A MISSING LINK: EXPLORING THE CONNECTION BETWEEN SCHOOL CLIMATE

AND TEACHER RETENTION

by

Christine Whitt

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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2022

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APPROVED BY:

Lisa Foster, Ph.D., Committee Chair

Jeffrey Savage, Ed.D., Committee Member

ABSTRACT

This quantitative correlational study examined the strength of the correlations between school climate and teacher retention in rural, low-income elementary schools in North Carolina. In addition to identifying the overall relationship of school climate to teacher retention, this study examined the relationships between the overall climate factors (autonomy, community, induction, shared leadership, responsibility, and recognition) and teacher retention. Utilizing data from the North Carolina Teacher Working Conditions Survey (NC TWCS), 150 teachers were surveyed. Teachers included in the data collection were identified as working in low-income and rural schools, serving pre-kindergarten to fifth grade. Existing data was requested from school districts and placed in a Microsoft Excel spreadsheet. Data was then uploaded to SPSS software for correlation and regression analysis. This study found a relationship between the overall school climate and teacher retention. It also indicated the mediating factors of leadership, autonomy, and recognition as having a relationship with retention, while factors of responsibility, community, and induction had little to no relationship. The findings of this study serve an important role in solving the teacher retention problem in North Carolina schools and provide information for school leaders in creating positive climates that promote retention.

Keywords: climate, retention, education, attrition, culture, autonomy, leadership, induction, community, distributed leadership, motivation, responsibility, recognition, self-efficacy

Dedication

This dissertation is dedicated to all educators. Thank you for all your work and dedication to a field that can oftentimes feel thankless. Moreover, for giving of yourself to provide loving and engaging environments for all kids. Lastly, for being there when others are not and working tirelessly to make sure all kids can learn in a safe space.

Acknowledgments

Wow, where do I start? First and foremost, I thank God for giving me the patience, persistence, and wisdom needed to finish this journey. Without Him, nothing would be possible.

Thank you to Dr. Foster, who served as an excellent guide through this process. From my first class to my last submission, Dr. Foster, you have always provided direction and reassurance.

Thank you Dr. Savage for serving as my committee member. Your thoughtful comments, questions, and feedback during review and defense also helped me through this journey.

Thank you to my husband, Tom, and children, Preston and Charlie. This process was sometimes just as tedious for you as it was for me. You provided me with quiet times to think, study, and write. You offered the correct amount of distraction to help keep me grounded, listening ears to vent my frustrations, and support and advice when needed. Tom, you supported me through many crazy journeys- this one by far is one of the craziest. I'm looking forward to the many crazy journeys to come.

To my parents, Jeanne and Ed, words of thanks are not enough. You taught me that I could do anything I set my mind to from an early age. You supported me through my undergraduate degree, master's, doctorate, and everything else life has thrown at me. Dad, thank you for letting me talk, vent, and otherwise be a sounding board. You allowed me to form my own opinions and supported me when needed. Mom, thank you for teaching me to look at the bigger picture, and for always listening and guiding me in the right direction. Thank you for your powerful editing skills and advice- I am sure you now know more than you ever wanted to know about climate and education.

To my mother and father-in-law, Debbie and Pete, thank you for your encouragement, support, and continual prayers.

To my "teacher friends," thank you for being a sounding board, a venting space, a celebration buddy, and an idea machine.

Thank you to the numerous educational leaders who have helped encourage and mentor me into the educational leader I am today.

Thank you to the members of #DoctoralMomLife and Liberty University's Doctoral Cohort for your support and advice. We are all in this together, and it really does take a team.

Table of Contents

List of Tables

List of Figures

List of Abbreviations

Annual Yearly Progress (AYP)

Distributed Leadership (DL)

Every Student Succeeds Act (ESSA)

Elementary and Secondary Education Act (ESEA)

North Carolina Department of Public Instruction (NC DPI)

North Carolina Teacher Working Conditions Survey (NC TWCS)

No Child Left Behind (NCLB)

Rural and Low-Income Schools (RLIS)

Value Added Model (VAM)

CHAPTER ONE: INTRODUCTION

Overview

The purpose of this quantitative correlational study was to identify possible relationships between school climate and teacher retention in rural, low-income elementary schools in North Carolina. This chapter provided an overview of the literature and theories that guided this study, presented the problem and purpose of this study, provided social context, the research questions, significance the findings, and definitions of important terms in the study.

Background

Teacher retention is a growing problem in the United States. In 2020, North Carolina schools reported a 19% overall attrition rate for teachers moving across schools and a 4% attrition rate for teachers permanently leaving the profession (North Carolina Teacher Working Conditions Survey, 2020). The hiring and training of each new teacher cost up to $20,000 (Learning Policy Institute, 2017), and the lack of continuity impacts student learning (Ronfeldt et al., 2013). This section outlined the historical, theoretical, and social context of teacher attrition and the motivation to stay.

Historical Overview

In 1965, the Elementary and Secondary Education Act (ESEA) was signed into law, placing federal mandates on states and schools to provide equitable education. This policy was designed to hold schools accountable for student learning. The funding offered to schools under ESEA promoted professional development, increased instructional resources, and provided for parental and community involvement. Since its signing, the act has been revised every five years with little change in the requirements until 2001 (Paul, 2016).

In 2001, President George W. Busch changed the ESEA to reflect current accountability needs, leading to the No Child Left Behind Act (NCLB). This granted the federal government more educational authority and enacted stricter school guidelines to reduce or eliminate the achievement gap between different subgroups. As part of the new regulations, schools were required to adapt to a common curriculum. They were also required to use student testing data as part of teacher evaluation decisions, train teachers to meet new standards for teaching, and hold schools accountable for meeting the annual yearly progress (AYP). AYP is a method used for showing school growth. Failure for schools to meet new guidelines meant less funding (Klein, 2015), and failure for teachers meant a possible loss of employment (NCLB, 2002).

When re-evaluating NCLB in 2015, President Barak Obama again changed the law and created the Every Student Succeeds Act (ESSA). In theory, this change lessened the strict federal oversight of schooling (Klein, 2015) and returned policymaking decisions to the state and district leaders (Klein, 2016). However, much of the stress created through evaluation models, common curricula, and teacher induction methods remained. Currently, ESSA is the law, but state authorities rather than the federal government have decided to monitor school academic progress. The threat to job security through high-stakes testing and evaluation models stills exists (Klein, 2016).

Society-at-Large

It is important to approach the problem holistically when considering teacher retention rates. High teacher attrition rates affect the community by impacting tax dollars and continuity. Teacher attrition costs school districts over $20,000 for each teacher that leaves a district; these fees are associated with hiring and recruitment costs inherent to filling vacant positions

(Learning Policy Institute, 2017). If teachers remain in their current positions, schools could reallocate the tax dollars to invest in programs serving students.

Additionally, the greater a school's teacher attrition rates, the greater the effect is on student performance. Schools with significant teacher attrition produce lower reading and math scores, especially among lower socioeconomic groups (Ronfeldt et al., 2013), including rural schools. Teacher discontinuity results in greater distrust among staff and families. There is also a lack of student growth in policies, procedures, and relationship building (Ronfeldt, 2013), leading to lower growth opportunities among staff who choose to stay, impacting student learning (Ye & Singh, 2017).

Rural schools are impacted more than urban schools when considering North Carolina schools. Of the 30 schools in North Carolina with the highest teacher attrition rates in the 2019-2020 school year, 25 schools were rural (Public Schools First NC, 2020). Attrition rates greatly affect school relationships and climate (Johnson, 2014). When schools can fill vacant positions, new teachers who are still in survival mode are often hired, negatively affecting student success (Ulferts, 2018). With rural schools reporting a small recruiting pool (Tran et al., 2020), hiring qualified teachers becomes problematic (Tran et al., 2020; Ulferts, 2018).

Schools that serve lower-income populations experience even greater challenges with teacher attrition (Geiger & Pivovarova, 2018). In North Carolina, districts offer supplements to salaries (Public Schools First NC, 2020). With pay being a significant factor affecting teacher attrition (Geiger & Pivovarova, 2018), the over $2,000-a-year deficit between lower-income rural districts and higher-income urban districts in North Carolina increases the impact of teacher attrition (Public Schools First NC, 2020). This finding leads to a more significant deficit in high-quality teaching staff, affecting student success (Lee, 2018; Lee & Mamerow, 2019).

Theory

Since the implementation of NCLB and ESSA, teacher attrition has continued to increase, with eight percent of all teachers leaving the profession each year (Learning Policy Institute, 2018). Organizational climate theory was used to understand the relationship between school climate and teacher attrition rate. The construct of school climate was based on previous research by Johnson et al. (2014) and Preite (2015). School climate is the quality and character of school life, including the norms, values, and expectations that a school accepts and promotes (Brookover, 1985). According to the research, the variables that most influence school climate are belonging, autonomy, transition, induction process, and the learning community as set by leadership (Johnson et al., 2014). These studies are based on the theory that the person and the environment act interdependently, and climate reacts to group and individual perceptions and interactions (Preite, 2015).

The motivated socio-cognitive theory of climate assumes that individuals create climate perceptions to reduce anxiety and increase belonging (Beus et al., 2018). Beus et al. (2018) based their theory on the importance of meeting needs to obtain success and using group expectations to motivate behavior and reduce social anxiety.

The motivational theory feeds into the motivated socio-cognitive theory of climate. Motivation is a quest to fill psychological and physiological needs (Hertzberg, 1966; Maslow, 1943; Wolf, 1970). While Maslow (1943) suggested motivation comes from fulfilling different levels of need, other theories suggest that all needs are in a constant push and pull of fulfillment (Hertzberg, 1966; Wolf, 1970). Recognizing and providing the elements of work that motivate an individual creates job satisfaction (Hackman & Oldham, 1975), leading to retention.

It must be understood that the job environment is a mediating factor to gain a clearer understanding of an individual's motivation to stay or leave a career or workplace (Hackman & Oldham, 1975). Job characteristic theory suggests that the actual job can serve as a motivator. Workers should feel their work is challenging, varied, and meaningful while being trusted to make decisions about their work, recognized through quality feedback and increased responsibility (Hackman & Oldham, 1975). When these factors are realized, workers are fulfilling their need for achievement, recognition, work, and responsibility (Herzberg, 1966; Wolf, 1970), placing them at the higher levels of Maslow's (1943) hierarchy of needs and leading to greater motivation for staying in their current role. As a result, it becomes the school leader's role to implement policy in a manner that creates a climate allowing for need attainment. This research sought to understand the relationship between teacher attrition and school climate by using motivational theory through the motivational socio-cognitive theory of climate.

Problem Statement

Teacher attrition is increasing, as are the costs associated with school districts (Learning Policy Institute, 2017). Policies associated with school and teacher performance from federal accountability measures exacerbate job stress. How leadership enacts these policies produce significant effects on the school's overall climate, teacher perception of their work, and motivation to remain in the profession (McConnell, 2017; Rinke & Mawhinney, 2017). While meeting the federal accountability requirements is imperative, the school's administration must also meet the needs of its teachers. School leaders must provide a positive school climate that offers opportunities to build relationships, have autonomy over curriculum, create shared responsibility, recognize staff for accomplishments, interact positively with staff, and provide proper training and support (Johnson et al., 2014).

Over 50% of teachers with less than 5 years of experience resign from teaching each year (Learning Policy Institute, 2018). In North Carolina, 25 of the 30 school districts with the highest attrition rates are rural areas (Public Schools First NC, 2020). Considering many teachers cite working conditions as the primary contributing factor (McConnell, 2017), one can reason that the method by which leadership implements policies is a significant variable in the teacher attrition problem (Urick, 2016). For example, accountability measures require that students meet a set growth for the year in reading and math (ESSA, 2015), which has led many school leaders to use scripted curricula to meet this need (Carl, 2014). Consequently, this approach has eliminated the need for teacher autonomy over curriculum implementation. When teachers leave the profession, students and districts suffer from a lack of experience within the school (Rinke & Mawhinney, 2017) and diminished funds that could be used for programming rather than recruitment (Learning Policy Institute, 2017). Furthermore, greater teacher attrition rates result in lower recruitment rates and create situations where planning for programs is nearly impossible (McConnell, 2017). Additionally, it undermines the profession by lessening the reliability of the position and creating uncertainty (Rinke & Mawhinney, 2017).

Research indicates teachers who are recognized for their work (Springer et al., 2016), are connected to others (Ulfrets, 2015), participate in the decision-making process (Torres, 2019), and have more classroom autonomy (Carl, 2014). Furthermore, they tend to feel more supported by the principal (Urick, 2016) and are less likely to leave their position and stay in the profession. While each variable has been studied in isolation, little research has examined all of these variables as predictors for school climate and the impact of climate on teacher attrition in rural Title I schools in the United States. The problem was that existing literature had not addressed the high teacher attrition rates as they correlate to school climate.

Purpose Statement

The purpose of this quantitative correlational study was to determine the strength of the relationship between school climate (independent variable) and teacher attrition (dependent variable) to offer insight into the potential cause of the teacher attrition problem in rural, public, Title I schools in North Carolina.

The sample population was selected through a random sample of teachers working at Title I, rural, low-Income schools (RLIS) in North Carolina. Teachers were eligible to participate if they completed the North Carolina Teacher Working Conditions Survey (NC TWCS) during the 2019-2020 school year.

By examining the variables through the motivational theory lens that create a positive school climate, this study quantified how climate correlated to teachers' decision to stay or leave. Previous research indicated that the independent variables of climate were as follows. Carl (2014) defined autonomy as the ability of teachers to have decision-making ability. Community is a teacher's connections with others within their building and community (Ulfrets, 2015). Induction is the training and support new teachers receive (Zhang & Zeller, 2016). Torres (2019) defined shared decision-making as the ability to make decisions that impact the school as a whole, and recognition is the act of being acknowledged for work done well (Springer et al., 2016). Finally, leadership is how effective a school leader is in sharing a vision and motivating others (Kraft & Zhang, 2016).

These elements are supported by motivational theory, which indicates the job task, autonomy (Hackman & Oldham, 1975; Hertzberg, 1966; Wolf, 1970), recognition (Hertzberg, 1966; Wolf, 1970), and responsibility (Hertzberg, 1966; Wolf, 1970) lead to greater motivation.

The results of this study helped identify methods by which school leaders can build positive climates in their schools.

Significance of the Study

The significance of this study was identifying the strength of the relationship between school climate and teacher attrition to assist school leaders in reducing teacher attrition within their schools. By identifying the contributing school climate factors that produce the strongest relationship to teacher attrition, school leaders can develop a more welcoming school climate. This study added to the literature on teacher attrition by filling the gaps in the current literature that connect school climate to attrition.

Theoretical Significance

Using motivational theory to identify relationships between teacher attrition and school climate allowed the data to show how leaders can use motivational theory to control the factors that usually lead to teacher attrition. Many of the factors promoted in motivational theory are similar to those presented as factors that promote a positive climate. Job task, recognition, community, responsibility, leadership style, autonomy, and self-efficacy are motivational factors that align with climate factors (Campbell et al., 1970; James & Jones, 1974; Johnson et al., 2014). This study confirmed that motivation and retention were related to school climate helping school leaders make policy implementation decisions.

Empirical Significance

Current teacher attrition literature presents different factors that may be mediators of attrition; however, the research does not combine these factors to represent school climate. Research suggested that various factors related to school climate were contributing factors. These included autonomy (Crocco & Costigan, 2007; Jakee & Keller, 2017; Robertson-Kraft &

Zhang, 2016), leadership style (Robertson-Kraft & Zhang, 2016; Tribodeaux, 2015; Ware et al., 2013), induction techniques (Crocco & Costigan, 2007; Papay et al., 2017; Tribodeaux, 2015), and community (Crocco & Costigan, 2007; Geiger & Pivovarova, 2017; Robertson-Kraft & Zhang, 2016; Ulferts, 2016). However, there is a gap in how these factors produce climate and how the overall climate leads to retention. This study aligned the factors through a motivational lens to identify the relationships between climate and attrition, adding to current research and allowing future studies into teacher attrition. Future research must focus on the cause-and-effect relationships in identifying the strength and direction of possible relationships between climate, the mediators of climate, and teacher retention.

Practical Significance

Professionally, this study assisted school leaders with building positive school climates despite the contextual restraints of pay, facilities, and policy (Wolf, 1970). In identifying the relationships between school climate and attrition, school leaders can create healthier and more motivating environments. This study can lead to higher retention rates for teachers, savings on requirement and training funds for new teachers, and continuity for students of highly qualified staff (Goldring et al., 2014).

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Research Questions

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RQ1: Is there a correlation between teacher retention and a positive school climate in rural, low-income elementary schools?

RQ2: How accurately can a school's teacher retention be predicted by a linear combination of a school's climate factors (autonomy, community, induction, leadership, shared responsibility, and recognition)?

Definitions

1. *Annual Yearly Progress (AYP)* - A goal set by the federal government based upon current student standardized test scores to demonstrate a school's role in student learning (NCLB, 2002).

2. *Autonomy-* The ability for teachers to have decision-making ability (Carl, 2014).

3. *Climate-* The quality and character of school life, including the norms, values, and expectations that a school accepts and promotes (Brookover, 1985) dependent upon belonging, autonomy, transition, induction process, and the learning community (Johnson et al., 2014).

4. *Community-* A teacher's connections with others within their building and community (Ulfrets, 2015).

5. *Every Student Succeeds Act (ESSA)* - This law was enacted in 2015. ESSA is a re-working of NCLB, which ensures schools meet accountability measures but releases the oversight from the federal government to the state government. Schools must follow ESSA or risk losing federal funds (Klein, 2016; Kline, 2015).

6. *Induction-* The training and support new teachers receive (Zhang & Zeller, 2016).

7. *Job Satisfaction-* The emotional state that results from one's perception of their work experience (Locke, 1976).

8. *Leadership-* The ability of an individual to effectively share their vision and goals while motivating others (Kraft & Zhang, 2016).

9. *No Child Left Behind (NCLB)* – In 2001, NCLB was signed into law and required schools to meet new accountability measures, including the use of highly qualified teachers and mandatory performance testing in reading and math for all students in grades three and

above. It also granted greater oversight of education to the federal government. Failure to

comply with NCLB mandates resulted in a loss of federal funding for schools (Klein,

2015).

10. *Policy*- The expectations put into place to ensure compliance with a set of standards. The

policy sets the routines, goals, and resources within a school and determines the priorities

(Levinson et al., 2009).

11. *Recognition*- The act of being acknowledged for work done well (Springer et al., 2016).

12. *Rural Schools*- Schools classified as rural by the U.S. Department of Education through

receipt of the RLIS funding.

13. *Shared Responsibility*- The ability to make decisions that impact the entire school

(Torres, 2019).

14. *Value-Added Model (VAM)* - The evaluation method utilized by schools which considers

performance observations, student test scores, and informal knowledge of teachers to

access the effectiveness of a teacher (Grissom et al., 2014).

CHAPTER TWO: LITERATURE REVIEW

Overview

The purpose of this literature review was to present the essential elements of teacher retention and school climate through the organizational and motivational theory lens. The chapter began with a background on organizational climate and the motivated socio-cognitive theory of climate (Beus et al., 2018). The chapter continued with a review of federal law, motivation, teacher retention, school climate, and the individual predictor variables of school climate.

Conceptual Framework

The purpose of this research study was to identify a possible relationship between teacher retention and school climate. Retention is the desire to keep an individual within their current position or keep teachers within a school (Kelchtermans, 2017). To understand why an individual is motivated to stay, it is important to recognize how climate is defined. This section presents the organizational climate theories related to teacher retention and motivation.

Organizational Climate Theory

Organizational climate and organizational culture are often used interchangeably; however, climate and culture are defined differently. Climate is the meaning people attach to their experiences at work, while culture is the assumptions about the values that guide an organization (Schneirder et al., 2012). Climate is reliant on the shared perceptions and meanings as they relate to an organization's policies, practices, and procedures and the observed reward system, expectations, and support leadership offers (Ostroff et al. 2003, Schneider & Reichers 1983, Schneider et al. 2011). The classical definition of climate places importance on the role of the leader (Schneirder et al., 2012) and the role of all workers within an organizational culture.

Culture is workers' assumptions, values, and beliefs about the environment. Stories told about

experiences passed from worker to worker can shape an organization's culture (Schein, 2010;

Trice & Beyer 1993; Zohar & Hofmann, 2012). This research examined the relationship between

climate and retention.

While research on organizational climate has been conducted (Beus et al., 2018; James &

Jones, 1974; Schneirder et al., 2012; Sells & James, 1988), there is little research giving direction

to what creates an organizational climate and strong climates (Beus et al., 2018; James & Jones,

1974; Schneirder et al., 2012; Sells & James, 1988). Many of the attributes of climate include

autonomy, individual responsibility, leadership, induction, reward and recognition systems,

community, and support (Campbell et al., 1970; James & Jones, 1974; Johnson et al., 2014), but

there has been little research into why and how. The motivated socio-cognitive theory of climate

(Beus et al., 2018) addresses the "what," the "how," and the "why."

The motivated socio-cognitive theory of climate assumed that individuals create climate

perceptions to lessen anxiety and increase belonging and control (Beus et al., 2018). Beus et al.

(2018) based their theory on the motivated social cognition theory. Individuals seek to gain

group acceptance and provide meaning within the group while maintaining personal control

(Hogg, 2000; Stevens & Fiske, 1995). Maslow's (1943) work on motivation articulated the

importance of meeting social needs before obtaining success and grounding this assumption.

Using symbolic interactionism (Blummer, 1969), individuals observe group norms and make

perceptions that assume priorities. As individuals interact within the group and share their

priorities and assumptions, a group climate is formed. Climates then continue to function as they

create group expectations that motivate behavior and reduce social anxiety (Beus et al., 2018).

With this understanding of how and why an organizational climate is formed and operates, the variables of autonomy, responsibility, leadership, induction, recognition, and community (Campbell et al., 1970; James & Jones, 1974; Johnson et al., 2014) can be looked at through the lens of the motivated socio-cognitive theory of climate (Beus et al., 2018). It is understandable that as an individual seeks to gain group acceptance through observations (community), how they are welcomed and supported within the group (induction), the amount of personal control (autonomy), and how effective the individual is in adding to the group climate perceptions (responsibility and recognition). The leader has the role of guiding the norms, understanding them, and responding to the formed perceptions.

Motivation Connection to Climate

Knowing that retention factors correlate to commitment and motivation, researchers must also understand and consider how motivation and climate relate (Bang et al., 2013; Purnama et al., 2016). Climate is created through responsibility, induction, recognition, autonomy, and community (Campbell et al., 1970; James & Jones, 1974; Johnson et al., 2014), which are important to higher-level need attainment.

Figure 1 identified the characteristics of motivation and illustrated the overlap with climate. At the top of the figure, the contextual elements identified in the need gratification theory begin the process of motivation and climate. These basic elements are part of the lower levels of Maslow's Hierarchy and act as demotivators (Wolf, 1970). Before leaders can focus on improving climate, they should first focus on meeting the elements of status, security, safety, and pay. The motivational elements presented by Maslow's hierarchy and two-factor theory support the growing climate. One's perceptions of their relationships with their co-workers and their sense of belonging at work create the community. An individual's perception of advancement

opportunities, recognition, and achievement influences their esteem. It also builds on climate

factors of recognition and autonomy, which according to job characteristic theory (Hackman &

Oldham, 1975), influence growth, self-actualization, and responsibility.

Figure 1

Motivational and Climate Theory Overlap
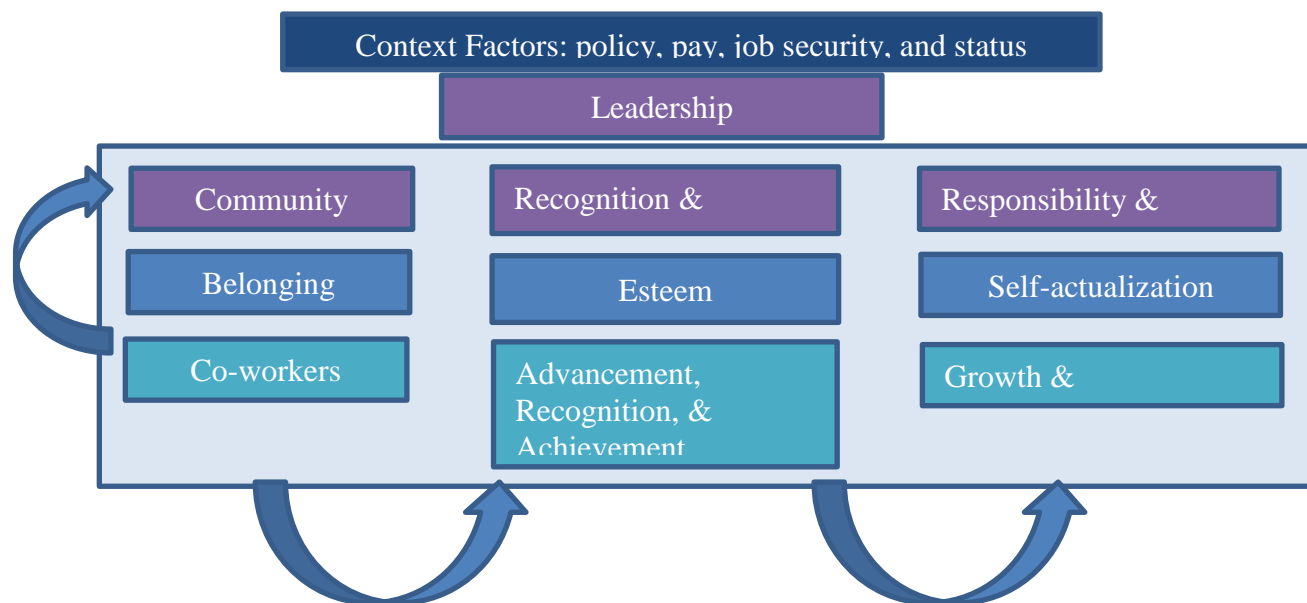
Note: Based on Campbell et al., 1970; Hackman & Oldham, 1975; James & Jones, 1974;

Johnson et al., 2014; Wolf, 1970.

Research has shown when individuals work within a climate that includes the factors of

autonomy, recognition, support, growth, and self-efficacy, they are more likely to be motivated

in their work (Darling-Hammond, 2003; Huysman, 2007; Ryan & Deci, 2000; Williams et al.,

2002). Furthermore, research on the relationships between motivation and climate indicates a

strong connection (Chinn, 2007; Peters & Waterman, 1982; Sorkro, 2012; Towers, 2006). Based

on these findings and the findings on motivation, commitment, and retention, it was

hypothesized that there was a positive relationship between climate and retention.

Related Literature

Since 2013, over 50% of teachers with less than five years of experience have left the profession (Understanding Teacher Shortages, 2018), with a total of 8% of all teachers leaving the profession each year (Learning Policy Institute, 2018). With the cost of hiring and training new teachers at approximately $20,000 per teacher (Learning Policy Institute, 2017), taxpayers are funding the teacher retention problem. Moreover, students and communities are suffering from a lack of continuity (Goldring et al., 2014). School leaders have an important task of motivating teachers to remain from one year to the next through a supportive school climate (Urick, 2016). This section provided an overview of the laws and variables that affect school climate and motivation for teachers to remain within a school and the profession.

Climate in Education and Federal Law

The school climate reflects the perceptions and beliefs of the students and staff. Current conditions of a school includes the laws and policies enacted (Levinson et al., 2009) that influence the beliefs and perceptions of the individual. Since signing the Elementary and Secondary Education Act (ESEA) in 1965, the federal government has exerted increasing power over schools. Through the ESEA, lawmakers increased federal funds allocations to schools for student achievement goals through professional development, instructional resources, and parental and community involvement (Paul, 2016).

Again, lawmakers changed the federal government's authority over schools with the signing of NCLB in 2001. This policy created new accountability measures, including proficiency testing in reading and math, new teacher certification standards, value-added models (VAMs) of evaluation for teachers, and the requirement for a school to demonstrate growth

towards a government-mandated performance goal or AYP (NCLB, 2002). Failure to comply with the new laws meant that schools would risk losing funding (Klein, 2005).

Many of the new policies associated with education negatively affected teacher motivation by threatening lower-level needs and creating opportunities for demotivators to flourish. Scripted curricula (Crocco & Costigan, 2007) and VAMs (Grissom et al., 2014) reduced teacher autonomy in the classroom. The use of student standardized test scores in teacher evaluations created longer working hours (Grissom et al., 2014), higher stress (Jakee & Keller, 2017; Thibodeaux et al., 2015), lowered self-efficacy (Schaufeli et al., 2009), and a loss of community (Johnson, 2015). Decreased student-to-teacher ratios, which created more opportunities for professionals without a pedagogical background to enter the field, led to less qualified teachers entering the profession with a background in educational methods and theories (Douglas, 2010). When individuals possess little knowledge of educational methods before entering the profession, as is the case with many alternative entry teachers (Zhang & Zeller, 2016), they are three times more likely to leave the classroom than those with pedagogical knowledge and practice (Ingersoll et al., 2014).

Noticing the negative effects of strict guidelines inherent to NCLB, President Barak Obama replaced NCLB with ESSA in 2015. By doing so, lawmakers ceded much of the educational decision-making authority back to the states and local districts (Klein, 2015). They also focused on school climate (Johnson et al., 2019). ESSA requires a school improvement team (Learning Policy Institute, 2018) to create shared decision-making and community opportunities. Through ESSA, lawmakers also emphasized the role of the school principal in creating a positive school climate (Young et al., 2017). They required that school leaders include climate as a component of school accountability measures (Johnson et al., 2019). With a focus on school

climate, lawmakers were creating opportunities for schools to improve the climate; however, principals primarily implemented these policies and laws. As a result, how the principal chose to enforce the laws and policies determined the school climate and teacher retention.

Teacher Retention

Teacher retention and teacher attrition are terms used to refer to the rate at which qualified teachers either stay (retention) or leave (attrition) the profession before retirement age (Kelchetermans, 2017). Among educators, the attrition rate is four times higher than in other professions (Riggs, 2013), and it is predicted that 20% to 50% of all teachers leave the profession within the first five years (Ingersoll & Smith, 2003; Latham & Vogt, 2007; Perrachione et al., 2008). This creates a problem regarding the continuity of learning for students and the climate within the school. Organizational elements (Ingersoll, 2001; Ingersoll & Smith, 2003) and one's prior experience, including those during the teacher education phase (Rots et al., 2012), contribute to leaving a school. Previous studies have examined the reasons why a teacher chooses to leave the profession, including intrinsic motivational factors, such as purpose and self-efficacy, to extrinsic motivators, including pay and bonus structures. However, most studies identified climate elements as the strongest motivators for one to stay within the profession (Kukla-Acevedo, 2009; Wynn et al., 2007).

When examining prior studies on teacher retention within a school, Kelchtermans (2017) identified several assumptions that have been made. The first assumption is related to teacher agency. This idea is that teachers have the ability to choose where they want to work and what type of work they would like to do. As Kelchtermans (2017) discussed, it combines sense-making, choice, and decision. The second assumption claimed that a teacher's decision to stay or leave was influenced by the teacher's interactions with others and the environment

(Kelchtermans, 2017; Lindqvist & Nordänger, 2016). This assumption was related to the

relationships and support teachers receives within the school and their ability to engage with the

school site. It is important to recognize that relationships and community are often influencers of

school climate (Campbell et al., 1970; James & Jones, 1974; Johnson et al., 2014). Kelchtermans

(2017) suggested the third assumption was the teacher's moral and ethical understanding of how

students were treated within the school. Teachers who feel the well-being of their students are

not being met are assumed to be more likely to leave a position. The last assumption included the

political decisions and processes within the environment. This assumption involved decisions

related to power, strategical actions, and how they are implemented within the building

(Kelchtermans, 2017). When considering these assumptions, teachers are constantly weighing

the benefits and consequences of the interrelatedness of the environment, political structures, and

the social and human behaviors leading to decisions about the reality of the job (Giddens, 1984;

Lothaire et al., 2012). These decisions and interactions with others create a climate transmitted

through relationships that influence the teacher's decision to stay or leave the job.

Teacher Retention in Low-Income and Rural Schools

Beasley et al. (2010) found that schools with fewer than 300 students reported higher

teacher turnover rates than their larger counterparts. Multiple studies indicated higher

correlations between teacher turnover and high poverty than schools with lower poverty levels

(Borman & Dowling, 2006; Brill & McCartney, 2008; Guarino et al., 2006; Lankford et al.,

2002; Smith & Ingersoll, 2004). Rural and low-income schools (RLIS) often have a smaller

population of teachers serving students (Beasley et al., 2010), which makes retaining quality

teachers paramount. These schools tend to struggle with teacher retention and encounter

recruiting difficulties (Ingersoll, 2001; Luekens et al., 2004; Strizek et al., 2006).

There are factors specific to RLIS that affect the high teacher attrition rates. A large one is that RLIS is often unable to provide similar salaries as schools in larger districts (Boe et al., 1997; Ingersoll & Rossie 1995). In North Carolina, school districts start with a single state salary and then offer additional supplements dependent on the size of the county. For example, a first-year teacher starting salary in Caswell County, which offers no additional supplement, is $35,000 a year (NC DPI, 2020). The same teacher could drive 45 minutes to Chapel Hill Schools, which offers a 16% salary supplement (Chapel Hill Schools, 2021), and earn $40,600 a year.

A second factor that makes it difficult for RLIS schools to retain high-quality teachers is the increased job stress due to the additional tasks many RLIS teachers must take on. This small population of teachers must complete the same amount of work as their higher compensated peers; RLIS schools must rely on teachers to fill in the gaps beyond their work scope. Often, these teachers are not properly trained to do the job they are being asked for and do not receive the amount of support needed to be successful (Barrow & Burchett, 2000). This additional job stress causes a lack of self-efficacy leading to higher attrition (Bellibas & Liu, 2017; Troesch & Bauer, 2017).

Impact on Student learning

When schools act as a revolving door for teachers, it negatively affects student learning (Gallant & Riley, 2017; Newberry & Allsop, 2017). Research has shown that the more experience a teacher has, especially at the elementary and middle levels (Ulferts, n.d.), the more likely students are shown to grow (Brill & McCartney, 2008; Rivkin et al., 2005). New teachers are still learning the rules and the climate of a building, which can negatively affect student learning (Huling, 1998). School leaders who experience distributions in staff stability struggle to build instructional programs that develop over time (Boyd et al., 2005; Guin, 2004). They also

encounter difficulties creating school vision, values, and norms, impacting school culture and responsibility. Furthermore, relationships among staff also suffer; without these shared understandings, the learning environment and students suffer (Kelchtermans, 2017).

Teacher Retention Strategies

With the elements working against RLIS teacher retention, school leaders must focus on teacher motivators that create a resiliency climate. Mallory and Allen (2007) suggested school leaders focus on creating a climate that builds on the "nurturing the nurturers" concept, including a supportive environment where leaders have high expectations for their staff and create opportunities for meaningful participation. Other research suggested a four spheres retention model focusing on classroom, school, community, and personal factors (Boylan et al., 1993), where community and classroom created the highest impact on retention (Davis, 2002). Climate theory suggests that leaders focus on community, autonomy, responsibility, leadership, induction, rewards, and recognition systems (Campbell et al., 1970; James & Jones, 1974; Johnson et al., 2014).

Motivation

Motivation maintains an individual's focus on completing the task assigned. School leaders must understand the factors that motivate an individual (Hackman and Oldham, 1975) to be better able to retain teachers. Maslow (1943) developed a motivational theory recognizing the importance of human needs and the desire to obtain these needs resulting in motivation. Advancing Maslow's theory, Hertzberg (1966) claimed that motivators and demotivators work separately to determine how close an individual is to obtaining a need, which Wolf (1970) then transitioned into need gratification. Wolf (1970) suggested that all need levels are in a continual attainment process with unmet, lower-level needs requiring more attention. Finally, Hackman

and Oldham (1975) utilized Wolf's ideas to create specific job characteristics relevant to supporting the attainment of needs and job satisfaction. Understanding motivation provides a foundation for understanding how school climate affects a teacher's decision to stay in or leave a school. When motivational needs are supported, teachers feel supported, enjoy and understand the boundaries of their work, and have a sense of belonging and importance, creating a more favorable climate (Johnson et al., 2014). It is the principal's role to implement policies in a way that does not threaten the characteristics of a positive work climate (Hackman & Oldham, 1975).

This next section identified the major concepts behind motivation, how they relate to retention and climate, and the role in which leadership controls motivation to create a more positive climate and higher retention rates.

Key Concepts of Motivation

The concept of motivation comes from the basic psychological belief that humans are created to behave in a specific manner. Modern research into motivation dates back to the early 19th century. The most well-known concept of motivation is arguably Maslow's Hierarchy of Needs. Maslow based his theory on the works of Dewey, Wertheimer, Goldstein, Freud, and Adler and included observations of humans at work (Maslow, 1943). Hertzberg (1966) had the concept of demotivators; Wolf (1970) created two separate groups of context and content factors, and Hackman and Oldham (1975) determined a set of factors related to specific job tasks advancing the key concepts of Maslow's theory.

To understand motivation more thoroughly, it is important to first understand the key characteristics of motivation. Motivation is an intrinsic phenomenon that guides an individual to continue with a task and includes multiple factors that increase or decrease desire. These goals are based on the individual's internal drive to fulfill a need (Hackman & Oldham, 1975;

Hertzberg, 1966; Maslow, 1943; Wolf, 1970). While all needs are in the process of attainment (Maslow, 1943), not all needs are equal (Hertzberg, 1966). The attainment of needs depends on the individual's current perceptions. It is believed that lower-level needs (safety and psychological needs) must be secured before an individual can work on obtaining higher-level of needs such as a sense of belonging, esteem, and self-actualization (Hertzberg, 1966; Maslow, 1943; Wolf, 1970). The work that an individual performs is often what motivates the individual. Opportunity for advancement, responsibility, recognition, and growth opportunities provide content factors that motivate individuals (Hertzberg, 1966; Wolf, 1070). These content factors also include the job tasks and their ability to be varied and clear (Wolf, 1970), maintain worker autonomy, and receive quality feedback from leaders. These factors can motivate workers and impact retention (Hackman & Oldham, 1975). Leaders, who want to motivate their workers to remain within a profession, should work to increase opportunities for teachers to obtain the need levels which they are lacking.

As important as the factors that work to motivate an individual, it is also important to understand what demotivates an individual. When a lower-level need is perceived as being threatened, as may happen when a teacher fear losing their job due to poor test scores, demotivation occurs (Hertzberg, 1966; Wolf, 1970). A worker driven by obtaining lower-level needs (safety and psychological) is in survival mode and is driven by the environment (Maslow, 1943). These hygiene (Hertzberg, 1959; 1964; 1966) or context factors include policy, pay and benefits, and job security (Wolf, 1970). With this understanding, leaders need to eliminate demotivators as factors affecting need obtainment (Hertzberg, 1966) and focus on individuals meeting new and higher-level needs to build motivation.

Motivations Connection to Commitment and Retention

Teacher motivation is a factor in the decision to remain employed within the same school (Ulfrets, 2016; Von der Embse et al., 2016) and results from the practices and structures in place (Holmes et al., 2019). For a teacher to commit to the school, they must be motivated to stay. Many motivational factors that influence commitment are based on the goals and needs of the individual being met. The goals of the individual, based upon the needs of the individual, are what create the motivation (Gagne & Deci, 2005). The commitment level is "a psychological link between the employee and his or her organization" (Allen & Meyer, 1996, p. 252). This psychological link creates a degree of connectedness. Those who can link present and future are more likely to use future goals need attainment to motivate or demotivate their current level of commitment (Husman & Shell, 2008). This means that as one considers their likelihood of staying within the same position, they must feel that their needs will continue to be met through the available resources. They must also feel that the attainment of future goals and need attainment are worth the sacrifice of any present need that may be threatened (Nias, 1981).

To recognize the link between motivation and commitment, one must understand how they are linked. According to Meyer and Allen (1997), there are three types of commitment: affective commitment (AC), normative commitment (NC), and continuance commitment (CC). AC reflects the emotional attachment and involvement one has with their job, NC relates to an obligation that one may feel towards their workplace, and CC reflects the perceived costs and benefits of leaving an organization. In which way the individual feels committed to their work reflects their motivation. An intrinsically motivated individual by a sense of belonging or shared values will reflect a higher level of AC and NC (Galletta et al., 2019). Any person who views the

extrinsic benefits of remaining with an organization as more elevated than the risks exhibits a higher level of CC (Clugston, 2000).

Understanding that retention comes from commitment and stems from motivation requires understanding the factors that promote commitment and motivation. A teacher's desire to remain committed to a school is based on future goals and the belief that the school can support this attainment. School leaders must consider elements of motivation (Hackman & Oldham, 1975; Hertzberg, 1966; Maslow, 1943; Wolf, 1970) along with aspects of commitment to improve retention. Dockel (2003) identified six retention factors related to motivation: compensation, job characteristics, training and development, supervisor support, career opportunities, and work-life balance. These six retention factors can motivate or demotivate an individual. They are known as psychological and safety factors; depending on how they are used, they can also be demotivators (Hackman & Oldham, 1975; Hertzberg, 1966; Maslow, 1943; Wolf, 1970). Thus, when retention factors related to compensation (pay, benefits, and policies) are not met, they can demotivate an individual or remove more intrinsic motivators. These factors can impact sense of belonging, esteem, and self-actualization (Wolf, 1970). Other retention factors (job characteristics, training and development opportunities, support, advancement, and balance) can also appeal to an individual's intrinsic motivation (Dockel, 2003; Wolf, 1970). These areas focus on meeting the higher-level needs, which research has shown to encourage teacher retention (Campbell et al., 1970; James & Jones, 1974; Johnson et al., 2014).

A teacher who is motivated to remain within their school has a high sense of commitment (Bang et al., 2013; Purnama et al., 2016). This commitment can be reflected in a teacher's engagement; studies demonstrate a high correlation to the previously mentioned retention factors (Shibiti, 2019). Teachers who feel that they can engage with their environments and have a

positive influence on the organization's goals have higher levels of commitment (Bono & Judge, 2003; Futura, 2015; Gagne et al., 2008; Seo et al., 2004). These findings suggest that commitment and retention are emotional responses to the retention and climate factors within a school.

Leadership's Role in Motivation

Many motivational theories and research focus on the ability of the leader to motivate staff. Principals can observe the needs of their staff and implement policies and climate changes that lead to retention. The job characteristic theory of motivation emphasizes creating a workplace that is optimal for employee motivation of the leader (Hackman & Oldham, 1975). When leaders ignore motivational needs and fail to offer support, teachers feel alone in their buildings (Holmes et al., 2019). This oversight can result in a lower sense of community and belonging, creating a less positive climate. It is the principal's role to improve learning by influencing teacher motivation (Eliophotou-Menon et al., 2016) and implementing factors that create higher motivation that is supported by human resource efforts (Coetzee et al., 2016; Kumar & Santhosh, 2014; Shibiti, 2017; Tourangeau et al., 2017). Overall, there is a positive link between the characteristics of a successful leader and employee motivation and commitment (Adair, 2008; Evan & Roth, 2011; Halepota, 2005; Nazarudin et al., 2008; Property of Charlotte Advocates for Education, 2004). As a result, the research indicates that school principals need to implement strategies for a more positive climate.

Job Satisfaction

Job satisfaction is how happy a person is with their job. The most prevalent definition of job satisfaction comes from Locke (1976), who described job satisfaction as the emotional state that results from one's perception of their work experience. Job satisfaction is related to each

employee and reflects each person's perception of their job and emotions about their job (Li et al., 2020). While one person may be satisfied with their work environment, another may experience distress, and it is each individual's experiences and perceptions that create job satisfaction (Sempane et al., 2002). When researching the effects of job satisfaction, researchers often consider the role of organizational climate and job retention. The section below outlined how job satisfaction relates to organizational climate and its role in teacher retention.

Job Satisfaction and Climate

The climate of the environment has a significant impact on job satisfaction. The more positive the climate, the higher the job satisfaction (Ahmad et al., 2018; Gaviria-Rivera & Lopez-Zapata, 2019; Ghavifekr & Pillai, 2016; Jiang et al., 2019; Li et al., 2020; Pecino, 2019; Tsai, 2014). Ahmad et al. (2018) argued that job satisfaction and climate were two interrelated but different components of leadership. Climate and satisfaction work independently but are mediators to each other. Climate focuses on how the organization works, while satisfaction is related to the perception individuals have of their day-to-day work (Castro & Martins, 2010). Researchers have found strong positive correlations with job satisfaction when considering the elements of climate (responsibility, recognition, autonomy, community, leadership, responsibility, and induction). Gaviria-Rivera and Lopez-Zapata (2019) found that transformational leadership positively influences job satisfaction. Responsibility and support have been shown to positively impact job satisfaction (Ahmed et al., 2018; Ghavifekr & Pillai, 2016). Self-efficacy, supported by recognition and community, has also been a moderator for climate and satisfaction (Downey et al., 1975). With such a high correlation between job satisfaction and climate, it can be justified to determine the climate based on job satisfaction (Belias et al., 2015).

Another consideration when examining job satisfaction to climate was the relationships between satisfaction, job stress, and climate. When job stress is high, satisfaction and climate are lowered (Ghavifekr & Pallai, 2016). Therefore, leaders should use organizational climate to help lower job stress (Jiang et al., 2019; Pecino, 2019). By using climate mediators such as autonomy, responsibility, community, and feedback, the climate can be stronger, and job stress can be lessened, leading to lower turnover (Huysman, 2008; Pecino, 2019).

Job Satisfaction and Teacher Retention

Retention relates to a person's desire to stay within their current position. While climate mediators are important in increasing a positive climate, it is also important to explore the moderator of job stress and its role in job satisfaction, climate, and retention. Job stress correlates to burnout (Guthrie & Jones, 2012), burnout lowers motivation (Pecino, 2019), and lower motivation contributes to attrition (Adera & Bullock, 2010; McCarthy et al., 2010). Figueiredo-Ferraz et al. (2012) found a two-way relationship between burnout and job satisfaction. The researcher indicated that those who had a higher level of job satisfaction had lower burnout rates. Those who experienced lower levels of burnout and job stress experienced higher job satisfaction with organizational climate affecting burnout (Winnubst, 1993). Furthermore, Li et al. (2020) indicated that climate served as a mediator between satisfaction and turnover. Therefore, to decrease teacher attrition there should be a focus on increasing job satisfaction and climate (Kim & Loadman, 1994).

Leadership's Role in Climate and Motivation

Leadership is one of the most important factors in a teacher's decision to remain within their school (Urick, 2016). The principal is responsible for establishing the school climate, tone,

vision, and goals to ensure the staff functions as a team (Player et al., 2017; Urick, 2016; Von der Embse et al., 2016).

The environment in which an individual works influences the school's climate (Johnson et al., 2014). The principal's role is to promote positive and effective school environments (Von der Embse et al., 2016). The leader's actions in managing conflicts, policies, and people can affect teacher stress (Gray et al., 2017). The principal must control climate variables such as autonomy, induction, the learning community, and the workload to reduce teacher stress and create a supportive atmosphere optimal for motivation (Johnson et al., 2014; Leithwood, 2006).

The school leader provides direction for the school and grants the teachers and community members opportunities to join the discussion and decision-making process. ESS guarantees the inclusion of shared decision-making through the inclusion of a school improvement team (Klein, 2016), but the principal needs to make shared responsibility, goals, and vision a priority. Teachers believe that school leadership should be shared (Urick, 2016), which increases job commitment (Player et al., 2017). Teachers who shared decision-making were content in their roles (Ware et al., 2013) and more likely to commit to a school (Torres, 2019). Furthermore, teachers in decision-making roles, especially policy decisions, increase the school climate's positivity and collaborative efforts (Carpenter, 2015).

The highest teacher attrition rates occurred in schools where teachers perceived poor leadership (Thibodeaux et al., 2015; Urick, 2016). The motivational theory promotes the idea that leaders are responsible for motivating workers (Hackman & Oldham, 1975; Wolf, 1970). Potentially confirming these theories, teachers attributed the stress leaders placed on job evaluations and the possibility of being caught to a lack of motivation (Carl, 2014). The method by which the leader shares and implements a given policy can raise or lower stress levels (Gray

et al., 2017), which affects a teacher's attainment of higher-level needs leading to higher or lower motivation (Hackman & Oldham, 1975; Hertzberg, 1966; Maslow, 1943; Wolf, 1970). A significant motivating factor belongs to the learning opportunities and support given through mentorship (Geiger & Pivovarova, 2018) and high-quality leadership (Player et al., 2017). There are many different leadership styles. How they are utilized provides a mediator for how climate is created within a school. Moreover, why motivated teachers decide to stay within a school. Transformational, instructional, and servant leadership styles are among the most common leadership styles found within a school (Pietsch & Tulowitzki, 2017). The following three leadership styles are examined in relation to climate and retention.

Transformational Leadership

Transformational leadership is based on the collectivist idea that a team working together can accomplish more. Transformational leaders set a vision and then inspire staff to act based on their individual talents (Bass, 1990; Bass & Avolio, 1995). Burns (1978) explained that transformational leadership works by having both leaders and staff interact in a way that each is raised to a higher level. A common theme through research on transformational leadership is using community to improve individuals and the organization (Bass, 1990; Bass & Avolio, 1995; Burns, 1978; Pietsch & Tuloqitzki, 2017; Yidiz & Simsek, 2016).

The community emphasis on transformational leadership is an important element towards building a positive climate. When individuals feel a part of the team, they are more motivated and engaged in their work (Bear et al., 2011; Johnson et al., 2014). Other elements of transformational leadership build autonomy, recognition, growth, and responsibility. Leithwood and Jantzi (2000) determined essential elements of transformational leadership to include individualized support (induction), high-quality feedback (recognition), shared decision-making

(responsibility), and community. Rich et al. (2010) recognized the characteristics of transformational leadership and found they work together to increase job autonomy- another important element of climate (Johnson et al., 2014).

In addition to transformational leadership sharing many qualities with positive climate, research also shows a positive correlation between transformational leadership and job satisfaction (Givens, 2008; Ozbaran, 2010; Podsakoff et al., 1990). Because individuals are more likely to recognize their abilities (Bass, 1985), they have a higher level of self and team efficacy (Yidiz & Simsek, 2016), resulting from feedback and recognition. Staff who feel more competent in themselves and their teams have higher work engagement (Tims et al., 2011), leading to higher job satisfaction.

Instructional Leadership

Instructional leadership refers to the methods principals use to build the instructional capacity of teachers and the overall growth of students. It prioritizes attention on providing support for teacher behaviors in the direct efforts to grow students (Leithwood et al., 1999). All principals are instructional leaders and engage in activities that build the instructional framework for their schools. A principal must focus on the mission, instructional programming, climate, and instructional supervision (Hallinger, 2003; 2005; Hallinger et al., 2010; Krug, 1992).

Many of the ways that principals implement instructional leadership can also be used to build supportive and positive climates. Many studies have focused on the relationships between self-efficacy, built through teacher recognition and instructional leadership. Studies found that when a principal is a strong instructional leader, they also build teacher self-esteem (Blasé & Blasé, 1999; May & Supovitz, 2011; Sebastian & Allensworth, 2012; Supovitz et al., 2010) and a positive a relationship between teacher self-efficacy and instructional leadership (Bellibas & Lui,

2017). This form of teacher empowerment directly results from recognition received from leadership (Aldridge & Fraser, 2016). Additionally, Hallinger and Murphey (1985) and Hallinger (2012) found that instructional leaders who focused on providing growth, recognition, and incentives for teachers were more effective as leaders. Zahed-Babelan et al. (2019) found that instructional leadership had a positive, direct, and significant relationship to climate through growth, collaboration, support, autonomy, feedback, and empowerment. Gumus and Akcaoglu (2013) found that instructional leadership produces an environment of teamwork and responsibility.

Servant Leadership

 Servant leadership, based on religious understandings (Al-Mahdy, 2016), is defined by the characteristics of listening, empathy, healing, awareness, persuasion, conceptualization, foresight, stewardship, commitment to human growth, and community building (Spears, 1998). The servant leader focuses on serving others (Greenleaf, 2002) and the growth of people rather than the organization (Dotta & Khatri, 2017). In this view, servant leadership believes the organization will grow if its people grow. According to Al-Mahdy (2016), the servant leader achieves success through a shared vision and teacher empowerment.

Many of the servant leader qualities are the same as those recommended for building positive school climates. A focus on building people first and leading second (Greenleaf, 2002) is relative to a climate where community, responsibility, recognition, and induction are prioritized. When building a positive climate, there is a certain amount of trust between the leader and the employee, which the servant leader builds through their actions (Van Dierendonck, 2011) and shared goals. It is believed that creating this trust and community work toward achieving shared goals creates higher performance and motivation (Hu & Liden, 2011;

Sarkus, 1996; Schaubroeck et al., 2011; Stone et al., 2004). Pauramiri and Mehdinezhad (2017) found a significantly positive relationship between servant leadership and trust. Other studies showed that employee empowerment built through recognition (Aldridge & Fraser, 2016) was a powerful mediator for servant leadership and trust (Ardalan et al., 2013). Polatcan (2020) found that servant leadership reduces teacher alienation, which increases community and belonging.

While servant leadership is shown to be positively correlated with school climate (Polatcan, 2020; Sergiovanni, 2001), it is also found to positively correlate with job satisfaction (Al-Mahdy, 2016; Amadeo, 2008; Anderson, 2005; Bovee, 2012; Cerit, 2009; Inbarasu, 2008; McCann et al., 2014; Miears, 2004; Thompson, 2002; Zigarelli, 1996). Teachers are reported to enjoy the supportive nature of servant leadership, which lowers negative feelings towards the school (Polatcan, 2020). Servant leadership can increase job satisfaction, decrease negative job-related feelings, and increase teacher retention (Kim & Loadman, 1994). It can then be hypothesized that the more qualities a school principal is perceived to have of servant leadership within a school, the more favorable the climate, job satisfaction, and teacher turnover.

School Climate

Climate is the quality and character of school life, including the norms, values, and expectations that a school accepts and promotes (Brookover, 1985). Climate depends on the sense of belonging, autonomy, transition, induction process, and the learning community (Johnson et al., 2014), which the school leader influences (Player et al., 2017; Urick, 2016; Von der Embse et al., 2016). School climate is produced by interdependence between the environment and individual opinions formed through perceptions of self and group interactions (Preite, 2015). It can be hypothesized that the relationship between the predictor variables of climate potentially determines the overall school climate and can be positively associated with

teacher retention. This section outlined the current literature on the predictor variables of school climate and how each relates to a teacher's motivation to remain within the school and profession.

Belonging and Community

One of the most important factors for teachers when deciding to return to a school is the classroom and community (Ulfrets, 2015-2016). Connections with the community originate from relationships (Johnson et al., 2014) which enforces the well-being of teachers (Bear et al., 2011). Leaders need to use relationships as a motivator and recognize the possible threats to motivation. Policies can lead everyone to possess an independent mindset, producing a lack of shared responsibility for students and school growth (Johnson, 2015). This can also lead to an environment that devalues relationships and the community, which is imperative to a positive climate (Johnson et al., 2014). Motivational theory (Hackman & Oldham, 1975; Hertzberg, 1966; Maslow, 1943; Wolf, 1970) indicates that the relationships an individual forms are factors in determining the motivation to continue with a task (Bear et al., 2011). Moreover, a lack of support is a key factor in teacher retention decisions (Thibodeauz et al., 2015). Many teachers reported that policies such as professional learning communities and the inclusion of instructional coaching staff offered more support for classroom teachers (Grissom et al., 2014). However, the demands on tests scores used to determine teacher effectiveness created situations where teachers felt isolated (Aldridge & Fraser, 2016; Johnson, 2015). School leaders would find it beneficial to focus on increasing a team support system within their schools while diminishing threats to the community to build a more positive school climate.

Autonomy

Autonomy relates to the amount of control or decision-making power one exerts in their job (Carl, 2014; Dou et al., 2016; Solomou & Pashiardis, 2016). Autonomy is dependent on the amount of trust leadership has in its teachers (Dou et al., 2016) and allows for teacher expertise and knowledge of students to be utilized in making school-wide decisions increasing school performance (Brezicha et al., 2020). Principals also utilize autonomy to increase school and teacher accountability and increase school effectiveness (Dou et al., 2016). Studies show that allowing teachers to have decision-making power within their classrooms and the school has a strong relationship to teacher retention and overall school climate (Brezicha et al., 2020; Dou et al., 2016; Solomou & Pashiardis, 2016.)

Johnson et al. (2014) claimed that autonomy was one of the more significant factors in school climate. Additionally, research has shown a strong correlation between autonomy, school climate, job satisfaction, and commitment (Brezicha et al., 2020; Dou et al., 2016). The level of autonomy given in a school is reflected in the perceived professionalism and trust teachers reported (Brezicha et al., 2020). When teachers feel they are trusted, their level of intrinsic motivation is raised, leading to higher levels of job satisfaction. (Brezicha et al., 2020). Furthermore, when teachers are given autonomy, they are more likely to accept changes (Brezicha et al., 2020) and adjust to job stress (Brezicha et al., 2020; Solomou & Pashiardis, 2016), leading to lower levels of teacher attrition.

Research shows that autonomy is a strong predictor of climate, job satisfaction, and commitment (Brezicha et al., 2020; Dou et al., 2016; Solomou & Pashiardis, 2016) for school leaders to recognize the threats to autonomy. After legislators enacted policies associated with NCLB and ESSA, teachers reported mixed feelings over their perceived measure of autonomy.

While teachers perceived being more in control of their future once given a standardized

accountability system (Grissom et al.,2014; Wright et al., 2018), they also perceived that scripted

curriculum (Milner, 2015) and high-stakes testing (Rooney, 2015; Wright et al., 2018) detracted

from their level of autonomy (Carl, 2014). Schools, where standardized test data was utilized in

teacher evaluation models reported feeling lower levels of autonomy than those that did not use

such data (Wright et al., 2018). As such, school leaders must decide what areas and what

amounts of autonomy are to be offered (Solomou & Pashiardis, 2016) to lower the risk of

increasing the workload. This can be a difficult task as the principal's level of autonomy over

school decisions also varies (Dou et al., 2016). Additionally, there is a gap between the levels of

autonomy teachers believe they have and what principals believe they give. It is reported that

teachers often feel that autonomy is symbolic rather than meaningful (Brezicha et al., 2020).

School leaders must then be aware of how their staff perceives their autonomy.

Induction

Initiation and transition in education relate to the teacher's training and education when

beginning a new position (Zhang & Zeller, 2016). Educators are required by law to be highly

qualified, meaning they have passed certification testing and have earned a minimum number of

college credits in the subject they decide to teach (Klein, 2015). This does not translate to a

successful initiation and transition period. Improper training positively correlates with leaving

the profession (Zhang & Zeller, 2016). According to Johnson et al. (2014), the initiation and

transition period is essential for a positive school climate. Teachers in their first five years of

teaching exhibit a significant attrition rate than those with more experience (Papay et al., 2017).

A lack of support and guidance can exacerbate this decision during their initiation period

(Ingersoll et al., 2014). When individuals possess insufficient knowledge of educational methods

before entering the classroom, they are three times more likely to leave the classroom than those with significant pedagogical knowledge and practice (Ingersoll et al., 2014). School leaders need to focus on training and support for new teachers to provide a climate that motivates the teacher to be successful (Geiger & Pivovarova, 2018). Motivational theory suggests that individuals are more motivated to continue with the task when trained (Hackman & Oldham, 1975; Hertzberg, 1966; Wolf, 1970).

Responsibility

 Shared leadership is when not all tasks are held by a single individual (Wai-Yan Wan, 2018) and is often referred to as distributed leadership. Distributed leadership (DL) has grown in popularity over the past decade (Ross et al., 2016) and is when all members of the school are allowed to lead and be a part of the decision-making process (Torres, 2019).

An important part of DL is the inclusion of a team-based response and an emphasis on relationships (Ross et al., 2016). It includes the perceived social influence of team members regardless of rank within the school (Wai-Yan Wan, 2018). Furthermore, it consists of how the teammates interact and the respect and trust built during these interactions.

DL is essential for educational change (Wai-Yan Wan, 2018). With the growing demands placed on school principals through compliance with new policies and accountability, DL is an important tool for principals to use to meet these demands (Holloway, 2018). When principals can delegate tasks to different team members and provide oversite rather than doing all tasks themselves, they have more time to focus on immediate needs. The inclusion of DL also positively impacts school climate and achievement (Holloway, 2018; Johnson et al., 2014; Wai-Yan Wan, 2018). Studies have also shown when DL is properly implemented, it can increase

school improvement measures, teacher self-efficacy, and the relationships between teachers and school leadership (Holloway, 2018; Wai-Yan Wan, 2018).

With an emphasis on building teacher strengths (Holloway, 2018), the school leader should direct the implementation of DL (Garcia, 2018). When carefully planned and supported by the principal, DL can strengthen staff commitment and job satisfaction (Garcia, 2018; Ross et al., 2016; Wai-Yan Wan, 2018). By creating conditions that make it possible for others to lead (Ross et al., 2016), DL creates an environment where teachers have greater ownership of the work and are more motivated to stay (Hackman & Oldham, 1975; Hertzberg, 1966). Teachers believe leadership should be shared (Spring et al., 2016; Urick, 2016) because it can increase job satisfaction (Holloway, 2018; Wai-Yan Wan, 2018), higher self-efficacy, and lower teacher turnover rates (Garcia, 2018) which are correlated with the DL model. As a result, it is an important mediator in understanding the relationship between school climate and teacher retention.

Recognition

Self-efficacy is defined as the "beliefs in one's capabilities to organize and execute courses of action required to manage prospective situations" (Bandura, 1995, p. 2). It has been found that teacher self-efficacy is a learned behavior based upon previous experience (Aldridge & Fraser, 2016) and is influenced by the direct leadership of a school principal (Bellibas & Liu, 2017). Studies on self-efficacy and job satisfaction recognize a positive correlation between the two (Aldridge & Fraser, 2016; Bellibas & Liu, 2017; Ford et al., 2017; Troesch & Bauer, 2017). Higher self-efficacy is linked to lower teacher burnout and job stress while providing higher job satisfaction and motivation (Bellibas & Liu, 2017; Troesch & Bauer, 2017).

Teacher self-efficacy results from teacher empowerment provided by the instructional leader (Aldridge & Fraser, 2016). Instructional leaders can influence positive self-efficacy by providing feedback and recognition, which increases teacher self-esteem and motivation (Bellibas & Liu, 2017; Ford et al., 2017). This approach must consider teachers' demands through policies enacted due to NCLB and ESSA, such as the VAM model and bonus systems, which causes teachers to doubt their abilities (Garcia-Arroyo et al., 2019). The VAM model relies on the punishment model, where teachers are placed on improvement plans and risk job loss if they are not performing at a pre-determined level (Ford et al., 2017). Many states implemented bonus systems, which increase extrinsic motivation, but lower intrinsic motivation and overall self-efficacy (Schaufeli et al., 2009; Springer et al., 2016). Multiple research studies found that since the inclusion of the VAM model, teacher self-efficacy has declined due to a focus on areas of improvement rather than recognition (Ford et al., 2017). Ford et al. (2017) also found that the VAM model created confusion among teacher expectations, which lessened the belief in the ability to do the job well, decreasing self-efficacy. Considering that teachers are more likely to stay in a position where they believe they can do the work (Chesnut & Burley, 2015; Ware et al., 2013), the school principal will need to remain cognizant of their effects and give time to properly explaining expectations. This approach would allow for balancing positive feedback with areas of improvement.

Summary

Teachers can significantly affect student learning, but only if they remain in the profession. Multiple policies have been created to meet the current laws of ESSA that have affected the motivation for teachers to stay or leave the profession. Theoretically, it can be determined that for one to remain in a profession, individuals must be motivated by belonging,

esteem, and self-actualization (Herzberg, 1964; Maslow, 1943). These content elements serve to build a healthy climate; they are related to the lower-level basic psychological and safety needs (Herzberg, 1964; Maslow, 1943; Wolf, 1970). Hackman and Oldham (1975) advocated that the elements supported each other, and the actualization of one would lead to the growth of the other. When the demotivating context factors are met, the motivating content factors that make up a positive climate will lead to a higher teacher retention rate (Campbell et al., 1970; James & Jones, 1974; Johnson et al., 2014).

One of the demotivators noted in motivational theory is policy (Hackman & Oldham, 1975; Herzberg, 1964; Maslow, 1943; Wolf, 1970). School leaders are charged with implementing federal and state policies while also being attentive to how they may work within their buildings. NCLB and ESSA created opportunities and challenges for leaders in creating a positive climate that motivates staff to stay. Leaders can strengthen responsibility through a mandated school improvement team, and this team can provide teachers with opportunities to share in decision-making. Furthermore, areas such as autonomy can be challenged when policies are created requiring teachers to follow a specific curriculum related directly to high-stakes testing (Crocco & Costigan, 2007). Community is challenged when teachers view VAM scores to include only their students, creating isolation among staff (Grissom et al., 2014; Johnson, 2015) and lowering self-efficacy (Schaufeli et al., 2009). Additionally, many of the policies implemented due to ESSA have created longer working hours (Grissom et al., 2014), leading to higher job stress (Jakee & Keller, 2017; Thibodeaux et al., 2015), creating burnout and higher rates of teacher turnover (Adera & Bullock, 2010; McCarthy et al., 2010). With research showing that burnout leads to turnover and correlates to job satisfaction, stress, and climate, school leaders must take inventory of the climate and job stress within their buildings.

Influencing all areas of motivation is the school leader. The school leader is responsible for cultivating the climate in the school by implementing policy in a way that does not threaten the variables of climate. It is important to recognize the interconnectedness of the variables and their relationships with motivation. The school leader can build community within the induction and training process through the use of PLCs (Grissom et al., 2014), which builds on the social needs of the individual (Hackman & Oldham, 1975; Hertzberg, 1964; Maslow, 1943; Wolf, 1970). The level of autonomy an individual has, and the amount of responsibility and recognition can create an environment where the individual feels valued (Bellibas & Liu, 2017; Brezicha et al., 2020; Ford et al., 2017; Holloway, 2018; Wai-Yan Wan, 2018). This can also build on their psychological needs (Hackman & Oldham, 1975; Hertzberg, 1964; Maslow, 1943; Wolf, 1970). The individual's basic needs are met when the school leader can produce a safe workspace free of unnecessary threats to job security (Hackman & Oldham, 1975; Hertzberg, 1964; Maslow, 1943; Wolf, 1970).

Overall, when school leaders focus on creating a climate where teachers have a role in decision making (Torres, 2019), feel connected (Ulfrets, 2015), given autonomy (Carl, 2014), recognition (Springer et al., 2016), support, and enjoy the work (Fernet et al., 2016), leaders can more likely retain quality teachers.

CHAPTER THREE: METHODS

Overview

The aim of this correlational study was to provide an understanding of the relationships between a school's teacher retention and the school's climate. The study also considered the various predictor variables that contribute to school climate to analyze which factors have the strongest relationships to climate and a school's retention rate. A point-biserial correlation was used to determine the strength of the relationship between a school's teacher retention rate and school climate. At the same time, a binomial logistic regression analysis provided a regression analysis of which predictor variables hold the strongest relationships. Chapter Three presented the design, participants, setting, procedures, and analysis used.

Design

The purpose of this non-experimental, correlational study was to determine the strength of the relationship between a school's teacher retention rate and its school climate. This study also analyzed which school climate predictor variables significantly predicted teacher retention rates using the North Carolina Teacher Working Conditions Survey (NC TWCS). This was an appropriate design due to correlational studies being used to determine relationships between two or more variables (Gall et al., 2007; Privitera, 2019; Walinga & Stangor, 2014).

In the first research question, the criterion variable was teacher retention rate based on an educator's reported intent to return to a school. The predictor variable was the overall school climate related to the overall perception of the school being "a good place to work and learn" (NC Teacher Working Conditions Survey, 2020). Multiple research studies have indicated that a key element of climate is the perception of the overall working environment (Beus et al., 2018;

Ostroff et al., 2003; Schneider & Reichers, 1983; Schneider et al. 2011), making this question appropriate for quantifying the overall perception of climate within the school.

The second research question focused on the combination of predictor variables (autonomy, community, induction, leadership, responsibility, and recognition) of school climate to determine if they predict teacher retention (Campbell et al., 1970; Gall et al., 2007; James & Jones, 1974; Johnson et al., 2014; Privitera, 2019; Walinga & Stangor, 2014). Survey responses from sections 6, 7, 9, and 11 of the NC TWCS were utilized to determine the relationships between the predictor variables and teacher retention.

Research Questions

RQ1: Is there a correlation between teacher retention within a school and a positive school climate in rural, low-income elementary schools?

RQ2: How accurately can a school's teacher retention be predicted by a linear combination of a school's climate factors (autonomy, community, induction, leadership, responsibility, and recognition)?

Hypotheses

H$_0$1: There is no statistically significant correlation between a school's teacher retention rate and school climate in rural Title I elementary schools in North Carolina as shown by the North Carolina Teacher Working Conditions Survey.

H$_0$2: There is no statistically significant predictive relationship between the criterion variable (teacher retention) and the linear combination of predictor variables of school climate (autonomy, community, induction, leadership, shared responsibility, and recognition).

Participants and Setting

The participants for the study were drawn from a random sample of rural, Title I elementary schools located in North Carolina during the 2019-2020 school year. Within this sample, there were a total of 150 teachers. Qualifying schools were identified first as elementary schools serving students in grades kindergarten to fifth grade. They were required to be classified as rural by their participation and receipt of Rural and Low-Income Schools (RLIS) funds, and they must also have received federal Title I funding during the 2019-2020 school year. The selection of schools meeting the requirements was based on published data from the North Carolina Department of Public Instruction (NC DPI) and the United States Department of Education.

The total number of schools meeting the criteria of rural, Title I elementary schools in North Carolina included 174 schools in 52 counties. For this study, the sample size consisted of 150 teachers exceeding the required minimum for a medium effect size of 66 with a statistical power of 0.7 at the 0.05 alpha level for correlation (Gall et al., 2007; Privitera, 2019; Walinga & Stangor, 2014) and 110 (Warner, 2013) for regression.

25% of teachers indicated their desire to leave their current school within this sample. The population represented a total of 6% teachers with less than 6 years of experience, 26% teachers with 7 to 10 years of experience, 31% teachers with 11-20 years of experience, and 37% teachers with greater than 20 years of experience (NC Teacher Working Conditions Survey, 2020).

Instrumentation

This study employed the North Carolina Teacher Working Conditions Survey (NC TWCS) data. Data was obtained with permission from individual school districts. This survey

(see Appendix A) was administered biennially to all North Carolina teachers. It was created by the Center for Optimal Learning Environments (COLE) to provide school leaders with the perceived working conditions of the staff in each school. The survey allows school leaders to plan for more supportive working environments for teachers and students (ASQNC, 2020).

The survey consisted of 11 different sections. Out of the 11 different sections, a total of 17 questions were used to measure the relationship of school climate variables (the predictor variables) have with teacher retention (the criterion variable). Each of the 17 questions utilizes a 4-point Likert scale where respondents selected which response most applied to their opinion. The responses were *Strongly Disagree (1), Disagree (2), Agree (3), or Strongly Agree (4)*. The higher the score, the more a participant agreed with the present variable at their school.

A single question on the NC TWCS prompted the participants to state their plans to return to the school or profession the following year. This question was used to determine teacher retention data. Answer choices for this question included: *return to the school, return to teaching but at another school in the district, return to teaching but within a different district and same state, transfer to a new state but continue with teaching, transition into administration, transition into a new position within education but not teaching or administration, or leave the profession*. Any response other than return to the school indicated attrition in scoring retention decisions.

A single question prompting a response to the overall opinion of the school being a good place to work and learn was applied to determine the overall school climate (NC Teacher Working Conditions, 2020). This question utilized a 4-point Likert scale. The options were *Strongly Disagree (1), Disagree (2), Agree (3), or Strongly Agree (4)*. The higher the reported score indicated a more positive school climate.

The NC TWCS was first introduced in 2014 and has been utilized to determine the overall school climate based on teacher quantitative survey data. All public schools in North Carolina under the Department of Public Instruction (DPI) jurisdiction are invited to take the survey. While given at the school site, NC DPI uses COLE for the administration and data collection. The NC TWCS is then administered through anonymous participant coding specific to the individual job assigned. Staff receives a code and a website link to access the survey. The schools are provided one code for each teacher, and they are sent to a representative at the school. The representative is asked to share information and codes with the staff during meetings. Staff is then provided the opportunity to complete the survey in privacy using their specific code. The survey is taken in a single session (COLE, 2018).

The purpose of the survey is to give schools and district leaders insight into how their teachers feel within their buildings, district, and state regarding the current climate of the schools. The NC TWCS underwent numerous internal and external validity and reliability testing. External validity testing included using Rasch rating scales for item-measure correlations, item fit, rating scale functions, unidirectionality, and generalizability, with results reflecting positive validity (New Teacher Center, 2014).

The survey was evaluated using Rasch rating and Cronbach's alpha testing to test for reliability (see Table 1). Internally, the Teacher Working Conditions Survey employed factor analysis and confirmatory factor analysis (CFA). Cronbach's alpha for internal reliability scores was between 0.86 and 0.96 (New Teacher Center, 2014), verifying reliability above 0.80 level (Gall et al., 2007).

Table 1

NC TWCS Reliability by Construct

Construct	Cronbach's alpha
Time	0.861
Facilities and resources	0.876
Community support and involvement	0.893
Managing student conduct	0.903
Teacher leadership	0.939
School leadership	0.948
Professional development	0.956
Instructional practices and support	0.910

*Note: From Moore, 2019

One of the key purposes of the NC TWCS is to assist school leaders in identifying the working conditions within their school from the teachers' perspectives. The NC TWCS also gives school leaders data on the overall percentage of teachers who remain within their school (stayers) or leave their school for another position (COLE, 2018). The NC TWCS includes multiple questions that enable school leaders to identify the factors of school climate as indicated in Appendix B, along with the constructs of the NC TWCS as it relates to each variable used for this study.

School climate is based on the perspectives (Beus et al., 2018; Ostroff et al., 2003, Schneider & Reichers, 1983, Schneider et al., 2011) of the levels of autonomy, community, recognition, leadership, responsibility, induction, and training (Campbell et al., 1970; James & Jones, 1974; Johnson et al., 2014) within a school. The use of the NC TWCS and its inclusion of

the questions addressed in Table 2 warranted the use of the instrument for this survey because they represent the perspectives of individual teachers as they pertain to each variable. Additionally, the NC DPI utilizes the survey results to track changes in teacher retention data and the reasons behind a teacher's decision to leave. When comparing survey data from 2018, survey results for teacher intention to stay or leave were closely matched (within 1%) to actual retention decisions (COLE, 2018). The NC TWCS has also been utilized in multiple research studies due to the convenience of the amount of data that can be pulled relatively easily and allowing for lower bias (Burkhauser, 2017; Lee et al., 2020; Ye & Singh, 2016).

Procedures

Before beginning the study, a request for IRB approval from Liberty University was submitted (see Appendix C). Using information available from the North Carolina Department of Public Instruction (NCDPI) and the United States Department of Education, a list of eligible elementary schools in North Carolina was obtained based upon the qualifications of receiving funding through RLIS and Title I.

Raw data was requested from individual school districts for each school in the selected sample group (see Appendix D). Data was then entered into a Microsoft Excel spreadsheet. All data was stored in a locked electronic file that is password protected.

Data Analysis

To address null hypothesis one, the researcher conducted a point-biserial correlation (r_{pb}) to determine the relationship between the school's climate (predictor) and the school's retention rate (criterion). A point-biserial correlation was appropriate because the analysis aims to measure the strength of the linear relationship signified by r_{pb} and reported as a number between +1 and -1 (Gall et al., 2007; Laerd Statistics, 2015; Privitera, 2019; Walinga & Stangor, 2014).

Furthermore, the absolute value is used to determine the strength of the correlation (Laered Statistics, 2017). Point-biserial is a special Pearson correlation used when the dependent variable is dichotomous, and the independent variable is linear (Laerd Statistics, 2017).

Binomial logistical regression was conducted to test null hypothesis two to determine the strength of predictor variables (autonomy, community, leadership, recognition, responsibility, and induction) in determining a school's teacher retention rate. Binomial logistic regression was employed in determining the strength of relationships between multiple linear predictor variables and a single, dichotomous dependent variable (Gall et al., 2007; Laerd Statistics, 2017). Due to this hypothesis including multiple predictor variables (community, autonomy, induction, recognition, and leadership) and a single criterion variable (teacher retention), this was an appropriate analysis (Laerd Statistics, 2017).

Several assumptions must be met for the point-biserial correlation. First data was checked for continuality and paired responses. The data was then screened to check the assumption of bivariate outliers using a box plot. The predictor variables (x) and the criterion variables (y) were graphed using a box plot (Gall et al., 2007; Laerd Statistics, 2018; Privitera, 2019; Walinga & Stangor, 2014).

Following the point-biserial correlation, a test for the assumption of homogeneity of variances was conducted using Levine's statistics (Laerd Statistics, 2017). The assumption of homogeneity of variance ensures equal variance across all samples (Laerd Statistics, 2017; Levene, 1960).

Finally, a test for the assumption of normal distribution was also conducted. Using a Q-Q plot (due to the large sample size) where the predictor variable (x) and criterion variable (y) were

graphed, the assumption of normal distribution was utilized to check for the data points falling on or near the line of distribution (Laerd Statistics, 2017).

The data was then used to conduct a point-biserial correlation (r_{pb}) to test the relationship between the two variables. The alpha was set at 0.05 (Gall et al., 2007; Privitera, 2019; Walinga & Stangor, 2014). It is appropriate to use the correlation coefficient to determine effect size in a correlational analysis. The effect size was determined by the guidelines that a correlation coefficient of 0.10 is small, 0.30 is medium, and anything above 0.50 is large (Cohen, 1988; Warner, 2013).

Before conducting the binomial logistic regression, the researcher conducted additional data screening using Casewise diagnostics. The Casewise diagnostics was used to identify outliers (Laered Statistics, 2017). Also, assumptions of linearity must be met; the Box-Tidwell (1962) method was used to identify linearity (Laered Statistics, 2017).

A binomial logistic regression was conducted, and an Omnibus test for model coefficient to detect if the model was statistically significant. Variance and case classification were determined using Nagelkerke R^2. Finally, the binomial logistical regression was used to determine the significance of each variable on teacher retention. The null hypothesis was rejected for variables where p < .05. The researcher reviewed the table of coefficients to determine which of the predictor variables, if any, was the most significant outcome variable (Field, 2018; Laered Statistics, 2017).

CHAPTER FOUR: FINDINGS

Overview

This study aimed to analyze the hypothesized relationship between school climate and teacher retention. The predictor variable was teachers' perception of school climate, and the criterion variable was teacher retention. This chapter included the research question, null hypothesis, data screening, descriptive statistics, assumption testing, and results.

Research Questions

RQ1: Is there a correlation between teacher retention and a positive school climate in rural, low-income elementary schools?

RQ2: How accurately can a school's teacher retention be predicted by a linear combination of a school's climate factors (autonomy, community, induction, leadership, shared responsibility, and recognition)?

Null Hypotheses

$H_0$1: There is no statistically significant correlation between a school's teacher retention rate and school climate in rural Title I elementary schools in North Carolina, as shown by the North Carolina Teacher Working Conditions Survey.

$H_0$2: There is no statistically significant predictive relationship between the criterion variable (teacher retention) and the linear combination of predictor variables of school climate (autonomy, community, induction, leadership, shared responsibility, and recognition).

Descriptive Statistics

Descriptive statistics were obtained on each of the variables. The sample comprised of 150 participants. Teacher perception of climate was self-reported by teachers as the extent to which they felt the school was a good place to work and learn. Climate was based on the

perception of the quality of life (Brookover, 1985) as it depends on belonging, autonomy, transition, induction process, recognition, and responsibility (Johnson et al., 2014). Each variable of climate was self-reported through a series of questions. Scores for overall climate and each variable of climate ranged from 1 to 4, with 1 representing "*strongly disagree*" and 4 representing "*strongly agree*" (see Table 2).

Table 2

Descriptive Statistics

	"Strongly Disagree"	"Disagree"	"Agree"	"Strongly Agree"	Mean	Standard Deviation
Climate	4	11	78	57	3.25	0.701
Autonomy	1	21	96	32	3.04	0.536
Leadership	1	16	97	36	3.12	0.601
Belonging	0	11	115	24	3.05	0.428
Induction*	0	0	82	9	3.18	0.260
Recognition	0	10	93	47	3.25	0.567
Responsibility	0	3	139	8	3.06	0.271

*Induction n=91

Teacher retention was based on self-reported data from teachers' plan to return to the current school. The participants responded that 112 teachers reported their desire to return to their current school, and 38 reported their plans to leave. The average experience level was 11-20 years, with 10 being 1st-year teachers, 14 teachers having between 2-3 years of experience, 27 teachers having 4-6 years of experience, 45 teachers having 7-10 years of experience, 47 having 11-20 years of experience, and 75 having more than 20 years of experience.

Results

Hypothesis $H_0 1$

Hypothesis $H_0 1$ stated no statistically significant correlation between a school's teacher retention rate and school climate in rural Title I elementary schools in North Carolina, as shown by the North Carolina Teacher Working Conditions Survey. This study was able to reject the null at the 95% confidence level using a point biserial correlation analysis, where r_{pb} (148) = 0.210, p = 0.010. This section identified the data screening and analysis leading to this result.

Data Screening

Data were sorted and scanned for missing entries and outliers for each variable. No data errors or inconsistencies were identified. A box plot was used to detect bivariate outliers between each the predictor variable and the criterion variable. While outliers were detected, they were kept within the analysis. The outliers did not represent an inconsistency with data entry, nor did they represent higher than 5% of overall data acceptable with a 0.05 alpha. Removing the outliers would inaccurately describe the research findings and is not recommended for a point biserial correlation (Laerd Statistics, 2017). See Figure 2 for the data box plot.

Figure 2

Box Plot:Teacher Retention and Climate
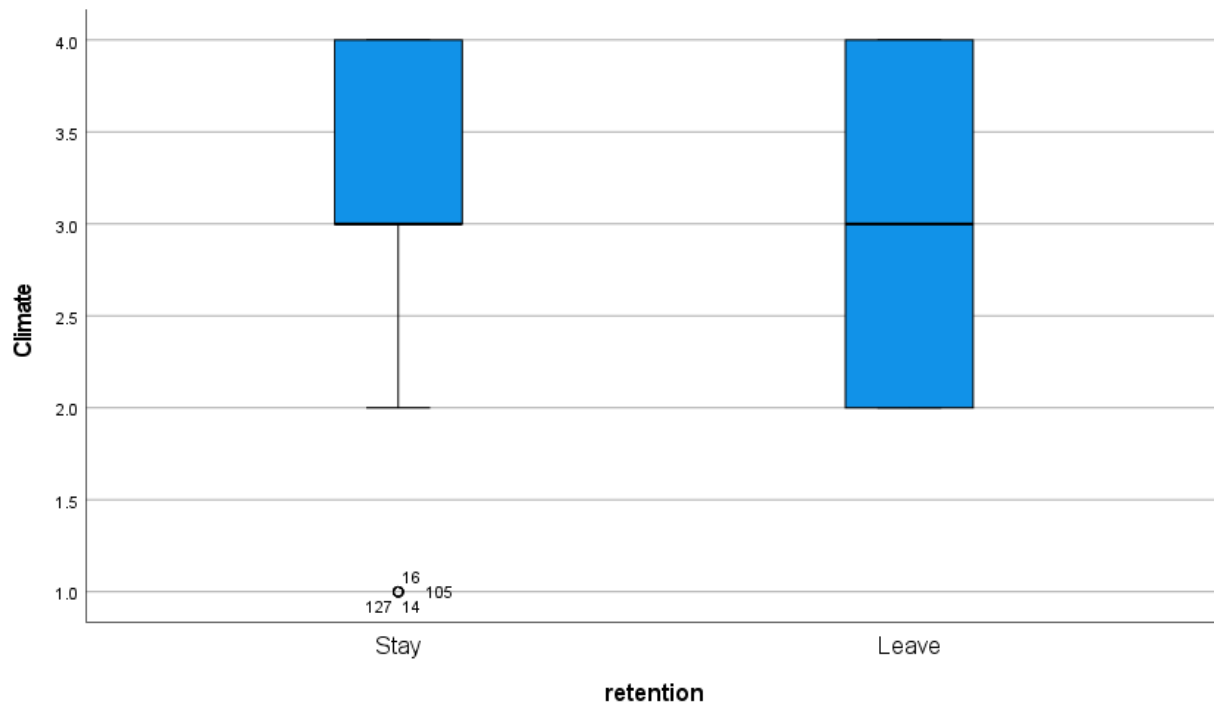
Assumptions

The point-biserial correlation requires the assumption of homogeneity of variance. There was a homogeneity of variances for climate scores for teachers planning to stay at a school and those planning to leave, as assessed by Levene's test for equality of variances ($p =0$ .721). This satisfied the assumption for homogeneity of variances with $p >0$ .05 (Laerd Statistics, 2017). See Table 3 for data points.

Table 3

Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
Climate	Based on Mean	.128	1	148	.721
	Based on Median	.064	1	148	.801
	Based on Median and with adjusted df	.064	1	146.642	.801
	Based on trimmed mean	.262	1	148	.610

The point-biserial also requires that the assumption of normal distribution be met. The assumption of normal distribution was examined using a Q-Q plot due to the large sample size (Laered Statistics, 2017). The assumption of normal distribution was met as indicated by linearity (see Figures 3 and 4).

Figure 3

Normal Q-Q Plot of Climate
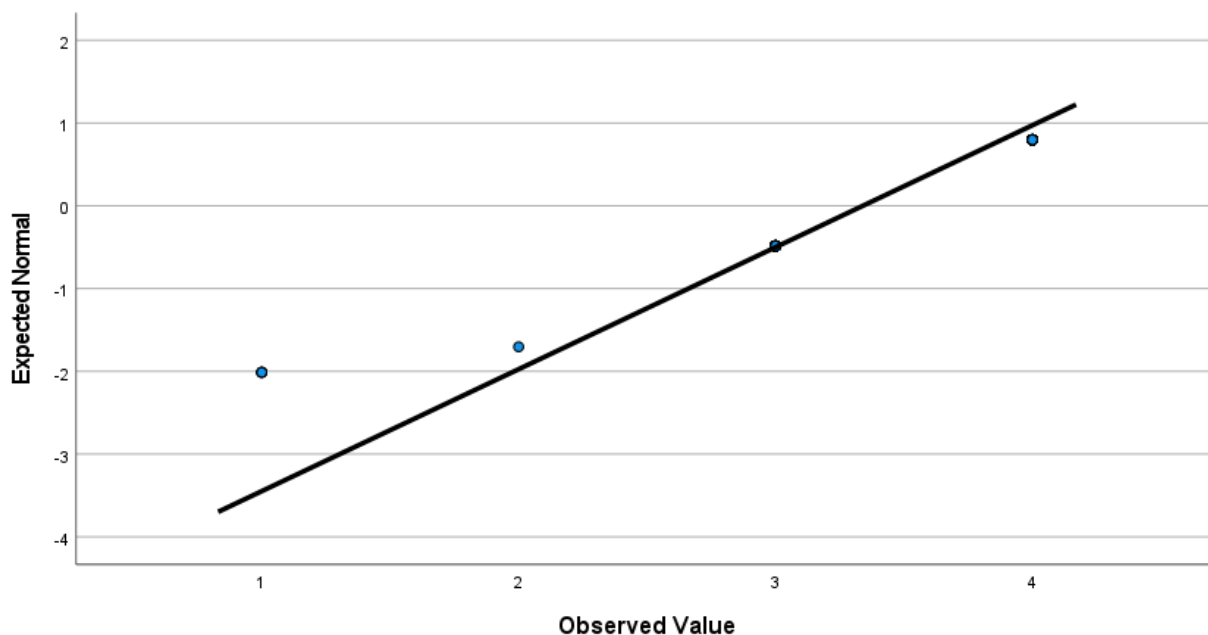
Figure 4

Normal Q-Q Plot of Climate
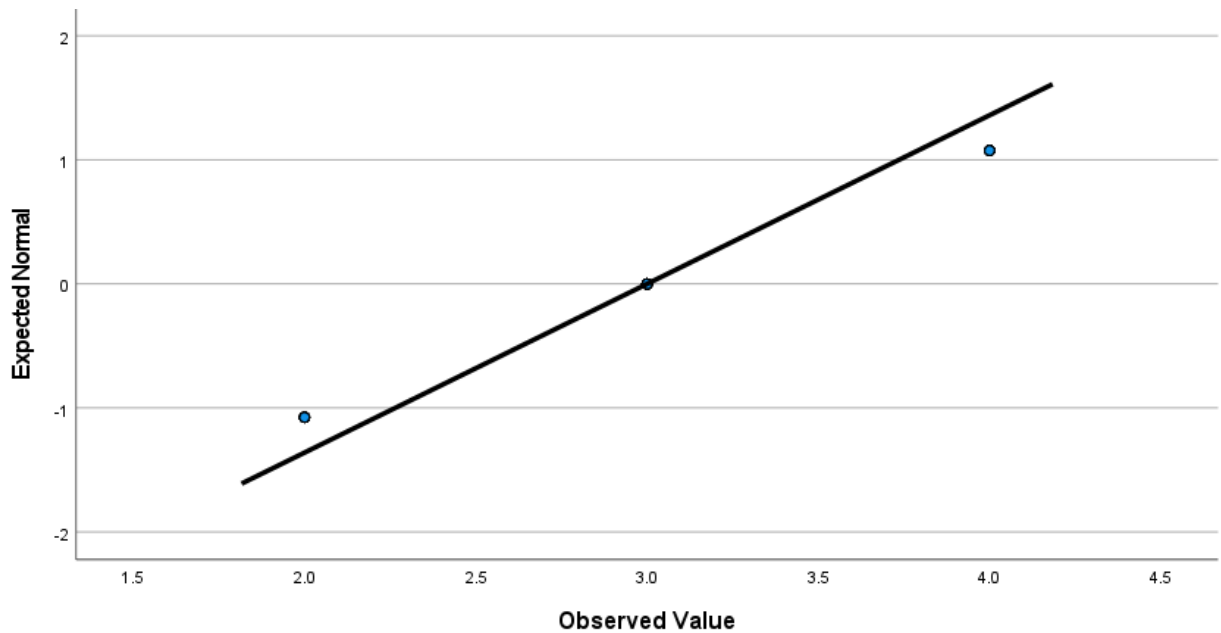
Additionally, a Shapiro-Wilks test was conducted to test for normal distribution (see

Table 4). With $p = \leq 0.001$, the assumption for normality was not met; however, due to the large

sample size of over 20 individuals, this does not indicate invalid data (Geert van den Berg, 2022;

Laerd Statistics, 2017). Furthermore, the central limit theorem states that when independent

variables are normalized, they will show normality even when samples are not normally

distributed. Additionally, research indicates it is not necessary for normal distribution within a

point biserial correlation analysis due to the robustness of the correlation coefficient used

(Fischer, 2010; Laerd Statistics, 2017).

Table 4

Test of Normality

	Retention	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Climate	Stay	.272	112	<.001	.697	112	<.001
	Leave	.237	38	<.001	.811	38	<.001

a. Lilliefors Significance Correction

Analysis

A point-biserial correlation was conducted to test the hypothesized relationship between overall perception of school climate and teacher retention. The predictor variable was the overall perception of school climate, and the criterion variable was teacher retention. The researcher rejected the null hypothesis at the 95% confidence level where r_{pb} (148) = 0.210, p = 0.010. A statistically significant relationship existed between teachers' perception of school climate and their desire to return to the same school. The data was represented as an absolute value in a point-biserial, indicating no positive or negative relationship (Laered Statistics, 2017). The effect size was small at r_{pb} (148) = 0.210 (Gall et.al., 2007). The desire to return to a school accounted for 4% of climate scores (see Table 5).

Table 5

Point-Biserial Correlation Test Results

		Retention	Climate
Retention	Pearson Correlation	1	-.210[*]
	Sig. (2-tailed)		.010
	N	150	150
Climate	Pearson Correlation	-.210[*]	1
	Sig. (2-tailed)	.010	
	N	150	150

*. Correlation is significant at the 0.05 level (2-tailed).

Hypothesis H₀2

H₀2 stated that there was no statistically significant predictive relationship between the criterion variable (teacher retention) and the linear combination of predictor variables of school climate (autonomy, community, induction, leadership, shared responsibility, and recognition). A binomial logistic regression found that three of the school climate variables (leadership, autonomy, and recognition) were significant predictors of teacher retention.

Data Screening

A test for outliers was conducted using Casewise diagnostics. There were 3% of cases where the standard deviation was above 2.0 (see Table 6). Each case was analyzed to determine possible reasons for being an outlier, and it was determined that no error occurred. Since the number of outliers remained under 5% and data did not violate assumptions, these cases were not removed from the analysis (Laered Statistics, 2017).

Table 6

Casewise Diagnostics

Case	Selected Status[a]	Observed Intent to Return	Predicted	Predicted Group	Temporary Variable Resid	ZResid	SResid
40	S	N**	.866	Y	-.866	-2.548	-2.152
41	S	N**	.877	Y	-.877	-2.668	-2.150
45	S	N**	.895	Y	-.895	-2.922	-2.145
89	S	N**	.926	Y	-.926	-3.528	-2.375
112	S	N**	.858	Y	-.858	-2.462	-2.206

a. S = Selected, U = Unselected cases, and ** = Misclassified cases.
b. Cases with studentized residuals greater than 2.000 are listed.

Assumptions

The binomial regression requires that the assumption of linearity of the logit be met. Linearity of the continuous variables was examined using the Box-Tidwell (1962) procedure. A Bonferroni correction was applied using all 13 terms in the model resulting in a statistical significance being accepted when $p <0$ .00384. A Bonferroni correction is used when there is a possibility of a single false positive in a set of tests that could cause a problem, and this is only used when a small set of comparisons are being made (Tabachnick & Fidell, 2014). Based on this assessment, the assumption of linearity was met with each variable's p value being greater than 0.00384 (see Table 7).

Table 7

Box-Tidwell Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1ª	Leadership	31.452	14.467	4.727	1	.030	45669903613308.590
	Autonomy	-28.279	20.611	1.883	1	.170	.000
	Community	47.221	28.178	2.808	1	.094	32200192890985074000 0.000
	Responsibility	-133.170	81.808	2.650	1	.104	.000
	Recognition	-3.247	18.756	.030	1	.863	.039
	Induction	165.509	81.087	4.166	1	.041	7.577E+71
	Autonomy by Natural Log Transformation of "Autonomy"	15.586	10.216	2.328	1	.127	5876080.078
	Community by Natural Log Transformation of "Community"	-22.226	13.203	2.834	1	.092	.000
	Natural Log Transformation of "Leadership" by Leadership	-13.739	6.737	4.159	1	.041	.000
	Natural Log Transformation of "Responsibility" by Responsibility	59.775	37.555	2.533	1	.111	91235810707403670000 000000.000
	Natural Log Transformation of "Recognition" by Recognition	.389	8.623	.002	1	.964	1.475
	Natural Log Transformation of "Induction" by Induction	-76.941	37.804	4.142	1	.042	.000
	Constant	-112.576	119.997	.880	1	.348	.000

Analysis

A binomial logistic regression was conducted to see if there was a predictive relationship between the criterion variable (teacher retention) and the linear combination of predictor variables (autonomy, community, induction, leadership, shared responsibility, and recognition). Using the Omnibus Tests of Model Coefficients, the logistic regression model was statistically significant, $x^2 (4) = 17.112$, $p < 0.009$ (see Table 8).

Table 8

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	17.112	6	.009
	Block	17.112	6	.009
	Model	17.112	6	.009

The model explained 27.4% of the variance in teacher retention plans using Nagelkerke R^2 and correctly classified 82.8% of cases; sensitivity was 97.4%, and specificity was 17.6% (see Tables 9 and 10).

Table 9

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	71.351[a]	.168	.274

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

Table 10

Sensitivity and Specificity

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B) Lower	Upper
Step 1[a]	Leadership	2.188	.972	5.064	1	.024	8.920	1.326	59.990
	Autonomy	2.367	.965	6.024	1	.014	10.671	1.611	70.674
	Community	-.082	1.115	.005	1	.942	.922	.104	8.202
	Responsibility	-3.515	1.830	3.691	1	.055	.030	.001	1.073
	Recognition	-2.228	1.126	3.913	1	.048	.108	.012	.980
	Induction	-.138	1.925	.005	1	.943	.871	.020	37.923
	Constant	6.560	4.821	1.851	1	.174	706.338		

a. variable (s) entered on step 1: Leadership, Autonomy, Community, Responsibility, Recognition, Induction.

Of the six predictor variables, three were statistically significant: leadership, autonomy, and recognition (see Table 11).

Table 11

Logistic Regression Predicting Teacher Retention Based on Climate Variables

			Predicted		
			Intent to Return		Percentage Correct
	Observed		No	Yes	
Step 1	Intent to Return	No	3	14	17.6
		Yes	2	74	97.4
	Overall Percentage				82.8

a. The cut value is .500

Of the variables, autonomy had the best predictability to teacher retention at $p = 0.014$, followed by leadership at $p = 0.024$, and recognition at $p = 0.048$. The responsibility, community, and induction variables were not statistically significant with $p > 0.05$.

CHAPTER FIVE: CONCLUSIONS

Overview

This study aimed to identify the possible relationships between school climate and teacher retention. This study found a statistically significant relationship between teacher retention and school climate using a correlational design. This section reviewed the study results within the context of previous research, discussed the implications for practice based on the results, outlined study limitations, and provided recommendations for further research.

Discussion

The purpose of this study was to identify the strength of relationships between school climate and teacher retention. This study found a statistically significant relationship between school climate and teacher retention, with the variables of leadership, autonomy, and recognition being predictors for teacher retention. This section discussed the results of each hypothesis.

Null Hypothesis 1

Climate is defined as the character of school life based upon the perceptions of the individual (Brookover, 1985). It was hypothesized that school climate had a positive correlation with teacher retention, which meant that teachers were more likely to stay within a school from one year to the next when a positive school climate was present. This study found a statistical relationship between school climate and teacher retention. Previous research suggested that the various elements of school climate were motivators for teacher retention (Kukla-Acevedo, 2009; Wynn et al., 2007), which was supported by this study. The data from this study agreed with the assumption that teachers will choose where they work based on their perceptions of their work environment (Kelchtermans, 2017; Nodanger, 2016). The results also supported Le et al.'s (2020) conclusions that climate is a mediator between job satisfaction and turnover.

The findings of this study also supported job characteristic theory (Hackman & Oldham, 1975), which suggests that an individual is motivated to stay or leave a workplace based on the environment. When individuals are content in their environment and feel that they are in a positive space, they are more likely to stay. This is reported in a correlation of r_{pb} (148) =0.210; giving a p =0.010 effect size.

Null Hypothesis 2

Null hypothesis two states there is no statistically significant predictive relationship between the criterion variable (teacher retention) and the linear combination of predictor variables of school climate (autonomy, community, induction, leadership, shared responsibility, and recognition). This study showed this hypothesis to be partially true. While variables of community, induction, and responsibility did not significantly affect teacher retention, the variables of autonomy, leadership, and recognition did prove to be statistically significant.

The motivated socio-cognitive theory of climate partially supports the results of this study. This theory helped define the elements of climate as individuals seek to gain group acceptance (Beus, 2018) through responsibility, induction, recognition, autonomy, and community (Campbell et al., 1970; James & Jones, 1974; Johnson et al., 2014). Research shows that individuals are more motivated in their work when they have a positive view of these elements (Darling-Hammond, 2003; Huysman, 2007; Ryan & Deci, 2000; Williams et al., 2002). This study confirmed the relationship between the climate elements of autonomy, leadership, and recognition and the motivation to continue with the work. Interestingly, this study showed that community, induction, and responsibility variables did not correlate to an increase in the motivation to stay. Suggesting that while an individual may seek acceptance by adapting to the perceptions of their peers, the amount of which a person can control their work and be

recognized for it is more valuable. Additionally, this study is supported by previous motivational theory suggesting that workers are motivated by their goals of attaining recognition, control of the environment, and achievement (Herzberg, 1966; Wolf, 1970), leading to Maslow's (1943) higher levels.

Individually, the significance of each predictor value provided further insight into how school climate relates to teacher retention. Various studies have indicated that different climate factors are most influential in determining a teacher's decision to stay or leave, including leadership (Urick, 2016), shared decision making (Torres, 2019), and community (Ulfrets, 2015-2016). These elements, however, had not been measured against each other in a single study until now. This study found that autonomy was the most influential of these variables, followed by leadership and recognition, with community, induction, and responsibility not being significant. This finding contradicts the work of Torress (2019) and Ulfrets (2015-2016), indicating that when studied in a larger context, different variables may be perceived differently.

Autonomy clearly held the most significance to teacher retention when considering the individual variables. This significance was supported by previous research that indicates a high correlation between autonomy, climate, job satisfaction, and commitment (Brezicha et al., 2020; Dou et al., 2016; Solomou & Pashiardis, 2016).

Leadership also held a higher significance to teacher retention. The principal is the driving force behind the vision and the school's day-to-day policies, which sets the climate (Johnson et al., 2014). It is evident and easy to understand the importance of the principal's role in teacher retention. This study confirmed the findings of Leithwood (2006) that the more supportive a school leader is, the more motivated a teacher is to stay.

The third statistically significant variable related to teacher retention was recognition. This coincides with former studies that found that the higher the self-efficacy, the higher the job satisfaction and lower burnout (Aldridge & Fraser, 2016; Bellibas & Liu, 2017; Ford et al., 2017; Troesch & Bauer, 2017). Self-efficacy is built through feedback and recognition (Bellibas & Liu, 2017; Ford et al., 2017); it is understandable that recognition would provide greater teacher retention.

Alternatively, the researcher did not find community, induction, and responsibility variables to be significant to teacher retention. This contradicts previous studies indicating a sense of community (Grissom et al., 2014), proper training (Zhang & Zeller, 2016), and higher responsibility (Garcia, 2018; Ross et al., 2016; Wai-Yan Wan, 2018) lead to greater support, job satisfaction, and retention. However, in each area, contingencies were offered for why the variables in this study may not have proven to be significant. Aldridge Fraser (2016) and Johnson (2015) found that community can have the opposite effects when teachers feel in competition with each other due to test scores. Responsibility was only found to be impactful when carefully planned and supported through distributed leadership (Garcia, 2018; Ross et al., 2016; Wai-Yan Wan, 2018). If teachers found themselves in these situations, the results would vary of how significant these factors were in teacher retention.

Implications

The results of this study are important to school leaders in several ways. This study demonstrated a relationship between overall school climate and a teacher's intention to remain within their school. For principals to retain quality teachers, a factor in student performance (Ye & Singh, 2017), principals need to create a positive school climate. Principals can do this by

being aware of the staff's perceptions of the school and taking necessary action when the climate seems to diminish.

This study also found that principals who focus on improving teacher autonomy, providing quality leadership, and recognizing the good work of their teachers will likely have an easier time retaining quality teachers. By retaining teachers, school districts will be able to save on the cost of hiring and training new teachers (Learning Policy Institute, 2017), which can increase student performance (Ronfeldt et al., 2013) and eliminate another barrier to planning new programs (McConnell, 2017).

Limitations

There were limited internal threats to the validity of this study due to the nature of data collection. Data was collected anonymously through COLE, where each participant was randomly given an individual code to log into the survey providing no identifying information. There was no harm or perceived hard in participants taking the survey. Raw data was then delivered to the researcher for storage in a locked file providing further security to participant responses.

There were, however, limitations to the study. Correlation and regression studies provided limitations to this study because they only provide information about the strength of the relationship and not causality. Moreover, this study did not report the impact of a specific treatment on climate to show if it had an effect or caused retention. Correlation and regression studies also do not include a control group to compare the results (Gall et al., 2007).

Furthermore, this study also had limitations in its sample. The researcher only utilized participant results from Title I, rural elementary schools in North Carolina, and this limited the findings to only that population, limiting the study's generalizability. While it could be assumed

that the results of this study can be applied to different populations, it is cautioned. The sample also included data stripped of identifying information from schools. While all schools included represented the same sample population (Rural, Title I, Elementary Schools), it was impossible to identify if various school factors outside of climate accounted for the difference in data.

A third limitation was that this study did not address the follow-through in teachers' decisions to leave or stay within their schools. Teachers were surveyed towards the end of the school year about whether they intended to leave or stay within a school. Teachers who indicated their desire to leave or stay may not have followed through with what they indicated on the survey.

A fourth limitation was the study did not meet the assumption of normal distribution using the Shapiro-Wilks test. However, the assumption for normality was met by showing linearity on the Q-Q plots. There are multiple possibilities as to why normality was not met using the Shapiro-Wilks Test but showed linearity on the Q-Q plot. The most commonly attributed is a large sample size and a curve skewed in one direction (Geert van den Berg, 2022; Laered Statistics, 2017). There may be a chance of Type I error by continuing with the point-biserial correlation without statistical normality (Fischer, 2010; Laerd Statistics, 2017).

Additionally, this study used a Likert scale to survey teachers' perceptions of climate elements. Due to the survey being administered in a single session, teacher perceptions of climate elements could have been influenced by the day's events and not their overall perception of the school. Likert scales are also limited in their ability to record beyond a participant's agreement or disagreement with a statement.

Recommendations for Future Research

This study should be repeated in other areas to include other populations to increase generalizability. These populations could potentially include urban areas, other states within the United States, schools serving higher-income students, and secondary schools. A similar study should be conducted under an applied research method to implement strategies suggested to increase positive climate and track perceptions of climate and their outcomes on teachers' decisions to remain in a school. Lastly, this study should be repeated under additional theoretical constructs.

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APPENDIX A

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APPENDIX B

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APPENDIX C

Date: 11-18-2021

IRB #: IRB-FY21-22-355
Title: A MISSING LINK: EXPLORING THE CONNECTION BETWEEN SCHOOL CLIMATE AND TEACHER
Creation Date: 10-20-2021
End Date:
Status: Approved
Principal Investigator: Christine Whitt
Review Board: Research Ethics Office
Sponsor:

Study History

Submission Type	Initial	Review Type	Exempt	Decision	Exempt

Key Study Contacts

Member	Lisa Foster	Role	Co-Principal Investigator	Contact	lafoster@liberty.edu
Member	Christine Whitt	Role	Principal Investigator	Contact	clwhitt@liberty.edu
Member	Christine Whitt	Role	Primary Contact	Contact	clwhitt@liberty.edu