fourth- and fifth-grade United States self-contained, general education teachers?

Definitions

1. *Burnout* – The emotional, mental, and physical exhaustion that results from job-related stress (Blasé, 1982).
2. *Job Demand-Control-Support model (JDCS)* – The JDCS model is a theoretical framework for understanding occupational stress. Job demands, job control, and social support are three components that make up the theory, which posits that the work environment is a determinant of employee health and well-being (Karasek & Theorell, 1992).
3. *Revised School Level Environment Questionnaire (R-SLEQ)* – The R-SLEQ is an instrument utilized to measure teachers' perceptions of school climate across five school climate factors: (a) collaboration, (b) decision-making, (c) instructional innovation, (d) school resources, and (e) student relations (Johnson, Stevens, & Zvoch, 2007).
4. *School Climate* – Teachers' perception of the quality and character of school life, which is a reflection of schools' norms, values, expectations, interpersonal relationships, teaching and learning practices, and organizational structures ("National School Climate Center," n.d.).
5. *Teacher Stress* – Negative emotions such as depression, anger, anxiety, tension, anger, or frustration felt by a teacher as a result of teaching (Kyriacou, 2001).

6. *Teacher Stress Inventory (TSI)* – The TSI is an instrument used to measure two aspects related to stress: (a) perceived job stress levels, and (b) the levels of stress-related manifestations (Fimian, 1988).

CHAPTER TWO: LITERATURE REVIEW

Overview

A thorough review of the literature was conducted to identify studies that examined school climate and teacher stress. After reviewing the theoretical framework that underpins the study, this chapter will present the themes and findings of studies investigating school climate and teacher stress and describe an under-researched gap in the literature and how this study added to the body of research. The chapter will conclude with a summary of the literature.

Theoretical Framework

Numerous theoretical frameworks and models have been associated with environmental climate and occupational stress. The theoretical framework for this study was based primarily on Karasek and Theorell's (1992) Job Demand-Control-Support (JDCS) model. This framework provided the foundation and support for the study.

Job Demand-Control-Support Model

Teacher well-being may be viewed through the lens of the Job Demand-Control-Support model (JDCS; Karasek & Theorell, 1992). Within the context of this study, unfavorable job characteristics, in particular a poor school climate, may have an impact on teacher job stress. The prominent theory posits that the work environment is a determinant of employee health and well-being. In its original state the model was simply the Job Demand-Control (JDC) model without the support component; however, in the 1980s, the theory was expanded by Johnson and Hall (1988) to add a social dimension, thus making it the JDCS model. The three distinct components that make up the JDCS model are job demands, job control, and social support (Karasek & Theorell, 1992). Psychological job demands refer to workload in terms of time pressure and role conflict. Job control, also known as job decision latitude, refers to how much

of an ability the employee is given in regard to making job-based decisions. Social support refers to the level of support an employee feels that they have from the supervisor and colleagues.

Karasek and Theorell (1992) proposed four job types based on the combination of demands and control: low-strain jobs, high-strain jobs, passive jobs, and active jobs. Low-strain jobs are characterized by jobs with low demand and high control. These jobs do not require difficult tasks and employees have the freedom to make job-based decisions. High-strain jobs are very demanding and employees have very little control. The model hypothesizes that high-strain jobs are the most damaging to employee health. Passive jobs have low demand and control. Employees who have passive jobs have the lowest risk of stress; however, these jobs often involve simple, repetitive tasks. Active jobs are those that have high demand and high control. The high level of control employees have with an active job should serve to counteract the effects of the high demand of the job.

The underlying implication of the JDCS model is that employee well-being can be improved without any necessary change in the job demands if the level of social support is increased (Doef & Maes, 1999). Studies using the JDCS model have produced mixed results. Andersson, Larsen, and Ramstrand (2017) used the JDCS model as the theoretical basis for their study when determining job satisfaction and job fatigue using a sample of Swedish police. Findings from the study indicate that the JDCS model was highly predictive in relation to job satisfaction and fatigue, with job demands as the strongest predictor of fatigue, and support as the greatest predictor of job satisfaction.

Within the context of this study, the JDCS model contends that when teachers perceive that they have an adequate level of school-based support, they are less likely to have feelings of

stress. School based support can be characterized by a supportive administration and collegial support. One study that can be related to the model is Nie, Chua, Yeung, Ryan, and Chan's (2015) cross-sectional survey-based study that examined the link between autonomy support and teacher stress. The researchers used 266 Chinese middle school teachers as participants. The findings suggested that teachers who perceived their work environment to be autonomously supportive had lower levels of stress. An autonomously supportive environment is one in which teachers feel empowered by their leadership to make decisions, wherein a sense of confidence is conveyed by the principal to teachers and teachers are competent and valued members of the school community. This type of climate is fostered by a principal's vision for empowering teachers and involving them in school wide decision-making.

On the other hand, not all schools and work environments are supportive. Fitting the JDCS model's hypothesis, Bartholomew, Ntoumanis, Cuevas, and Lonsdale's (2014) study of Spanish physical education teachers found that teachers who worked in a controlling environment experienced high levels of job pressure, a decreased well-being, and reported greater burnout. These findings align with the notion that a school's level of support or control influences teacher stress and well-being.

Related Literature

Understanding the relationship between school climate and teacher stress required a detailed review of the literature. The remainder of the chapter synthesizes studies related to the variables in the current study and also outlines the need for the current study.

School Climate

The entire school experience, be it academic, social, or emotional, is shaped by the school climate. School climate is perception based on experience. It is frequently thought of in terms

of the feeling that is elicited by a school's environment. One school environment might be described as seeming safe and warm, while another school may be seen as cold and uninviting. These feelings are often referred to as the school climate because they relate to how the school experience is internalized or perceived, in feelings and attitudes, by its community members (Sherblom, Marshall, & Sherblom, 2006).

Halpin and Croft (1963) are often credited as being pioneers of school climate research. They created the Organizational Climate Description Questionnaire (OCDQ), one of the first widely used instruments to assess organizational climate. The instrument contains eight dimensions of organizational life and was first used in Halpin and Croft's landmark study using a sample of elementary schools. The 71 elementary schools from the study were divided into six categories based on the following school climate types: open, autonomous, controlled, familiar, paternal, and closed. Their study explored school climate through the eyes of teachers and principals and helped pave the way for other researchers. The OCDQ has been revised and there is now an updated elementary school version (OCDQ-RE) and a secondary school version (OCDQ-SE). Both are widely used today when assessing organizational health.

Over the years one of the stumbling blocks with school climate research has been the inconsistency of the term itself. There is not one universal, agreed upon definition for school climate. Halpin and Croft (1963) compared a school's climate to that of a personality, with each school, like each person, having a unique set of traits that make up their personality. Van Houtte (2005) explained that school climate is the set of common beliefs and shared experiences between school personnel, while the National School Climate Center (n.d.) defines it broadly as the quality and character of school life. Another take on the definition is that school climate comprises the attitudes, norms, beliefs, values, and expectations of a school, and these in turn

impact the extent to which students, staff, and parents feel safe, respected, and welcome (Aldridge et al., 2016). This invisible dimension of school life is the result of the overall interactions and relationships between staff and students (Pinkas & Bulić, 2017).

One reason that characterizing school climate can be difficult is because it encompasses such a broad range of aspects in the school environment. Several researchers have created components of school climate in an effort to define the term. For instance, Cohen, McCabe, Michelli, and Pickeral (2009) determined that there are four dimensions of school climate: physical and social-emotional safety, quality of teaching and learning, relationships and collaboration, and the structural environment. Wang and Degol (2016) defined school climate by using the following four categories: academic, community, safety, and institutional environment.

Generally speaking, climate is often referred to on a continuum of healthy to unhealthy, or is considered to be some degree of positive or negative, with every school setting different based on their distinctive characteristics. Factors shaping school climate include, but are not limited to, a school's location, size, student population, and school type. Given that school climate is a multidimensional construct, measuring school climate is a complex process and numerous instruments have been developed over the years. Through the use of various climate tools, school climate can be measured from student, teacher, principal, or even parent perspectives. The following review of literature includes studies that use a variety of instruments and sought to examine student, teacher, and principal perceptions of school climate across a multitude of factors from physical environment to school relationships.

School climate and student outcomes. A growing and compelling body of research concludes that school climate has widespread implications for schools and stakeholders. The

two most prominent stakeholders impacted by school climate are teachers and students. Positive student outcomes related to positive school climate include low student absence and suspension rates, high academic performance, and less bullying. Based upon previous research linking student perception of school climate and behavioral, academic, and social outcomes, Gordon and Fefer (2019) studied factors that influenced school climate perceptions among high school students. Findings indicated that there were significant differences in perceptions of school climate based on race, gender, academic history, and behavioral history. School climate perceptions were increasingly more negative as detention and suspension numbers increased, and students' total discipline history was found to be a significant predictor of perception of school climate.

School climate also has a significant relationship with student achievement (Davis & Warner, 2018; O'Malley, Voight, Renshaw, & Eklund, 2015). Using a data set including 263 high schools and 1,195-student background, achievement, and school climate variables from the New York City Department of Education, the researchers found that school climate variables were responsible for more of a variance in academic growth than student background variables (Davis & Warner, 2018). In addition, O'Malley et al. (2015) determined that high school students, regardless of family structure, with more positive perceptions of school climate had higher self-reported GPAs. These studies support the notion that school based practices are important factors in student achievement, and not simply family support, socioeconomic status, or any other student or family background factors.

School climate and student achievement. Academic performance has and will continue to be a primary measure of school success. There is an increasing body of research showing that the climate within a school is a key factor in overall school performance (Smith & Shoupe,

2018) and student performance (Ali & Siddiqui, 2016; Shindler, Jones, Williams, Taylor, & Cardenas, 2016; Wang & Degol, 2016). Among other factors, school climate impacts students' absenteeism, behavior, suspension rates, and achievement, and is widely recognized as being an important factor for increased student achievement (Konold & Cornell, 2015). According to a comprehensive research synthesis of studies covering the associations between socioeconomic background, inequality, school climate, and academic achievement from the last 20 years, positive school climate was found to positively influence student academic outcomes (Berkowitz, Moore, Astor, & Benbenishty, 2017). In addition, positive climate was even found to assist students in overcoming academic barriers that are associated with low socioeconomic backgrounds.

In many places across the United States, there is a newfound sense of urgency to take school climate seriously as a factor of school success. One state that is making school climate a priority is Georgia. All public schools in Georgia now have annual criteria to meet in regard to school climate. Smith and Shouppe (2018) studied the relationship between school climate, using the Georgia School Climate Star Rating (SCSR), and student achievement, using the Criterion-Referenced Competency Test (CRCT) for third through eighth grades in reading and math. Using a sample of 31 elementary and 12 middle schools, the researchers analyzed data from the SCSR, which includes student, personnel, and parent survey responses as well as components on student discipline, the learning environment, and school attendance. To assess student achievement, the Reading and Math portions of the CRCT state assessment were utilized. Results indicated that both reading and math were significantly impacted by school climate, with the impact on reading most substantial. The study also examined the implications for schools classified as Title I or non-Title I and the relationship between school climate and student

achievement. Schools were separated into three categories based on the stars earned on the SCSR. These groups were arranged accordingly, from more positive school climate ratings to less positive school climate ratings, with group one earning four or five stars, group two earning three stars, and group three earning one or two stars. Schools deemed Title I were found to fall into group two, and especially group three more often than non-Title I schools, indicating that improving school climate in schools with higher levels of poverty is especially needed. In addition, a difference in Title I and non-Title I groups in achievement was found to be significant. In line with previous research, this study supports the claim that the effect of school climate on student achievement is statistically significant.

Using the Student School Climate Questionnaire (SCSQ), an instrument designed to assess students' perceptions on the physical, social, and learning environment factors of school climate, Ali and Siddiqui (2016) studied the relationship between school learning environment and students' academic achievement. The study was conducted using a sample of 1,472 tenth-grade public school students in Pakistan. This ex post facto research used achievement scores from the annual examination results from 2012. A positive correlation was found between the learning environment and students' academic achievement. These findings were echoed in Shindler et al.'s (2016) study examining the relationship between school climate and student achievement. Findings from their study, which used a sample of 230 urban public schools across five states, indicated that the two variables were highly related, so much so that the authors suggested that climate is the single most predictive factor in a school's ability to increase student achievement.

Based upon previous research findings, which conclude school climate perceptions are predictive of academic success, Kwong and Davis (2015) conducted a multilevel study using the

Educational Longitudinal Survey to examine the relationship between specific school climate variables and student achievement among high school students. Results from the nationwide study, with a sample of 16,258 students and 1,954 schools, indicated that the student learning environment in particular was highly predicative of success in math and reading standardized test scores. When students felt safe and supported and encouraged by their peers, teachers, and parents they were more likely to succeed academically. Moreover, the study found that high institutional surveillance, another school climate factor, had a negative impact on the student learning environment and academic outcomes. Implications of the study's findings include school districts finding ways to provide a safe and positive learning environment for students without securitizing the school with things like metal detectors and drug dog checks.

The majority of school climate research studies, especially those focused on the relationship to academic achievement, have utilized samples from high school students (Wang & Degol, 2016). In an effort to expand the body of research, Daily et al. (2019) analyzed the relationships between 10 school climate domains and academic achievement in middle and high school students. The study used self-reported final term grades from students as a measure of student achievement and the 42-item School Climate Measure (SCM) to assess school climate. The SCM is a multi-dimensional instrument intended to measure school climate by assessing the following 10 domains: positive student-teacher relationships, order and safety, opportunities for student engagement, school physical environment, academic support, parental involvement, school connectedness, perceived seclusion/privilege, school social environment, and academic satisfactions. Additional non-academic factors were examined as well, including student demographic information, mother's educational level, and family structure. Results from the study showed that middle and high school students who reported positive school climate also

reported higher academic performance. Findings also suggest that middle and high school students differ in their needs as they relate to academic performance.

While some research points to the quality of school climate as the most predictive school factor in promoting student achievement (Jones & Shindler, 2016; Shindler et al., 2016), not all findings are congruent. For example, using the School Climate Inventory-Revised (SCI-R) and Texas standardized test scores in reading and math, was Allen et al. (2015) found that there was no relationship between school climate and student achievement.

School climate and student behavior. School climate impacts student achievement (Kwong & Davis, 2015), emotional health (Pietarinen, Soini, & Pyhalto, 2014), attendance (Van Eck et al., 2017), and behavior (Aldridge, McChesney & Afari, 2018). Since students spend so much of their life in school, it would be logical to assume that schools have the ability to influence behavior. Specifically, school climate has the potential to impact delinquent, or negative, behaviors such as bullying, substance abuse, and aggression (Wang & Degol, 2016). In an attempt to examine which aspects of school climate influence bully victimization and delinquent behaviors in Australian high schools, Aldridge et al., (2018) assessed school climate using the following six sub-constructs: teacher support, peer connectedness, school connectedness, affirming diversity, rule clarity, and reporting and seeking help. The study used a questionnaire to assess students' perceptions of school climate as well as a bullying scale and delinquency index to gather data. The study's findings indicated that positive student perceptions of teacher support, school connectedness, and rule clarity were associated with less bullying. Unexpectedly, the results showed that two of the other six school climate constructs, affirming diversity and reporting and seeking help, had statistically significant positive effects on bully victimization, which suggests that there was more bullying when these constructs were

perceived to be present. Another result of the study was that students who perceived a greater sense of school connectedness and rule clarity were likely to report fewer delinquent behaviors. The study's findings affirm that school climate can be instrumental in decreasing the prevalence of bullying and delinquent behaviors.

Benbenishty, Astor, Roziner, and Wrabel (2016) determined that school climate and school violence were linked. Using student survey data on climate from middle and high schools in California, it was discovered that decreased levels of violence and a positive climate were linked with high levels of achievement. The researchers noted the significance of focusing on school climate, student behavior, and student achievement as three interdependent factors. Capp, Astor, and Gilreath (2020) also explored school climate in California; however, they did so from the perspectives of public school staff members. Their findings revealed that as staff members reported more positive perceptions of school climate, they reported lower levels of student misbehavior.

Bear, Yang, Mantz, and Harris's (2017) study examined the association between students' perceptions of school climate and their perceptions of the frequency of their schools' use of praise, rewards, punitive consequences, and the teaching of social and emotional competencies. Findings from the study indicated that there was a positive relationship between the use of praise and rewards and students' perceptions of school climate. On the other hand, students' perceptions of the use of punitive consequences, such as being yelled at by an adult or being sent out of class or to the office for rule breaking, were negatively associated with their perceptions of school climate. Finally, students' perceptions of their teachers and schools teaching social and emotional competencies were associated with positive school climate

perceptions. Findings from this study are consistent with research supporting the significance of positive school climate and positive student outcomes for behavior.

Using the Authoritative School Climate survey, Konold et al. (2016) found that positive school climate characterized by consistent and fair discipline, as well as supportive teacher-student relationships, was associated with lower levels of peer aggression and higher levels of student engagement in high school students. Since the people within the school create the school climate, the climate is negatively or positively impacted accordingly.

Cornell and Huang (2016) extended the research by focusing on how an authoritative school climate, specifically, affects risk behaviors such as substance use and aggression in high school students. Findings from the statewide data indicated that schools with an authoritative school climate, characterized by strict but firm discipline and strong student-teacher relationships, had lower reported instances of alcohol and marijuana use, bullying, fighting, weapon carrying, gang membership, and suicidal thoughts. These findings support the notion that more positive perceptions of school climate are associated with fewer risk behaviors in students, and working to promote positive school climate should be a priority.

Similar to Cornell and Huang's (2016) study focused on authoritative school climate, Jia, Konold, and Cornell (2016) examined the relationship between authoritative school climate and high school dropout rates. Their findings were consistent with authoritative school climate theory in that students who claimed feeling higher levels of support, an important component of school climate, had significantly lower dropout rates compared to peers that claimed lower levels of support.

Student attendance is another area that may be impacted by school climate. Van Eck et al. (2017) studied students with similar perceptions of school climate in order to determine if

their perceptions were linked to chronic absenteeism. Individual student responses were grouped into three levels of perceived school climate: “positive,” “moderate,” and “negative” climate and school attendance were tracked daily by the schools. Students in this study were identified as chronically absent if they had been enrolled in the school for at least 90 days and missed more than 20 days. Using individual student results, school level chronic absenteeism was then determined by dividing the total number of chronically absent students by the total number of students enrolled for at least 90 days. Results showed that students who reported “moderate” and “negative” school climate were more likely to attend schools with higher chronic absence rates when compared to students who reported having a “positive” school climate. While there may be other factors that play into students’ chronic absenteeism such as poverty or student health, this study supports the notion that school climate may also be a relevant risk factor for chronic absenteeism.

School climate and teacher outcomes. Across the workplace, organizations with a positive work environment have engaged and satisfied employees, both of which breed organizational success. The field of education is no exception to the latter statement. School climate can affect teachers significantly by influencing teacher retention, collaboration, and commitment to the profession. Research suggests that schools with supportive environments are more likely to retain their teachers and maximize student learning (Kraft, Marinell, & Yee, 2016). The recent focus on school climate and its acknowledged impact has led the U.S. Department of Education (2014) to grant more than \$40 million dollars to school districts in order to improve school climate.

Orzea (2016) analyzed school climate from the perspective of teachers. The study’s sample was drawn from four small town schools and used a total of 83 primary, elementary, and

high school teachers as participants. Orzea hypothesized that teachers' perceptions of school climate were dependent on age, experience, school location, and grade level taught. Findings from the study align with previous research, indicating that teachers over the age of 45 have a more favorable perception of school climate compared to their younger colleagues. One possible explanation for this is that younger teachers are less experienced and see themselves as less efficient and often feel less supported.

Another study that focused on new teachers took place in Kermanshah, Iran (Reza et al., 2013). The researchers sampled 196 new physical education teachers in an effort to analyze the relationship between organizational climate and work motivation with job commitment. The findings revealed a significant and positive relationship between climate and job motivation with organizational commitment, indicating that a positive school climate can impact new teachers' commitment and motivation. Reza et al. noted that by providing teachers with a positive school climate there is a greater tendency for them to stay loyal and committed to their job.

School climate and leadership. One of the most significant factors in improving student achievement and overall school improvement is strong leadership (Kilinc, 2014). The principalship is a crucial role in any school. Principals lead schools and are therefore largely responsible for the way a school functions. Quite simply, principals steer the ship. As the educational leader, principals can influence the quality of instruction and set the tone for the climate in a school. Principals can be change agents of school climate. Strong principals have the ability to foster positive relationships among staff members and create a sense of teamwork and community. In addition, creating a positive work environment, acting as a competent administrator, maintaining open communication, and supporting teachers are all ways that principals can help retain teachers (Bland et al., 2014). On the other hand, principals have the

power to negatively impact school climate by taking away teacher autonomy and creating a toxic work environment.

Instructional leadership predicts school climate (Akram et al., 2018). When examining secondary teachers' perceptions of instructional practices of their head teachers, otherwise known as principals, Akram et al. found a positive correlation between instructional leadership practices and school climate. Instructional leadership, a relatively new and widely researched topic, is the managing of the curriculum and instruction of a school. The school principal fills this role. The recent focus on instructional leadership has helped to move principals out of their more traditional role as school leaders who handle stakeholders, discipline, and the general running of the school, into, in addition to the latter, experts on instruction and best practices in teaching.

In a correlational study Allen et al. (2015) examined the relationship between transformative leadership, school climate, and student achievement using a sample of elementary teachers and principals from Texas. A positive relationship was found between transformative leadership and school climate, which supports the notion that principals are a key component in schools and that their particular leadership style can have school wide implications.

Rhodes, Camic, Milburn, and Lowe's (2009) study sought to examine the effectiveness of a collaborative approach to improving school climate at three middle schools. Teachers identified problems affecting their school's climate and created programs to address the problems and alter relationships between administrators, teachers, parents, and students. Findings from the study suggested that teachers' perceptions of school climate can be improved by principals who work toward removing the barriers teachers face that limit their ability to focus on student instruction. The researchers also noted that demonstrating collaborative

decision-making practices and providing teachers with support and resources improved school climate. These findings align with the growing body of research that concludes that the principal-teacher relationship is paramount and that principals have the ability to strongly impact school climate.

With the notion that leadership is a critical component of school success, Ross and Cozzens's (2016) correlational study investigated teachers' perceptions of principals' leadership behaviors and the connection to school climate based upon Green's (2010) 13 core competencies within the four dimensions of principal leadership. Five core competencies were found to be significant in positively influencing school climate through effective leadership. In addition, findings indicated that when teachers positively perceived their principals' leadership they were more likely to have a positive perception of their school climate. This is similar to the findings of Rhodes et al. (2009), which noted that as a teacher's perception of leadership improves, s/he becomes more effective and satisfied in the classroom.

Removing administrative tasks, providing resources, and supporting teachers so that they are able to focus on instruction is a common thread throughout the research on school climate and leadership (Rhodes et al., 2009; Ross & Cozzens, 2016). When principals engage in these positive behaviors, teachers and students benefit. On the other hand, Kipps-Vaughan (2013) found that when teachers feel like unrealistic demands are placed on them, and superiors do not validate teachers' abilities, teachers feel devalued.

School climate and teacher retention, job satisfaction, and burnout. Teacher retention is a growing problem in the field of education. One reason teachers leave the field of education is due to poor school climate (Wallace Foundation, 2013). According to a 2014 National Center for Education Statistics (NCES) report, just over half of the teachers who left teaching for

another profession reported that their new workload and working conditions were better in their current position than in their previous teaching job (Goldring, Taie, & Riddles, 2014). Research indicates that teachers' environments are important in shaping their experiences, motivation, and well-being (Collie et al., 2012). Teacher stress has been shown to be related to early retirement, absences, and staff turnover (Kipps-Vaughan, 2013). According to a study conducted by Berg and Cornell (2016), student aggression towards teachers was found to be linked to teacher burnout; however, positive school climate was shown to possibly reduce student aggression. These findings support the notion that supportive schools with a positive school climate result in greater safety and less distress for teachers.

Positive school climate, including social support and positive relationships, was shown to be negatively related to teacher burnout (Hakanen, Bakker, & Schaufeli, 2006). Wynn, Carboni, and Patall's (2006) three-year study found that beginning teachers' decisions to remain at their school were most strongly associated with school climate and principal leadership. Likewise, school climate variables are a predictor of teacher commitment and teaching efficacy, and workload stresses are directly related to job satisfaction (Collie et al., 2012). Specifically, findings from a quantitative, cross-sectional study, which included a sample of 664 public school teachers from British Columbia and Ontario, Canada concluded that student relations and collaboration among staff predicted teacher commitment.

Kraft et al. (2016) authored a report from the Research Alliance for New York City Schools that focused on the relationship between middle school climate, teacher attrition, and student achievement using teacher responses to NYC's annual School Survey, as well as human resource data, school records, and student test scores. A significant relationship between school climate and teacher retention was found. In addition, findings from the study indicated that

when schools strengthened their organizational effectiveness teachers were more likely to remain, and standardized test scores increased at a faster rate.

Malinen and Savolainen's (2016) longitudinal study examined the effect of school climate on teachers' job satisfaction and burnout. Using a sample of 642 Finnish lower secondary teachers, spanning 38 schools, the researchers found that school climate had a positive effect on job satisfaction. The findings, however, revealed that school climate did not have a positive effect on burnout. These findings are similar to those of De Nobile and McCormick's (2010) study, which used survey data from 356 staff members from Catholic primary schools in Australia. Their findings indicated no significant associations between teacher stress and school climate. The researchers suggested that one reason for this finding may have been due to the prevailing school culture often found in Catholic schools.

Concerned with the "emotional labor" of teaching, that is, the need for teachers to manage their emotions on a daily basis by displaying positive emotions and hiding negative ones, Yao et al. (2015) investigated teachers' perceptions of school climate, emotional labor strategies, and emotional exhaustion. Emotional exhaustion is associated with burnout, as it is the first of three stages of burnout according to Maslach (2003). Using a sample of 703 primary and high teachers from China and data from three instruments, one measuring each variable, the researchers concluded that teachers' perceptions of school climate had a negative effect on surface acting. Surface acting is defined as masking true emotions for the purpose of meeting the expected school norms of appropriate emotional display. Results also revealed that teachers' perceptions of school climate had a positive effect on deep acting, which is the attempt by a person to actually experience the emotion at hand. According to the researchers, both surface and deep acting are associated with emotional exhaustion. These findings suggest that

improving school climate can decrease emotional exhaustion, which is associated with teacher burnout.

Stress

There are biological, psychological, and interactionist approaches to understanding stress. Stress can be seen as a stimulus, a response, or a transaction. Most of the stress theories claim that stress involves an interaction between a problem and a person's ability and resources to deal with the problem. Fish (2018) summarized stress as psychophysiological mechanisms that activate as a result of a threatening situation. Specifically in reference to occupational stress, Kyriacou (2001) conceptualized work-related stress as the negative emotions resulting from aspects of work. Klassen (2010) asserted that teacher stress is the feeling of negative emotions as a result of teaching and is related to numerous negative teacher outcomes such as absenteeism, burnout, depression, and attrition.

Understanding stress and stressors, or the cause of stress, is difficult because individuals react to situations in different ways, and it is therefore a highly subjective phenomenon. For instance, one person might find a situation incredibly stressful while another might find the same situation thrilling. This may be the case when singing or speaking in front of a large crowd or riding a rollercoaster. Generally, stress involves a physiological and emotional response to a threatening circumstance.

One way to view stress is from a stimulus-based approach. This approach suggests that when an external pressure becomes too great, internal failure will inevitably ensue. Another way to view stress is from a response-based approach. Hans Selye popularized this approach in the 1930s. Selye (1976) described stress using a response model, wherein stress is the body's non-specific response to any demand. Selye used three stages to explain how the body reacts to

stress: the alarm reaction stage, the resistance stage, and the exhaustion stage. Selye acknowledged that not all stress is negative or harmful.

A third approach to understanding stress suggests that stress is the result of both internal and external factors. Lazarus and Folkman (1984) developed the transactional model of stress, which is often used today as a contemporary basis for understanding stress. This two-way appraisal model of stress is defined by neither the environment nor the person's response but rather the individual's perceptions and feelings of vulnerability and his or her ability to cope. In this model, when a person encounters a stressor s/he first identifies if it is positive, threatening, or irrelevant. This is referred to as the primary appraisal. If the stressor is interpreted as threatening, a secondary appraisal takes place, wherein the person evaluates the resources available to handle the stressor. If the resources available are deemed insufficient, stress results. This approach to understanding stress evolved into the transactional model of stress and coping, and can be applied to the work environment. This model posits that teacher stress can be anticipated by measuring teachers' perceptions of their classroom demands in relation to the available classroom resources. This means that stress is likely to be experienced when teachers view their job demands as exceeding their ability to cope.

One conceptualization of occupational stress is found in the person-environment (P-E) fit theory. The person-environment (P-E) fit theory, originally developed in the context of organizational psychology, explains that the interaction between the person and the environment determines whether or not stress results (Caplan & Van Harrison, 1993). The fundamental premise of the theory is that when the fit between the person and environment are incompatible, stress ensues. On the other hand, when personal factors such as individual abilities are in congruence with environmental factors, such as job requirements, positive outcomes result. This

means that stress varies from person to person. The theory also distinguishes between objective and subjective fit. For the purpose of the current study, which focused on teacher perception, the subjective P-E fit is the more appropriate lens since school climate is understood through the teacher's interpretation. It is understood that a poor fit between the person and the environment will increase the risk of stress, while a good fit will likely promote job satisfaction and lessen the levels of teacher stress.

The theoretical framework for the current study, and another lens for viewing the occupational health of teachers, is the JDCA model (Karasek & Theorell, 1992). This theory contends that employee outcomes, like stress, are the repercussion of the level of job demands, workload, amount of job control, or ability to make on-the-job decisions. The theory posits that when job demands are reduced, job control is enhanced; social support is provided; and teachers are less likely to have stress. The theory also supports the notion that even with high job demands, employee outcomes can be positive as long as sufficient job control and support is provided. For teachers, both support and job control can be improved with a positive school climate.

Causes of teacher stress. Teaching is a human service profession and as a result is a challenging and stressful occupation (Kuntz et al., 2013). Teaching involves a variety of ongoing and competing activities and requirements, and teachers face a constant flow of external stimuli and demands as they navigate through the workday. There are many strong predictors of teacher stress. One of the strongest is teacher workload (Collie et al., 2012; Klassen, 2010), while student misbehavior is another major stress factor in the school environment (Abdullah & Ismail, 2019). Teaching demands, expectations, and ever-changing priorities also have a significant impact on teacher stress (Stauffer & Mason, 2013).

Today, teacher attrition, or the leaving from teaching jobs, has become a global problem. Teacher stress has a negative effect on job satisfaction (Karabatak & Alanoğlu, 2019) and job dissatisfaction may be a predictor of turnover. School leadership, specifically the extent to which school principals are supportive of teachers, as well affiliation, or the extent to which teachers feel encouraged and accepted by colleagues, influences teachers' job satisfaction (Aldridge & Fraser, 2016). Teacher stress is widely accepted as a factor that causes turnover (Ingersoll, 2012). Teacher stress and attrition stems from various places, including teachers' personal life circumstances and working conditions (Skaalvik & Skaalvik, 2015). Manabete, John, Makinde, and Duwa (2016) found that job insecurity, poor relationships with administration, role ambiguity, and work overload were main sources of stress among teachers in Nigerian secondary schools and technical colleges.

Focusing on teacher workplace perceptions and using a transactional conceptualization of teacher stress, Lambert, Boyle, Fitchett, and McCarthy (2019) found that only about half of the 813 kindergarten teachers in their study, who perceived that their classroom resources were insufficient to meet the demands of the classroom, would become teachers again if given the chance to go back and re-choose their profession. These findings are in line with previous research that indicates the three significant causes of teacher stress are workload, student behavior, and lack of support (McCarthy, Lambert, & Reiser, 2014).

The research on teacher stress mainly focuses on the causes of stress, such as administration, student behavior, and high-stakes testing accountability measures; the consequences of stress, such as health implications and burnout; or the solutions for teacher stress, such as new teacher-training programs and coping strategies. Additionally, the literature concludes that teacher stressors generally fit into one of two overarching categories. The first

category is environmental, and the second category is personal. Environmental factors are things that are beyond the teacher's control, like job demands. Personal factors, or stressors, are things such as personality traits that are specially related to the individual teacher.

In an effort to add value to the person versus context debate, Frenzel, Becker-Kurz, Pekrun, and Goetz (2015) sought to determine if teacher emotions are person, subject, or student group specific. For two weeks, teachers were asked to report feelings of enjoyment, anger, and anxiety immediately after teaching a class period. One group of teachers taught multiple subjects to one group of students, as in a self-contained classroom setting, while another group of teachers taught only a few subjects to numerous groups of students. Findings indicated that teachers' emotional experiences were as a whole quite positive, with teachers reporting having experienced enjoyment in 95% of the observed class periods, anger in about 40% of their class periods, and anxiety in only about 20% of all their class periods. These findings suggest that enjoyment, anger, and particularly anxiety vary from teacher to teacher.

Teacher stress and accountability measures. Educational legislation and policy can be another source of teacher stress. Since 2002 and the implementation of No Child Left Behind (NCLB) public schools have been in an increased era of high-stakes testing and accountability measures. In addition, the 2009 Race to the Top (RttT) federal grant competition led many states to transform their academic standards and assessments. High-stakes testing not only has implications for students, but teachers as well. With the new age of accountability came a shift in the way many states evaluate teachers. Many states moved toward test-based accountability policies that linked student achievement scores to teacher evaluations. According to a 2015 National Council on Teacher Quality report, 43 out of 50 states use student achievement as a measure of teacher effectiveness on their state evaluation systems (Doherty & Jacobs, 2015).

Teacher evaluations are used across the country to dismiss teachers, make improvement plans, and in some cases they factor into compensation for merit pay. The accountability policies that were intended to raise student achievement are inadvertently working to lower teacher morale. The results of the accountability reforms have negatively altered teachers' work experience by narrowing the curriculum and disempowering teachers by reducing their ability to use their skills, personal experiences, and judgments as professional educators (Rooney, 2015). Instead, the increased emphasis on "the test" has reduced the independence of teachers and forced many into mandated curriculum and instructional strategies that leave teachers with little control and job satisfaction.

According to the National Education Association (NEA), 72% of teachers cite that they feel moderate to extreme pressure to increase assessment scores (Walker, 2014). Ryan et al. (2017) conducted a study in which data were collected from 1,866 teachers across three states in order to examine the relationship between test-based accountability, teacher stress, burnout, and turnover intentions. Findings indicated that accountability policies may predict greater teacher turnover intent and higher levels of teacher stress. Additionally, the study found that even for teachers who do not leave the profession, test-based accountability is strongly linked to stress and burnout symptoms (Ryan et al., 2017).

High stakes testing has also been found to have negative influences on those that do not even directly participate in the testing. Saeki, Segool, Pendergast, and von der Embse (2018) investigated the potential influence of test-based accountability policies on teacher stress and the school environment among K-2 teachers from Texas, North Carolina, and Pennsylvania. Despite the fact that these teachers and their students do not participate in end of year high-stakes

assessments, the teachers reported high levels of stress associated with the test-based accountability policies.

The most recent reauthorization of the federal education law is known as the Every Student Succeeds Act (ESSA, 2015). ESSA has brought in a new wave of reform wherein standardized testing is still required; however, states are granted more flexibility in execution and accountability measures. The policy change has yet to make a significant research documented impact on teachers; however, it could positively impact teachers and students alike.

Teacher stress in beginning teachers. Preservice and beginning teachers face an uphill battle and a daunting learning curve as they enter the teaching profession. From unmet and unrealistic expectations to lack of preparation and school-based support, new teachers often struggle in their first few years on the job. Because of this high initial commitment to entering the field, people often refer to teaching as a *calling*. Regardless of how or why people enter the field, novice teachers specifically are at risk of feeling higher levels of teacher stress. One reason for stress in first-year teachers is that their support needs are very high. A first-year teacher in one grounded theory case study reported feelings of stress due to curriculum challenges, lack of support, time management struggles, and student discipline issues (Dias-Lacy & Guirguis, 2017). Yuan and Lee's (2016) qualitative, narrative inquiry study found that strained relationships with colleagues and poor school climate can influence a beginning teacher's practice and emotional well-being.

Using multiple multivariate regression models, Harmsen, Lorenz, Maulana, and van Veen (2018) conducted a study focused on the relationship between stress causes, stress responses, teaching behavior and attrition in beginning teachers in the Netherlands. The researchers identified the following five stress causes: (a) high psychological task demands, (b) negative

social aspects, (c) negative organizational aspects, (d) lack of developmental opportunities, and (e) negative pupil aspects. In addition, three stress responses were outlined: (a) tension, (b) negative emotions, and (c) discontent. Results from the study indicated that all five stress causes had positive and significant relationships with one or more of the stress responses.

The following two studies do not focus specifically on stress for new teachers, but rather factors in general that impact new teacher attrition. The goal of Gray and Taie's (2015) study was to better understand the factors that impact novice teachers' careers. Some of the factors studied included teacher education and preparation, salary, and the presence of a mentor. The study followed 1,900 first-year teachers and found that by the end of the fifth year 17% of the original teachers had left the field of education. Results were impacted by teachers' salary levels, meaning that teachers with a higher salary were more likely to remain in the profession, but were not influenced by level of education or teacher preparation, as there was not a significant effect in this area. The presence of a mentor did positively impact teachers' choices to remain in the profession.

Similarly, Hopkins, Bjorklund, and Spillane (2019) sought to understand the role of social conditions, specifically colleague trust, and how that impacts new teacher turnover. Their study followed 47 teachers in the midwestern United States for their first five years of teaching. Survey data collected pertained to participants' school-based social network and relational trust, along with demographic data. Findings indicated that beginning teachers who reported higher levels of trust were less likely to leave in their first five years of teaching. One important limitation of the study is that the data were unable to differentiate between attrition, or the leaving of the field, and movement, which is when teachers change districts. Both of these results were captured together as one. Of the original participants, nearly 20% were special

education teachers and by year five none of them were still in the district, suggesting that turnover is particularly high for this group of beginning teachers.

Teacher stress and relationships. Relationships are at the heart of teaching. Teachers form relationships with principals, colleagues, additional school staff, students, and parents. While these relationships may vary in their significance, each one has the ability to impact teachers' daily working lives. One of the most important relationships is the student-teacher relationship. This relationship is also a significant predictor of teaching stress. In general, teachers report higher levels of stress when teaching diverse groups of students with a range of abilities and when teaching students with extreme academic or behavioral needs.

Forty-four preschool teachers provided ratings on 72 preschool-aged children using the Index of Teaching Stress and Student-Teacher Relationships Scale in a recent correlational study. Findings indicated that when a teacher's relationship with a child is conflict-filled, the teacher is more likely to experience stress as a result of the interaction (Gagnon, Huelsman, Kidder-Ashley, & Lewis, 2019). Addressing challenging student behavior is part of nearly every teacher's job, and it can be the reason for a difficult student-teacher relationship. Stress and frustration as a result of managing behavior problems in the classroom results in low teacher self-efficacy and job satisfaction (Landers, Servillio, Alter, & Haydon, 2011). Facing continual disruptive student behaviors in the classroom is one of the top reasons for leaving the teaching profession (Grayson & Alvarez, 2007).

While challenging student behavior is shown to be a cause of major stress for teachers, the following study explored a possible reverse effect (Närhi, Kiiski, & Savolainen, 2017). In a sample of fourth to seventh-grade students, Oberle and Schonert-Reichl (2016) examined the link between teachers' burnout levels and students' physiological stress response. Using the

Maslach Burnout Inventory to collect teacher data and collecting morning salivary cortisol in children as a biological marker of stress, the researchers found that children's morning cortisol levels differed significantly between classrooms. Findings showed that teachers' occupational stress is linked to students' physiological stress regulation and that higher levels of teacher burnout significantly predicted students' morning cortisol.

Another important relationship is between the principal and the teacher. School leadership has the ability to impact school climate and culture, which in turn can affect teacher stress (Sammons, Gu, Day, & Ko, 2011). Using the most recent nationally representative data from the National Center for Education Statistics' Schools and Staffing Surveys, the workplace condition that is most predictive of teacher turnover is a perceived lack of support from administration (Carver-Thomas & Darling-Hammond, 2019). It was found that teachers who feel strongly that their administration is not supportive are more than twice as likely to move schools or leave teaching when compared to those who believe strongly that their administration is supportive.

One study conducted in Malaysia focused on the relationship between school leaders' authentic leadership and teachers' job stress. Authentic leadership, a new leadership construct, is characterized by leadership that maintains transparency and honesty, is based on moral and ethical behavior, and develops positive psychological capacity (Ismail, Abdullah, & Abdullah, 2019). The recent cross-sectional study used the Authentic Leadership Questionnaire (ALQ) to measure authentic leadership and the Teachers Work Stress instrument (TSW) to measure job stress. Findings from the study indicated that authentic leadership contributed to a significant negative impact on teachers' job stress. As a result of the findings, the researchers suggested that

principals adapt an authentic leadership style in order to manage teachers' job stress and improve schools overall.

Collegial relationships are a third significant relationship for teachers. Collie, Shapka, Perry, and Martin (2016) found that when teachers felt a sense of connectedness with colleagues, they reported higher levels of work-related well-being and overall well-being. This may be in part because a high-quality relationship with colleagues could be associated with increased levels of collaboration. High-quality collaboration between teachers has been shown to increase the quality of teaching and students' achievement (Killion, 2015). It may also be associated with a decreased level of workload, which may aid in reducing teacher stress.

Wolgast and Fischer (2017) examined relationships and cooperation amongst colleagues and their ability to reduce stress. Using the social interdependency theory (SIT) as a theoretical framework, the researchers used the assumption that perceived colleague support could buffer and reduce perceived stress. This longitudinal study used results from 2,648 teachers over the course of a four-year time period. Findings indicated that teachers who had prepared classes, or lessons planned in cooperation with colleagues, demonstrated lower levels of perceived stress four years later.

Consequences of teacher stress. Teachers' stress has been linked to poor mental health and overall well-being (Prilleltensky, Bessell, & Neff, 2016). Teachers' emotional and psychological well-being impacts not only teachers, but students as well (Hinds, Jones, Gau, Forrester, & Biglan, 2015; Roberts, LoCasale-Crouch, Hamre, & DeCoster, 2016). Consequences of teacher stress can be long-lasting and impact teachers' personal, professional, mental, emotional, and physical life.

Teacher stress and depression. According to Hinds et al. (2015) repercussions of teacher stress can include poor student-teacher relationships, decreased teacher effectiveness, and teacher depression. An estimated 17.3 million American adults experienced at least one major depressive episode in 2017, making it one of the most common mental disorders in the United States (NIMH, 2017). Due to the high prevalence of adults experiencing depression, it is likely that it impacts the vast majority of occupations and workplaces. Teaching, which is widely recognized as a stressful career, is no exception, and there is a growing body of research on teacher depression (Hindman & Bustamante, 2019; Richards, Levesque-Bristol, Templin, & Graber, 2016; Roberts et al., 2016).

Using a nationally representative sample of 362 Head Start teachers, Hindman and Bustamante (2019) conducted a longitudinal study aimed at exploring the nature of teacher depression over the course of the preschool year. Findings indicated that one in three Head Start teachers reported feeling depressed in either the fall or spring. Depression was linked to workplace factors in that teachers with a more positive support climate had slightly decreased depression and those with high demand-related variables had increased depression.

Teachers must be able to regulate their own emotions when on the job in order to provide students with consistency, a safe place for learning, and positive behaviors to emulate. Teacher-child relationships and interactions depend on the teachers' ability to do the latter. Studies have shown that with workplace stress comes more conflict in teacher-child relationships and the quality of relationship can impact academic success (Whitaker, Dearth-Wesley, & Gooze, 2015). In another study aimed at examining the links between Head Start teachers' depression, teacher-child interactions, and children's social-emotional development, it was found that in classrooms

with depressed teachers, children made significantly fewer gains in social-emotional skills (Roberts et al., 2016).

Teacher stress and burnout. Heavy workload, copious amounts of paperwork and administrative tasks, lack of parental and administrative support, and high-stakes testing pressure have become common concerns for American public school teachers. These issues have led, in many cases, to a rise in teacher stress. Teachers' stress has been shown to negatively predict work-related well-being for teachers (Li & Zhang, 2019). This condition can also impact, among other things, teacher performance, health, and job satisfaction. Prolonged stress can lead to depression, sickness, illness, and burnout, which can result in leaving the profession prematurely, and is a main cause of the 21st century teacher exodus (Rumschalg, 2017). Burnout is characterized by the three dimensions of emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach, 2003). Emotional exhaustion occurs when a teacher is overextended by work and feels emotionally and physically drained. Depersonalization ensues when a teacher feels irritable and negative toward others. Finally, reduced personal accomplishment is when a teacher feels ineffective and lacks productivity at work. Burnout occurs when a teacher reports concurrent feelings of these three elements.

Less stress means more satisfaction and more satisfied employees are usually more productive and committed to the job longer (Epps & Foor, 2015). Thousands of teachers leave the field of education, stressed and burned-out, each year (Ingersoll, 2012). Signs of teacher burnout include, but are not limited to: illness, absenteeism, a lack of commitment, poor job performance, and impatience (Parker, Martin, Colmar, & Liem, 2012). Teacher burnout is a main cause of teacher attrition (Jalongo & Heider, 2006). Using survey data from a cross-sectional study design, Gloria, Faulk, and Steinhardt (2013) found that teachers with higher

levels of perceived work stress were more burned out. Teachers leaving the field of education could cost school districts up to \$2.2 billion a year and up to \$7.3 billion a year nationwide (Rumschlag, 2017).

Coping strategies for teacher stress. Forty-six percent of United States K-12 teachers report having high levels of stress (Gallup, 2014). Among other things, teacher stress can negatively impact teacher health, emotional well-being, and commitment to teaching. The consequences of teacher stress can be damaging to not only the teachers themselves, but also to students and even schools as a whole. Skaalvik and Skaalvik (2015) conducted 34 qualitative interviews with teachers at various stages of their career and found that they all reported the same sources of job satisfaction and stress; however, their coping strategies and consequences of stress varied. Six themes were identified, each of which constituted a unique category of stress: workload and time pressure, adapting teaching to students' needs, disruptive student behavior, value conflicts and lack of autonomy, teamwork, and lack of status. All teachers reported that their primary source of job satisfaction was working with children. Younger teachers reported experiencing a heavy workload and coped with this by avoiding sick leave and instead working additional hours to prepare for the job; middle aged teachers reported still having high ambitions and working long hours and using sick leave to cope and build in recovery time; and finally the senior group of teachers reported that they were no longer able to work the same hours so they used more sick leave and some even reduced their employment. Understanding the relationships between the various factors that contribute to teacher stress is paramount.

Teachers with coping skills are less likely to burn out from teaching (Betoret, 2006). Cancio et al. (2018) conducted an exploratory study focused on special education teachers and their stressors and coping skills. Participants reported feeling stress from heavy workloads,

multiple roles, student behavior, and student achievement pressures. Findings indicated that listening to music and feeling supported by family and friends were the most common coping strategies. Implications from this study are that teachers with less stress generally have higher job satisfaction and remain on the job longer, which in turn benefits students and student achievement.

Another coping skill for stress may be found in the use of intentional mindfulness practices. DiCarlo, Meaux, and LaBiche (2020) explored the effectiveness of mindfulness practices as a means to increase positive classroom climate and decrease perceived stress amongst early childhood teachers. In this case study each of the three participants implemented the Mindfulness Practices Intervention, which consisted of yoga poses, breathing techniques, and guided meditation. As a result, all three teachers reported increased positive climate, and two of the three teachers had a decrease in their perceived stress levels, according to the Perceived Stress Scale. These results support the notion that intentional mindfulness practices can be a low-cost way to improve classrooms for students and teachers alike.

Summary

Teachers' perceptions are an important consideration for research. Past research covers a wide array of studies pertaining to school climate and teacher stress; however, few studies focus on the two topics in conjunction. Understanding which factors of school climate most impact teacher stress will allow for districts, principals, and other educational leaders to work toward minimizing teacher stress and providing better working conditions that will hopefully equate to teachers remaining in the field of education longer. As a result, this has the possibility to positively impact students, in that generally speaking, students benefit from experienced, knowledgeable, and satisfied teachers in the classroom.

Few studies have explored which specific factors of school climate impact teacher stress the most. Additionally, the current study included participants from across the country that taught fourth or fifth grade in self-contained, general education, public school settings. These specific criteria ensured that non-classroom teachers, who do not have the same level of responsibilities as classroom teachers, were not involved in the study. Having participants from across the country allowed the results to be more generalizable than if findings were taken from one or two school districts where school climate might be skewed for one reason or another due to district initiatives or state mandates.

CHAPTER THREE: METHODS

Overview

The purpose of this quantitative, correlational study was to examine the relationship between school climate and teachers' self-perceived stress levels. Teachers in this study came from self-contained, general education, fourth- and fifth-grade public school classrooms across the United States. A correlational design was used for this study to examine the relationship among the variables. This chapter will outline the research design, research question, null hypotheses, participants and setting, instrumentation, procedures, and data analysis.

Design

This study utilized a quantitative, correlational research design to determine the predictive relationship between school climate and self-perceived stress levels among fourth- and fifth-grade teachers. Correlational research was the best choice for this study because the design is not experimental and the objective of the study was to identify the relationships, if any, among the variables. In correlational research designs, the researcher does not manipulate the variables, but instead statistical tests are run to measure the strength of relationship between two or more variables (Creswell, 2015).

The predictor variable for this study was school climate, which is defined by the National School Climate Center (n.d.) as teachers' perceptions of the quality and character of school life, which is a reflection of schools' norms, values, expectations, interpersonal relationships, teaching and learning practices, and organizational structures. The Revised School Level Environment Questionnaire (R-SLEQ) was used to measure teacher-perceived school climate. The instrument measures teachers' perceptions of school climate with regard to the following five environmental school climate factors: collaboration, decision-making, instructional

innovation, school resources, and student relations. Each of these five climate factors can be explained as follows (Johnson et al., 2007). *Collaboration* is working and communicating with other teachers. *Decision-making* is teachers' opportunities to participate in making school wide decisions. *Instructional innovation* is teachers' willingness to implement new teaching approaches and curriculum materials. *School resources* is having sufficient materials, resources, and technology available for teachers, and *student relations* is the perceptions of student behavior, cooperation, and motivation to learn. These five climate factors were used as the predictor variables for this study.

The criterion variable for this study was teacher stress, which is defined by Kyriacou (2001) as negative emotions such as depression, anger, anxiety, tension, or frustration felt by a teacher as a result of teaching and its related responsibilities. The Teacher Stress Inventory (TSI) measured the perceived levels of stress related to teaching.

The predictor and criterion variables were obtained using two instruments. Both surveys were administered electronically to fourth- and fifth-grade teachers from the Facebook group *Fourth and Fifth Grade Teacher Talk* via Survey Monkey®. In order to examine the relationship between the two variables a multiple regression analysis was used to determine whether there was a significant relationship between school climate and self-perceived stress. A correlation analysis was conducted to determine whether a predictive relationship existed for the subscale scores (collaboration, decision-making, instructional innovation, school resources, and student relations) on the R-SLEQ and the overall teacher stress score on the TSI.

Research Question

The following research question was used to guide the study:

RQ: How accurately can teachers' stress be predicted from a linear combination of teachers' perceived school climate indicators for fourth- and fifth-grade United States self-contained, general education teachers?

Null Hypothesis

The study was designed to test the following null research hypothesis:

H₀: There will be no significant predictive relationship between the criterion variable (teachers' stress) and the linear combination of predictor variables for school climate (collaboration, decision-making, instructional innovation, school resources, and student relations) among fourth- and fifth-grade United States self-contained, general education teachers.

Participants and Setting

This quantitative, correlational study relied on data gathered through electronic means in order to examine the relationship between school climate and self-perceived stress levels among fourth- and fifth-grade teachers.

Population

The participants for the study were drawn from a convenience sample of teachers who are members of the Facebook group *Fourth and Fifth Grade Teacher Talk*. Joining the group is voluntary and provides teachers with an outlet to share ideas and collaborate with educators from across the world. While the group is predominately comprised of public school teachers from the United States, there are teachers from other countries and the private sector. This study only utilized data from self-contained, general education, fourth- and fifth-grade public school teachers in the United States. Demographic information was collected using 10 questions, and the researcher screened participants to ensure the sample contained only teachers from self-contained, general education, fourth- and fifth-grade public school teachers in the United States.

Sample

Convenience sampling was used in this study. This non-probability sampling method was selected because of the accessibility of participants. The Facebook group was chosen as the population of interest because it contains fourth- and fifth-grade teachers from across the country, rather than from one district, which allowed the researcher to generalize the findings to fourth- and fifth-grade teachers in the United States, rather than one isolated geographic area within the country.

For a correlational study, at least 66 participants are needed to meet the required minimum for a medium effect size with a statistical power of .7 at the .05 alpha level (Gall et al., 2007). One hundred twenty ($N = 120$) teachers participated in the study; however, nearly half of them did not fit the study's criteria or did not complete both surveys in their entirety. Therefore, the final sample size for this study was 68 ($N = 68$) participants. This met the minimum required amount for a medium effect size. The sample consisted of 44 fourth grade teachers and 24 fifth grade teachers. Two male teachers and 66 female teachers participated. The demographic make-up of teachers was approximately 1.5% Asian, 0% Black-non Hispanic, 4.4% Hispanic, 1.5% Native American, 89.7% White-non Hispanic, and 2.9% other designations. Approximately 11.8% of teachers were 20 to 29 years of age, 29.4% were 30-39 years of age, 36.8% were 40-49 years of age, 16.2% were 50-59 years of age, and 5.9% were 60 years of age or older. Approximately 4.4% had 0-1 years of teaching experience, 16.2% had 2-5 years of experience, 32.4% had 6-10 years of experience, 13.2% had 11-15 years of experience, 16.2% had 16-20 years of experience, and 17.6% had 21 years or more experience in education. The percentage of teachers who held bachelor's degrees was 41.2%, 50.0% had master's degrees, 7.4% had specialist degrees, and 1.5% had doctorate degrees. See Table 1 for teacher demographics.

Table 1

Participant Demographics

Variable	Category	<i>n</i>	%
Grade level assignment	Fourth	44	64.7
	Fifth	24	35.3
School funding status	Title-I	48	70.6
	Not Title-I	20	29.4
Gender	Male	2	2.9
	Female	66	97.1
Age	20-29	8	11.8
	30-39	20	29.4
	40-49	25	36.8
	50-59	11	16.2
	60+	4	5.9
Race or Ethnicity	Asian	1	1.5
	Black not Hispanic	0	0.0
	Hispanic	3	4.4
	Native American	1	1.5
	White not Hispanic	61	89.7
	Other	2	2.9
Years of experience	0-1	3	4.4
	2-5	11	16.2
	6-10	22	32.4
	11-15	9	13.2
	16-20	11	16.2
	21+	12	17.6
Level of education	Bachelor's Degree	28	41.2
	Master's Degree	34	50.0
	Specialist's Degree	5	7.4
	Doctoral Degree	1	1.5

Note. *N* = 68.

Instrumentation

Two instruments were used in the study. The Revised School Level Environment Questionnaire (R-SLEQ) measured teacher-perceived school climate and the Teacher Stress Inventory (TSI) measured teachers' perceived stress. Both self-reported surveys use a Likert-type scale ratio and are frequently used in educational studies.

The Revised School Level Environment Questionnaire

The Revised School Level Environment Questionnaire (R-SLEQ) measured the predictor variable. See Appendix A for a copy of the instrument. The instrument was originally developed in 1982 with 56 items, each scored on a five-point Likert scale, and grouped in eight scales. Johnson et al. (2007) revised the instrument into a shorter and more focused survey with 21 items. The revised instrument was designed to measure teachers' perceptions of school climate with regard to the following five environmental school climate factors: collaboration, decision-making, instructional innovation, school resources, and student relations. Each factor corresponds to a subset of questions. Permission to use the instrument was provided by Dr. Bruce Johnson. See Appendix B for a copy of the permission letter. The instrument consists of 21 questions ranked on a five-point Likert scale ranging from Strongly Disagree to Strongly Agree. Items 1, 2, 4, 5, 6, 7, 8, 11, 12, 13, 15, 17, and 19 are worded positively and were scored with 1 indicating "Strongly Disagree," 2 indicating "Disagree," 3 indicating "Neither Agree nor Disagree," 4 indicating "Agree," and 5 indicating "Strongly Agree." Items 3, 9, 10, 14, 16, 18, 20, and 21 were worded negatively and are scored with 5 indicating "Strongly Disagree," 4 indicating "Disagree," 3 indicating "Neither Agree nor Disagree," 2 indicating "Agree," and 1 indicating "Strongly Agree." To calculate mean factor scores the scores for the items associated with each factor were added up and then divided by the number of items in the factor. For

example, if the sum of the decision-making questions equals 12, then 12 would be divided by 3 because there are three decision-making questions. The total score for this subscale is 4. Once items were scored, the total was calculated and divided by 21 to get a mean total score for climate. For the purpose of this study subscale scores and the total climate score were needed for data analysis.

The R-SLEQ has established reliability and validity indicators when measuring teachers' perceptions of school climate. It has been used in several recent studies (Barkley, Lee, & Eadens, 2014; Basak & Ghosh, 2011; Pinkas & Bulić, 2017; Yao et al., 2015). According to Johnson et al., (2007) Cronbach's alpha is computed for reliability on overall school climate at $\alpha = 0.90$. Each of the five factors also had an acceptable reliability coefficient between $\alpha = .77$ and $.86$ (Johnson et al., 2007).

Collaboration. Collaboration is defined as working and communicating with other teachers. The subscale consists of six questions (items 1, 6, 11, 16, 20, and 21). According to Johnson et al. (2007) Cronbach's alpha reliability for this subscale is $.82$.

Decision-making. Decision-making is defined as teachers' opportunities to participate in making school wide decisions. The subscale consists of three questions (items 4, 9, and 14). According to Johnson et al. (2007) Cronbach's alpha reliability for this subscale is $.78$.

Instructional innovation. Instructional innovation is defined as teachers' willingness to implement new teaching approaches and curriculum materials. The subscale consists of four questions (items 5, 10, 15, and 19). According to Johnson et al. (2007) Cronbach's alpha reliability for this subscale is $.79$.

School resources. School resources is defined as having sufficient materials, resources, and technology available for teachers. The subscale consists of four questions (items 3, 8, 13, and 18). According to Johnson et al. (2007) Cronbach's alpha reliability for this subscale is .77.

Student relations. Student relations is defined as the perceptions of student behavior, cooperation, and motivation to learn. The subscale consists of four questions (items 2, 7, 12, and 17). According to Johnson et al. (2007) Cronbach's alpha reliability for this subscale is .86.

Teacher Stress Inventory

The Teacher Stress Inventory (TSI) measured the criterion variable. See Appendix C for a copy of the instrument. The instrument was developed by Fimian (1984) to measure the source and level of stress, as well as the emotional and physical manifestations of stress in teachers. Permission to use the instrument was provided by Michael J. Fimian. See Appendix D for a copy of the permission letter. The TSI was initially developed based on the experiences of general education and special education public school teachers in the United States. The instrument has undergone several changes over the years in its development. The final form, and the version used in this study, has 49 questions, divided into 10 subscales, with each subscale comprised of three to eight items. The 10 subscales are also divided into two categories: stress source factors and stress manifestation factors. The five stress source factors have the following number of questions: time management (8), work-related stressors (6), professional distress (5), discipline and motivation (6), and professional investment (4). The 5 stress manifestations have the following number of questions: emotional manifestations (5), fatigue manifestations (5), cardiovascular manifestations (3), gastronomic manifestations (3), and behavior manifestations (4). The TSI uses a 5-point Likert scale. For each statement, the possible answers are as follows: 1 = no strength; not noticeable, 2 = mild strength; barely noticeable, 3 = medium

strength; moderately noticeable, 4 = great strength; very noticeable, and 5 = major strength; extremely noticeable.

The TSI is easily hand-scored; however, numbers need to be added and divided. Each subscale is scored one at a time and produces a mean item score, or subscale score. To score, the responses within each of the 10 factors are summed independently and divided by the number of questions associated with the factor. For instance, if the sum of the work-related stressor questions equals 24, then 24 would be divided by 6 because there are six work-related stressor questions. The total score for this section would be 4. Factor scores range from 1 to 5. A score of 1 is the lowest possible score indicating that the respondent has no stress sources or stress manifestations, while a score of 5 is the highest possible score and means that the respondent has stress of major strength sources and extremely noticeable stress manifestations. Adding up the 10 subscale scores and dividing by 10 calculates a total stress score. For the purpose of this study, only the total stress score was used in statistical analysis.

The TSI has demonstrated validity and reliability, has been used in several recent studies, and has been adapted and validated in several countries (Cook & Babyak, 2019; Erdiller & Dogan, 2015; Kourmoussi, Darviri, Varvogli, & Alexopoulos, 2015). Validity of the TSI was established through face, factorial, content, and convergent validity. In the instrument's creation, faculty members and graduate students screened an initial list of stress sources and manifestations and finalized a list of the most related. These 63 items were used to develop the pilot form of the TSI (Fimian, 1988). Content validity was established through the use of experts in the field. The experts surveyed each item and determined the degree to which it related to his or her concept of teacher stress. These findings helped to adjust TSI items. Construct validity was established through factor analysis. TSI reliability was established using alpha consistency,

test-retest, split-half, and alternate-forms. Fimian and Fastenau (1990) reported that the whole scale alpha reliability was 0.93 and there was satisfactory internal consistency reliability with Cronbach's coefficient ranges from 0.75 to 0.88 for all subscales. The TSI was administered multiple times within a two-week period to a group of teachers in order to establish test-retest reliability. An acceptable reliability in TSI for time series research was demonstrated through this study (Fimian, 1988). Finally, alternate forms reliability was demonstrated with high alpha scores and equivalence for stress factors using two different shortened forms of the TSI (Fimian, 1988).

The TSI concludes with a demographic section; however, for this study the researcher modified the original demographic section and created a new, 10-question demographic questionnaire with close-ended, mutually exclusive responses that aligned specifically with this research study. See Appendix E for the demographic questionnaire.

Procedures

The researcher obtained permission from the administrators of the *Fourth and Fifth Grade Teacher Talk* Facebook group to conduct the study (See Appendix F). Approval was then sought from Liberty University's Institutional Review Board (IRB) to conduct the study (See Appendix G). Once permission was granted from both, the researcher moved forward with the study. In the initial invitation to the study, a posting in the *Fourth and Fifth Grade Teacher Talk* Facebook group, the researcher invited all fourth- and fifth-grade, general education, self-contained public school teachers in the United States to participate in the study. The initial posting also explained that participants had the opportunity to enter a drawing to win one of six, \$25 gift cards to Amazon.com should they choose to provide their email address after the completion of their surveys. See Appendix H for the initial post and invitation to the study.

Given the unique online population used in this study, for convenience purposes, both the R-SLEQ and TSI were administered electronically using Survey Monkey®, a commonly used online survey medium. Questions were written verbatim and in the original order as they are in their paper form. From the original posting in the group, participants clicked on the study's unique survey link and were taken to a participant consent form. This form explained, among other things, that participation in the study was completely voluntary and comes with minimal risk. See Appendix J for the participant consent form. Once participants provided their electronic consent they clicked through to another page where they were asked the following ten demographic questions: grade level assignment, school type, classroom type, teaching role, school funding status, gender, age, race or ethnicity, years of experience, and level of education (See Appendix E). The survey automatically ended if potential participants selected that they were not self-contained, general education, fourth or fifth grade public school teachers in the United States. Participants who fit the criteria moved on and began the 21-question Revised School Level Environment Questionnaire (R-SLEQ). Finally, they completed the 49-question Teacher Stress Inventory (TSI). At the conclusion of these two surveys participants were given the option to provide their email address in order to be entered into a drawing for one of six, \$25 Amazon.com gift cards. Providing an email address was optional and was only used for the purpose of the gift card drawing. All participants then clicked the submit button and were thanked for their time and participation. The data collection window remained open for six weeks. Each Saturday the post was bumped to the top of the feed and one week prior to the closure of the data collection window the researcher posted to the *Fourth and Fifth Grade Teacher Talk* Facebook group a reminder that the window to participate in the study was closing in seven days (See Appendix K). To ensure that participants only responded one time, the

Survey Monkey settings were set to limit the number of individual responses to once only. The Survey Monkey settings were also set to collect data anonymously to protect participants' identities. Data collected from participants will be stored for three years after the completion of the study in a password-protected file on the researcher's computer and will be saved on a password protected back-up hard drive. After three years the data will be shredded and deleted. Data were organized using Microsoft Excel and descriptive and inferential statistics were run using Excel and the Statistical Package for the Social Sciences® (SPSS).

Data Analysis

Data from both instruments were entered into Microsoft Excel spreadsheets and organized. The researcher removed missing and incomplete respondent data from the data set. Next, the data were imported into SPSS where the values were coded and the instruments were scored. For the TSI, the researcher found the mean of each subscale and then found the mean of the 10 subscales combined to get an overall TSI score for each respondent. For the R-SELQ the researcher found the mean of each subscale and found the overall mean score according to scoring directions. Next, the data were copied into SPSS for descriptive and inferential statistical tests. The goal of descriptive statistics is to summarize information about a sample, while inferential statistics is used when relating two or more variables (Warner, 2013). First, descriptive statistics were computed for the study's variables, including the frequencies and percentages of the following ten demographic variables: (a) grade level assignment, (b) school type, (c) classroom type, (d) teaching role, (e) school funding status, (f) gender, (g) age, (h) race or ethnicity, (i) years of experience, and (j) level of education. The ranges, means, and standard deviations were computed for teacher-perceived school climate and teacher stress scores. Next, inferential analyses were completed to test the study's null hypothesis.

Correlational research analysis is used to determine whether relationships exist between variables and to what extent. Multiple regression analysis was used to test the null hypothesis and determine whether a relationship existed for the subscale scores on the Revised School Level Environment Questionnaire (R-SLEQ) and the overall teacher stress score on the Teacher Stress Inventory (TSI). Multiple regression is most appropriate when the goal of a study is to identify predictive relationships between variables and further analyze correlational studies (Gall, Gall, & Borg, 2007). A significance level of $p < .05$ was used to determine whether to reject the null hypothesis. There are three multiple regression assumptions that must be tested before data analysis. The first assumption is the assumption of bivariate outliers. The researcher looked for extreme bivariate outliers using scatterplots between all of the pairs of independent variables (x_1, x_2, \dots, x_n) and the predictor variables (x_1, x_2, \dots, x_n) and criterion variable (y). The second assumption is the assumption of multivariate normal distribution. By plotting a scatterplot for each pair of predictor variables (x_1, x_2), and between the predictor variables (x_1, x_2, \dots, x_n), and the criterion variable (y) the researcher checked for linear relationships between each pair of variables. The third and final assumption is non-multicollinearity among the predictor variables. This was tested using a variance inflation factor examination (VIF). No major violations of these three assumptions were found. The primary analysis for this data was the multiple regression analysis to test the null hypothesis. It was tested at the 95% confidence level and the reported significance was determined using an F -stat, and effect size through Pearson's R , and R^2 .

CHAPTER FOUR: FINDINGS

Overview

This correlational, predictive study examined the relationships between the predictor variables of school climate (collaboration, decision-making, instructional innovation, school resources, and student relations) with the criterion variable of teacher stress among fourth- and fifth-grade teachers. Data were collected through the use of the Revised School Level Environment Questionnaire (R-SLEQ) and the Teacher Stress Inventory (TSI). Sixty-eight teachers fit the study's criteria and completed the two surveys. This chapter will discuss the descriptive statistics, data screening procedures, and multiple regression assumptions. The results for the null hypothesis will be presented as well.

Research Question

RQ: How accurately can teachers' stress be predicted from a linear combination of teachers' perceived school climate indicators for fourth- and fifth-grade United States self-contained, general education teachers?

Null Hypothesis

H₀: There will be no significant predictive relationship between the criterion variable (teachers' stress) and the linear combination of predictor variables for school climate (collaboration, decision-making, instructional innovation, school resources, and student relations) among fourth- and fifth-grade United States self-contained, general education teachers.

Descriptive Statistics

This study surveyed fourth- and fifth-grade self-contained, general education, public school teachers in the United States. One-hundred-twenty teachers participated in the study; however, nine did not complete the surveys in their entirety, and 43 did not fit the criteria of the

study and were exited from completing the surveys. The remaining 68 ($N = 68$) teachers qualified for the study and completed both surveys in their entirety.

Descriptive statistics were obtained on each of the variables. The mean and standard deviation results for the predictor (collaboration, decision-making, instructional innovation, school resources, and student relations) and criterion (teachers' stress) variables are shown in Table 2. The Teacher Stress Inventory (TSI) data range was 1 to 5, wherein a score of 1 is the lowest possible score indicating that the respondent has no stress, while a score of 5 is the highest possible score and means that the respondent has major stress. According to the TSI results there was a mean of 2.78 for levels of teacher stress. When rounded to the nearest whole number, the average is 3, which indicates a medium level of stress. The Revised School Level Environment Questionnaire (R-SLEQ) data range was 1 to 5, wherein a 1 is the lowest possible score and indicates a lower perception of school climate and a 5 is the highest possible score, indicating a higher perception of school climate. The means for the collaboration and school resources subscales were the highest at 3.60. The decision-making subscale mean was the lowest at 2.50. These findings indicate that on average teachers feel they have adequate collaboration and school resources and less than average input in decision making.

Table 2

Descriptive Statistics

	<i>n</i>	Minimum	Maximum	Mean	Std. Deviation
Collaboration	68	2.00	4.67	3.5956	.62647
Decision Making	68	1.00	4.33	2.5049	.74311
Instructional Innovation	68	1.75	4.75	3.5368	.64684
School Resources	68	1.50	5.00	3.5956	.86390
Student Relations	68	1.00	5.00	3.4412	.84213
Teacher Stress	68	1.46	4.02	2.7804	.58965
Valid <i>N</i> (listwise)	68				

Results

Sixty-eight participants fit the study's criteria and fully completed both instruments.

Data were screened for missing data points and incomplete data sets before moving forward with assumption testing.

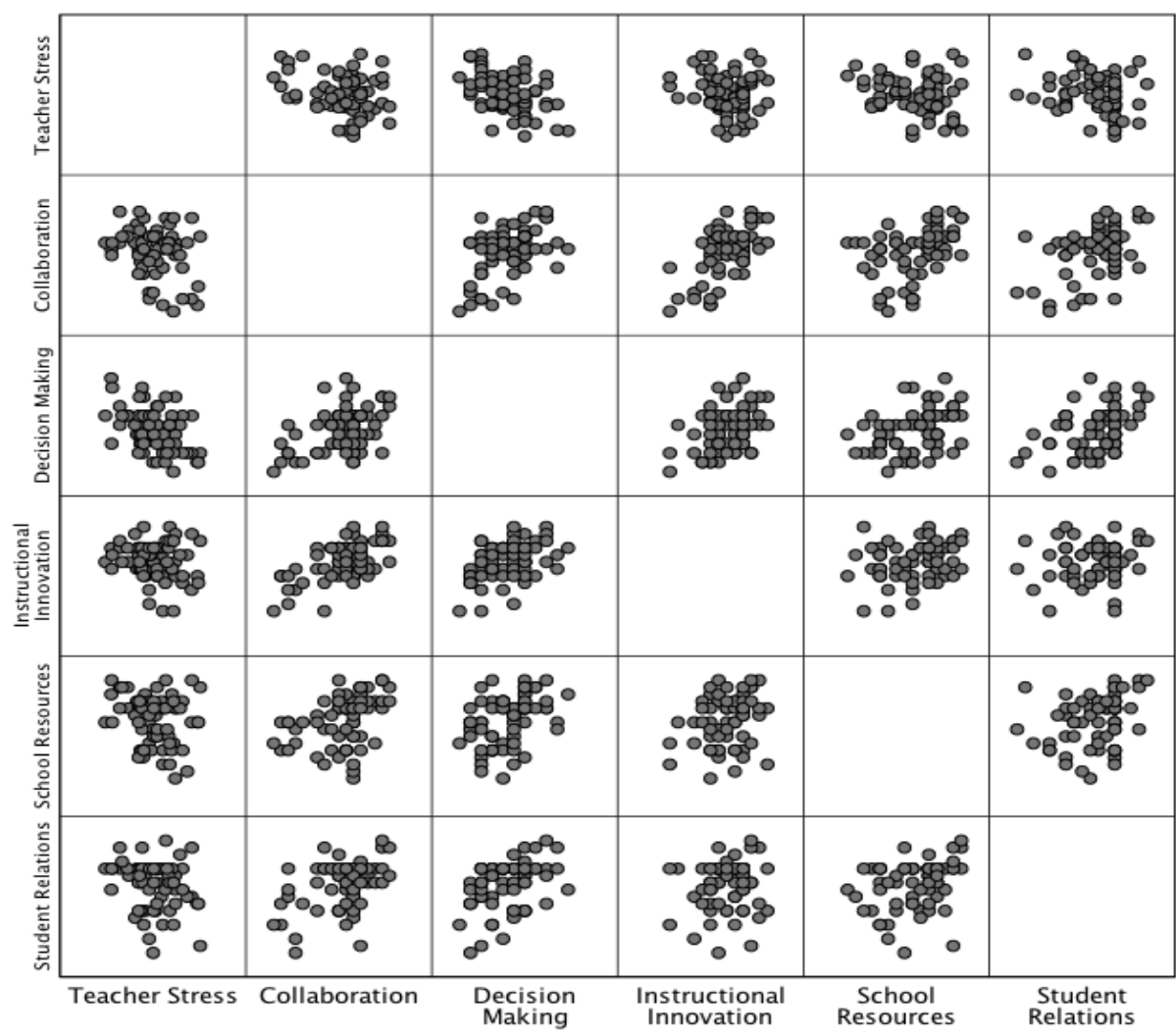
Assumption Testing

Prior to beginning multiple regression analysis, the data were prescreened to ensure that the assumptions of bivariate outliers, multivariate normal distribution, and non-multicollinearity were met. In order to test the assumption of bivariate outliers a scatterplot matrix was used. See Figure 1. Visual inspection did not identify any extreme bivariate outliers, so the assumption was met. The scatterplot matrix was also used to assess the assumption of multivariate normal distribution. By visually examining the scatterplot matrix it appeared there were linear

relationships between each pair of variables and in each instance, there was the approximate classic “cigar shape.” The assumption was met.

Figure 1

Scatterplot Matrix for Teachers’ Stress and School Climate Subscales



Note. ^a This scatterplot matrix was used for the assumptions of bivariate outliers and multivariate normal distribution. ^b $N = 68$.

The final assumption was non-multicollinearity. Multicollinearity happens when independent variables are too highly correlated with each other. Testing this assumption, the absence of multicollinearity was conducted using Variance Inflation Factor (VIF) values. In order for the assumption to be valid, the VIF values must be between 1 and 5. The results in Table 3 show that all scores fall within the minimum requirements, and thus, the final assumption was met.

Table 3

Assumption of Multicollinearity

Model		Collinearity Statistics	
		Tolerance	VIF
1	Collaboration	.484	2.065
	Decision Making	.662	1.511
	Instructional Innovation	.585	1.710
	School Resources	.767	1.304
	Student Relations	.717	1.395

Note. ^a Dependent Variable: Teacher Stress. ^b $N = 68$.

Hypothesis

The null hypothesis stated that there would be no significant predictive relationship between the criterion variable (teachers' stress) and the linear combination of predictor variables for school climate (collaboration, decision-making, instructional innovation, school resources, and student relations) among fourth- and fifth-grade United States self-contained, general education teachers. A multiple regression was conducted to test the relationship between

teachers' stress and the five school climate subscales. The researcher rejected the null hypothesis at the 95% confidence level where $F(5, 62) = 3.38, p = .009$. These results indicated that the linear combination of the predictor variables was significantly related to teachers' stress. The results of the ANOVA are detailed in Table 4.

Table 4

ANOVA^a

		Sum of				
Model		Squares	df	Mean Square	F	Sig.
1	Regression	4.993	5	.999	3.383	.009 ^b
	Residual	18.302	62	.295		
	Total	23.295	67			

Note. ^a Dependent Variable: Teacher Stress. ^b Predictors: (Constant), Student Relations, Instructional Innovation, School Resources, Decision Making, Collaboration. ^c Significant at the $p < .05$ level. ^d $N = 68$.

According to Warner (2013) the model's effect size was very large where $R = .463$ and $R^2 = .214$. According to the model, this indicates that approximately 21% of the variance of the criterion variable can be explained by the linear combination of predictor variables. Table 5 shows the model summary.

Table 5

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.463 ^a	.214	.151	.54332

Note. ^a Predictors: (Constant), Student Relations, Instructional Innovation, School Resources, Decision Making, Collaboration. ^b $N = 68$.

After reviewing the overall model involving the five predictor variables that were found to be significant at the $\alpha = .05$ level and following the rejection of the null hypothesis, the researcher analyzed the coefficients. These results may be found in Table 6. Each predictor was tested at the 95% confidence level. An examination of the coefficients determined that decision-making was a significant predictor of teacher stress ($p = .003$). The other four variables were found to not be significant predictors. The negative coefficient for decision-making suggests that there is a negative relationship between decision-making and teachers' stress. This means that as teachers feel increasingly involved in the decision-making process, they are less likely to feel stress. The opposite of this would also be true, in that as teachers feel they have less input in the decision-making process, they tend to perceive higher levels of stress.

Table 6

Coefficients^a

Model		Unstandardized		Standardized		t	Sig.
		Coefficients		Coefficients			
		B	Std. Error	Beta			
1	(Constant)	3.798	.460			8.263	.000
	Collaboration	-.096	.152	-.102		-.632	.530
	Decision Making	-.334	.110	-.421		-3.046	.003
	Instructional Innovation	.074	.134	.081		.550	.584
	School Resources	.004	.088	.005		.041	.967
	Student Relations	-.031	.093	-.045		-.337	.737

Note. ^a Dependent Variable: Teacher Stress. ^b *N* = 68.

Summary

This study utilized data from 68 teachers to examine the relationship between school climate and teachers' self-perceived stress levels. In the final chapter, these findings will be discussed in relationship to the existing literature, limitations will be addressed, and a series of recommendations for future research will be provided.

CHAPTER FIVE: CONCLUSIONS

Overview

Chapter Five includes a discussion of the results found in the previous chapter, along with the results for the research question, implications and limitations of the study, and recommendations for future research.

Discussion

The purpose of this quantitative, correlational study was to examine the relationship between school climate and teachers' self-perceived stress levels. Teachers in this study taught in self-contained, general education, fourth- and fifth-grade public school classrooms from across the United States. The study sought to determine if a predictive relationship existed between the predictor variables for school climate (collaboration, decision-making, instructional innovation, school resources, and student relations) and the criterion variable, teachers' stress.

School climate has been widely studied from the perspective of students and less frequently in conjunction with teacher outcomes. Therefore, there was a need in the field to conduct more research on school climate, specifically from teachers' perspectives (Capp et al., 2020). The current study's findings, that school climate factors can predict teacher stress, support the findings of existing research. One such study, conducted by Hu, Li, Wang, Reynolds, and Wang (2019), examined the relationship between stress among preschool teachers and two school climate factors, principal collegial leadership and professionalism. Through the mediating role of teacher self-efficacy, principal collegial leadership was found to have a significant negative effect on preschool teachers' stress, and professionalism was found to be a significant predictor of preschool teachers' stress.

Hu et al.'s (2019) findings regarding the importance of principal leadership are echoed

throughout the research on teacher outcomes and are often studied in association with school climate. In one study, conducted by Allen et al. (2015), the relationship between transformative leaders, school climate, and teacher achievement was examined. Findings indicated that there was a positive relationship between transformative leadership and school climate. Moreover, principal leadership has been shown to be a significant predictor of teacher stress (Ghavifekr, & Pillai, 2016; Ouellette et al., 2018). Consistent with Hu et al. (2019), Ouellette et al. (2018) found that collegial leadership, wherein the principal is supportive, approachable, and helpful, is a significant negative contributor to teacher stress. These findings are related to the present study because decision-making was found to be the strongest predictor for the model. This relationship was found to be significant in this study where ($p = .003$). The effect size was very large ($r = -.42$). The negative direction of the relationship suggests that as teachers feel increasingly involved in the decision-making process, they are less likely to feel stress.

Decision-making, in the context of this study, is defined as teachers' opportunities to participate in making school-wide decisions (Johnson et al., 2007). The present study's findings suggest that when teachers perceive they have low levels of input in their schools' decision-making process, they have higher levels of stress. The ability for teachers to have input in school-wide decision-making is most often the result of the school's leadership, and thus relates to the principal. These findings are consistent with Rhodes et al. (2009), who found that principals who demonstrated collaborative decision-making practices had improved school climate. Similarly, the results also support Carver-Thomas and Darling-Hammond's (2019) findings that perceived lack of support from administration is the workplace condition that is most predictive of teacher turnover.

Referring back to the JDCA model, which underpinned this study, findings of the present study support the notion that teaching could be described as what Karasek and Theorell (1992) would consider a relatively high-strain job. This study did not specifically examine the demanding nature of the teaching profession, however, results did indicate that lack of employee decision-making was present. High strain jobs are characterized as demanding and with little employee control. The model hypothesizes that high-strain jobs are the most damaging to employee health, which in the context of this study, would mean they are more susceptible to job-related stress.

One surprising result of the current study was that school climate factors, collaboration, student relations, school resources, and instructional innovation were not found to be significant predictors of teacher stress. Previous research has differed in some of these areas. For instance, Collie et al. (2016) found that teachers who felt a sense of connectedness with colleagues reported higher levels of overall well-being, perhaps due to increased level of collaboration and decreased level of workload, both of which might help in reducing stress levels. Likewise, Wolgast and Fischer (2017) determined that teachers who collaborated and worked together had lower levels of perceived stress. Previous research has also shown that student relations could be a predictor of teacher stress. For instance, Gagnon et al. (2019) found that when a student-teacher relationship is conflict-filled, the teacher is more likely to experience stress.

The current study's findings are consistent with previous studies, which have shown that organizational health predicts teacher stress and satisfaction (Ouellette et al., 2018). According to Reza et al. (2013) there is a significant and positive relationship between school climate and teachers' commitment and motivation. This is consistent with research that has shown a significant positive relationship between school organizational climate and job satisfaction

(Ghavifekr, & Pillai, 2016). These studies support the growing body of research that states supportive school environments are more likely to retain teachers (Kraft et al., 2016). The findings of the present study also support this, in that when teachers perceive their school climate as more positive, they report lower levels of stress. Generally speaking, when employees feel lower levels of job-related stress and higher levels of job satisfaction, they are more likely to continue working.

Implications

School climate research is not a new phenomenon, but with each study conducted comes a better and more full understanding of its impact and significance. The present study's investigation into the potential relationship between school climate and teachers' stress was necessary in part, due to the nation's difficulty in retaining qualified teachers. Research has shown that there is a significant relationship between school climate and teacher retention (Kraft et al., 2016). This is in part due to research citing that teachers' stress has been shown to negatively predict work-related well-being (Li & Zhang, 2019) and job satisfaction (Karabatak & Alanoğlu, 2019). On the other hand, positive school climate has been found to have a positive effect on teacher job satisfaction (Malinen & Savolainen, 2016). This previous research is significant to the current study's problem at hand because high attrition rates have shown to have negative implications for school districts and student achievement (Kini & Podolsky, 2016; Ronfeldt, Loeb, & Wyckoff, 2013) and teachers have cited both poor climate (Wallace Foundation, 2013) and stress (Ingersoll, 2012; Rumschal, 2017) as reasons for leaving the field of education.

The results of the current study indicated that the linear combination of the school climate predictor variables was significantly related to teachers' stress. The current study also concluded

that of the five predictor variables, decision-making was the only significant predictor of teacher stress. The findings of this study contribute to the growing body of knowledge on school climate and teacher stress in several ways. For instance, understanding the relationship between these two constructs may provide insight for districts and schools on the importance of creating positive school climates in an effort to retain healthy and productive teachers. A logical conclusion drawn from this study is that when school climates are poor, teacher stress is high. Therefore, maintaining a positive school climate may reduce the level of teacher stress, which in turn may decrease the level of teacher turnover.

Additionally, this study is significant for school principals to recognize their role in influencing school climate. School principals are instrumental in defining school climate and a school's climate is directly related to teacher and learner outcomes. This study concludes that one area of school climate to specifically improve upon is in the area of teacher decision-making. The results of this study articulate the importance of providing teachers with opportunities to participate in decisions about the way the school operates and governs. Generally speaking, when people feel that they have a "seat at the table" they are more likely to be invested in their work. Leaders can enhance self-determination by enabling others to act and placing the power for more decisions in their employees' hands (Kouzes & Posner, 2012). For principals, this can lead to molding teachers into teacher leaders, thus creating skilled, invested, and motivated teachers. When this becomes the norm, teachers, students, and administrators all benefit.

This study provided important insight into understanding the relationship between school climate factors and teachers' stress. Namely, this study confirmed that making a healthy school climate a priority is essential. However, it is apparent that further studies need to be conducted to further explore these two constructs in conjunction with one another.

Limitations

This study had several notable limitations. One limitation was related to the demographic makeup of the study. The vast majority of responses came from female (97.1%, $n = 66$,) and predominantly White (89.7%, $n = 61$) teachers.

Another limitation of the current study was the method in which participants were gathered. The study used a convenience sample and was conducted with participants from a single Facebook group, and while teachers came from a variety of states across the nation, they all had chosen to join this one group. The decision to join a Facebook group might speak to the uniqueness of these teachers. For instance, perhaps these teachers are more stressed than the typical teacher and are therefore seeking support online, or the opposite may be true and they are overachievers, thriving in the field and have chosen to join an online community in order to spread their knowledge and collaborate. Therefore, the generalizability of the study's results may not be transferable to the target population of fourth- and fifth-grade United States self-contained, general education teachers. As a result of the previous two limitations, it is recommended that future research include a larger and more diverse sample.

A final limitation is that both the R-SLEQ and TSI are self-reporting questionnaires. This is an internal validity concern because self-reporting instruments may be subject to response bias.

Recommendations for Future Research

While the current study demonstrates a significant relationship between school climate and teachers' stress, there are numerous limitations as previously mentioned, which make it apparent for the need of future studies in order to better understand the relationship between

these variables. Therefore, there are a number of recommendations for future research based on the study's findings and results.

It is recommended that the study be duplicated with a larger sample size and that future research explore the relationship of these two variables at the lower elementary, middle, and high school level. Further studies could also be replicated in private schools and with teachers in different settings, such as departmentalized or special education. It is possible that this study may yield different results with these different settings. For instance, research indicates that elementary teachers have been shown to report more positive levels of school climate when compared to their secondary teacher counterparts (Capp et al., 2020). Another recommendation for future research is that a qualitative study be conducted in order to gain a deeper and more detailed understanding of how school climate impacts teachers' stress levels.

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APPENDIX A:
REVISED SCHOOL LEVEL ENVIRONMENT QUESTIONNAIRE

The R-SLEQ has been removed to comply with copyright. It can be accessed online at <https://new.coe.arizona.edu/bruce-johnson-resources>.

APPENDIX B:
PERMISSION TO USE R-SLEQ

Re: [External] RE: Permission to use R-SLEQ

From: [REDACTED]
Sent: Wednesday, November 6, 2019 8:12 AM
To: Eason, Andrea <aeason8@liberty.edu>
Cc: [REDACTED]
Subject: [External] RE: Permission to use R-SLEQ

[EXTERNAL EMAIL: Do not click any links or open attachments unless you know the sender and trust the content.]

Hello Andrea,

You are welcome to use the Revised SLEQ in your study. Here is a link to some articles about it as well as the instrument and a factor & scoring guide: https://www.coe.arizona.edu/johnson_resources

Bruce

Bruce Johnson

Dean & Professor, College of Education

[REDACTED]

APPENDIX C:
TEACHER STRESS INVENTORY

The TSI has been removed to comply with copyright. It can be accessed online at www.InstructionalTech.net.

APPENDIX D:
PERMISSION TO USE TSI

Re: [External] RE: Permission to use TSI

From: [REDACTED]
Sent: Wednesday, November 6, 2019 9:27 PM
To: Eason, Andrea <aeason8@liberty.edu>
Cc: [REDACTED]
Subject: [External] RE: Permission to use TSI

[EXTERNAL EMAIL: Do not click any links or open attachments unless you know the sender and trust the content.]

Hello Andrea,

Feel free to use the TSI in the way that you've described..

To access the Inventory and test manual, click on the link just below my name, Choose TSI from the main menu, and that should get you to the TSI page!

Good luck with your project!

Regards,

Michael

Dr. Michael J. Fimian
[REDACTED]

APPENDIX E:
DEMOGRAPHIC QUESTIONNAIRE

Instructions: Please supply the information below. It will be used for statistical purposes only.

1. What grade do you currently teach?
 - a. fourth
 - b. fifth
 - c. other

2. Which of the following best describes the school where you currently teach?
 - a. public school in the United States
 - b. private school in the United States
 - c. school outside of the United States

3. Which of the following best describes your current teaching role?
 - a. general education teacher
 - b. special education teacher

4. Which of the following best describes your current teaching role?
 - a. self-contained teacher
 - b. departmentalized teacher

5. Which of the following best describes the school where you currently teach?
 - a. Title-I school
 - b. Not a Title-I school

6. What is your gender?
 - a. male
 - b. female

7. What is your age?
 - a. 20-29 years old
 - b. 30-39 years old
 - c. 40-49 years old
 - d. 50-59 years old
 - e. 60 or older

8. How do you identify your race or ethnicity?
 - a. Asian
 - b. Black-not Hispanic
 - c. Hispanic
 - d. Native American
 - e. White-not Hispanic
 - f. Other

9. How many years of teaching experience do you have?

- a. 0-1 years
- b. 2-5 years
- c. 6-10 years
- d. 11-15 years
- e. 16-20 years
- f. More than 20 years

10. What is the highest degree you have attained?

- a. Bachelor's degree
- b. Master's degree
- c. Specialist's degree
- d. Doctoral degree

APPENDIX F:

FACEBOOK GROUP PERMISSION

Re: [External] Re: Permission to Post Research Study in [REDACTED] Facebook Group

From: Kim [REDACTED]
Sent: Wednesday, November 13, 2019 11:54 PM
To: Eason, Andrea <aeason8@liberty.edu>
Subject: [External] Re: Permission to Post Research Study in [REDACTED] Facebook Group

[EXTERNAL EMAIL: Do not click any links or open attachments unless you know the sender and trust the content.]

Of course! You may post a link and follow up link to your research in the group. Best of luck on your research and your dissertation! It sound very interesting. I'd love to read it when you are finished. I hope you'll consider sharing it. :)

Kim [REDACTED]



Kim [REDACTED]
 Educator | Curriculum Developer
 Administrator

✉ [REDACTED]
 📞 [REDACTED]
 📍 [REDACTED]



On Wed, Nov 13, 2019 at 5:33 P [REDACTED]
 Good Evening Kim

APPENDIX G:
IRB APPROVAL

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

March 19, 2020

Andrea Eason
Amy Jones

Re: IRB Exemption - IRB-FY19-20-138 THE PREDICTIVE RELATIONSHIP BETWEEN SCHOOL CLIMATE AND SELF-PERCEIVED STRESS LEVELS AMONG FOURTH AND FIFTH GRADE TEACHERS

Dear Andrea Eason, Amy Jones:

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under the following exemption category, which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:

101(b):

Category 2.(i). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording).

The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects.

Your stamped consent form can be found under the Attachments tab within the Submission Details section of your study on Cayuse IRB. This form should be copied and used to gain the consent of your research participants. If you plan to provide your consent information electronically, the contents of the attached consent document should be made available without alteration.

Please note that this exemption only applies to your current research application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued exemption status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this exemption or need assistance in determining whether possible modifications to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,

G. Michele Baker, MA, CIP

Administrative Chair of Institutional Research

Research Ethics Office

APPENDIX H:**INVITATION TO STUDY (POST TO FACEBOOK GROUP)**

Dear Teachers:

As a student in the School of Education at Liberty University, I am conducting research as part of the requirements for a doctoral degree. The purpose of my research is to examine the predictive relationship between school climate and self-perceived stress among fourth- and fifth-grade teachers, and I am writing to invite eligible participants to join my study.

Participants must be 18 years of age or older, and self-contained, general education, fourth or fifth grade public school teachers in the United States. Participants, if willing, will be asked to complete a survey consisting of a demographic questionnaire, the Revised School Level Environmental Questionnaire, and the Teacher Stress Inventory. It should take approximately 10 minutes to complete the procedures listed above. Participation will be completely anonymous, and no personal, identifying information will be collected.

In order to participate, please click the link below:

<https://www.surveymonkey.com/r/CLIMATEANDSTRESS>

A consent document is provided as the first page you will see when you click on the survey link. After you have read the consent form, please click NEXT to proceed to the survey. Doing so will indicate that you have read the consent information and would like to take part in the study.

Participants will have the option to provide an email address at the end of the survey that will enter them into a drawing to receive one of six \$25 gift cards to Amazon.com. Email addresses will not be linked to the survey data collected.

Sincerely,

Andrea Eason
Doctoral Candidate
Aeason8@liberty.edu

APPENDIX I:

PARTICIPANT CONSENT FORM

Title of the Project: The Predictive Relationship Between School Climate and Self-Perceived Stress Levels Among Fourth- and Fifth-Grade Teachers

Principal Investigator: Andrea Eason, Ed.S, Liberty University, School of Education

Invitation to be Part of a Research Study

You are invited to participate in a research study. In order to participate, you must be 18 years of age or older, and a self-contained, general education, fourth or fifth grade public school teacher in the United States. Taking part in this research project is voluntary. Please take time to read this entire form and ask questions before deciding whether to take part in this research project.

What is the study about and why is it being done?

The purpose of this quantitative correlational study is to examine the relationship between teacher-perceived school climate and teacher stress among fourth- and fifth-grade teachers. The research question addressed in this study is: How accurately can teachers' stress be predicted from a linear combination of teachers perceived school climate indicators for fourth- and fifth-grade United States self-contained, general education teachers? This study will build upon the current body of knowledge on school climate and teacher stress.

What will happen if you take part in this study?

If you agree to be in this study, I would ask you to do the following things:

1. Complete an anonymous survey consisting of a demographic questionnaire, the Revised School Level Environmental Questionnaire, and the Teacher Stress Inventory. This should take approximately 10 minutes to complete.

How could you or others benefit from this study?

Participants should not expect to receive a direct benefit from taking part in this study. Benefits to society include that the findings may serve to build upon the existing body of knowledge of school climate and teacher stress and could positively impact student and teacher outcomes.

What risks might you experience from being in this study?

The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

How will personal information be protected?

The records of this study will be kept private. Research records will be stored securely, and only the researcher will have access to the records. Participant responses will be anonymous. Data will be stored on a password-locked computer and may be used in future presentations. After three years, all electronic records will be deleted.

How will you be compensated for being part of the study?

Participants have the opportunity to be entered into a drawing for participating in this study. Completing the survey and choosing to provide an email address will enter participants into a

drawing for one of six \$25 gift cards to Amazon.com. Email addresses will be requested for compensation purposes; however, they will be pulled and separated from your responses to maintain your anonymity.

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time prior to submitting the survey without affecting those relationships.

What should you do if you decide to withdraw from the study?

If you choose to withdraw from the study, please exit the survey and close your Internet browser. Your responses will not be recorded or included in the study.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is Andrea Eason. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at eason8@liberty.edu. You may also contact the researcher's faculty sponsor, Dr. Amy Jones, at [REDACTED]

Whom do you contact if you have questions about your rights as a research participant?

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at irb@liberty.edu.

Your Consent

Before agreeing to be part of the research, please be sure that you understand what the study is about. You can print a copy of the document for your records. If you have any questions about the study later, you can contact the researcher using the information provided above.

Please click NEXT to proceed to the survey. Doing so will indicate that you have read the consent information and would like to take part in the study.

APPENDIX J:
FOLLOW UP/REMINDER POST (POST TO FACEBOOK GROUP)

Dear Teachers:

As a student in the School of Education at Liberty University, I am conducting research as part of the requirements for a doctoral degree. Three weeks ago a post was made inviting you to participate in a research study. This follow-up post is being sent to remind you to complete the survey if you would like to participate and have not already done so. There is one week left before May 2, 2020, which is the deadline for participation.

Participants must be 18 years of age or older, and self-contained, general education, fourth or fifth grade public school teachers in the United States. Participants, if willing, will be asked to complete a survey consisting of a demographic questionnaire, the Revised School Level Environmental Questionnaire, and the Teacher Stress Inventory. It should take approximately 10 minutes to complete the procedures listed above. Participation will be completely anonymous, and no personal, identifying information will be collected.

In order to participate, please click the link below:

<https://www.surveymonkey.com/r/CLIMATEANDSTRESS>

A consent document is provided as the first page you will see when you click on the survey link. After you have read the consent form, please click NEXT to proceed to the survey. Doing so will indicate that you have read the consent information and would like to take part in the study.

Participants will have the option to provide an email address at the end of the survey that will enter them into a drawing to receive one of six \$25 gift cards to Amazon.com. Email addresses will not be linked to the survey data collected.

Sincerely,

Andrea Eason
Doctoral Candidate
Aeason8@liberty.edu