

AN EXAMINATION OF THE PERCEIVED RESOURCES AND DEMANDS
OF NORTH CAROLINA ELEMENTARY SCHOOL PRINCIPALS

by

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ABSTRACT

JAMES L. HELF. Examination of the perceived resources and demands of North Carolina elementary school principals.
(Under the direction of DR. RICHARD G. LAMBERT)

School administrators are faced with an increased number of responsibilities and challenges. In order to effectively create and maintain effective schools, educational leaders must provide principals with the proper tools. The purpose of this study was to administer the Comparative Appraisal of perceived Resources and Demands for Principals (CARD-P) to North Carolina elementary school principals. Adapted from the CARD (Lambert et al., 2001) which was developed to assess the unique demands and resources experienced by teachers, the CARD-P (Maerz, 2011) was designed to measure perceived stress in the elementary school principalship.

All public elementary school principals in the state of North Carolina (N=1,105) were invited to participate. A total of 303 (27.4%) elementary principals responded. In this study, public elementary school principals were defined as principals who lead in any prekindergarten through sixth grade school or any combination between prekindergarten and sixth grade. Overall, a majority of the respondents found their role as principal to be “very” or “extremely” demanding. Administrative responsibilities that were identified as being most demanding included teacher evaluation, curriculum/instructional initiatives, federal legislation, testing, and changes in policy and procedures. Implications and directions for future research are discussed.

DEDICATION

This dissertation would not have been possible without the support of my family and friends. I would like to dedicate this work to my parents, Phillip and Laverine Helf, who have taught me the importance and value of education and who have been my greatest teachers. I would also like to thank my wife, Shawanna Helf, for her patience, encouragement, and love.

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CHAPTER ONE: INTRODUCTION

Today, school administrators are faced with an increased number of responsibilities and challenges. The job has become multidimensional and requires expertise in curriculum, management, mentoring, assessment, human resources, and education law. Principals are responsible for establishing and maintaining a vision that is focused on school goals, strategically allocating staff and other resources to ensure that goals are met, build trust and facilitate a professional learning community, closely monitor teaching and learning, and analyze and interpret data to improve classroom and organizational practices, all while ensuring that the school is a safe learning environment for students and staff. Major priorities, such as the pressure to raise student test scores, ensure that highly qualified teachers are on staff, and provide the necessary resources in the middle of deep budget cuts, may affect the principal's ability to provide the superior leadership necessary to create and maintain an effective school.

Importance of having highly qualified administrators

Highly qualified administrators are critical to the success of a school. Research indicates that school administrators heavily influence teacher working conditions and

affect a district's ability to attract and retain outstanding teachers (DeAngelis, Peddle, & Trott, 2002; Regional Educational Laboratory Midwest, 2008). School leadership has been identified as the second most significant school-related contributor to what and how much students learn at school (Leithwood, Louis, Anderson, & Wahlstrom, 2004). Principals are responsible for investing resources in a way that is efficient, effective, equitable, and sustainable. Clearly communicating identified successes and opportunities for improvement is critical. Principals depend on faculty support to maintain a cohesive community of learners that productively engages students and teachers. Thus, teachers' work and, in part, their effectiveness, depend on decisions that the principal makes about the allocation of resources to classrooms.

Administrator Shortage

Given that principals are being asked to do more with less, interest in becoming a principal has decreased; the administrator shortage has been documented for more than a decade (Fenwick, 2001; Gutterman, 2007). There are three primary reasons for the shortage: (a) an increase in the number of administrators retiring, (b) a decrease in the number of teachers likely to transition into administration, and (c) an increase in the number of principals leaving the position to pursue other opportunities.

According to a recent survey of 3,200 elementary, middle, and high school principals conducted by the Northeast Regional Elementary School Principals' Council (2006), school districts in Pennsylvania, New York, Illinois, Wisconsin, Michigan, Indiana, Ohio, West Virginia, and Kentucky reported that approximately 42% of principals would retire within the next five years. Estimates show that a significant portion of the educational administration field will retire in the next 10 years. A 10-year

study by the National Association of Elementary School Principals (2007) revealed that the average retirement age of principals was 57. More importantly, the U.S. Bureau of Labor Statistics (2001) reported that “more than half plan to retire as soon as they are eligible, which would continue the 40-plus percent turnover rate in the next decade.” Given this trend, it will be critical for districts to address the need for highly qualified administrative applicants.

A recent study of Michigan school leaders (Cusick, 2003) indicates that districts are facing difficult times filling principal vacancies. The pool of people ready and willing to assume a role in school administration is shrinking. Traditionally, after obtaining a school administrator’s license, teachers represent the majority willing to take on the principalship, and, as Cusick found in Michigan, fewer teachers are doing this. Many district leaders who were surveyed stated that the number of candidates applying for positions is much lower than in years past.

Similar findings have been documented across the country. According to the North Carolina Department of Public Instruction, there are currently more than 17,000 licensed to be school administrators. With only 5,132 positions statewide, it would seem that the state has a surplus of applicants to fill these vacancies. However, it appears that more individuals with administrative licenses are choosing not to seek a position in school administration. According to the North Carolina Principals and Assistant Principals Association (2007), with the increase in responsibilities and duties for administrators, more teachers are choosing to stay in the classroom.

The American Association of School Administrators (2003) reported that the difference between daily teacher and administrator salaries is surprisingly narrow when

considering the length of the work year and comparative levels of education and experience. While school administrators make \$10,000–\$20,000 more annually, they work 20 to 40 more days per year and their hours average an additional 2-4 hours per day. These statistics may certainly explain why the job has become less appealing to teachers (Cusick, 2003).

Ironically, many principals are choosing to leave the profession and pursue other opportunities for the same reason teachers are not entering: long hours, low pay, and increasing responsibilities and duties. This has resulted in an increased number of principals leaving the position to pursue other opportunities.

According to Davis (1997), approximately 10% of principals quit voluntarily for a variety of reasons. In many cases, the principal gets burned out and feels as though he or she may be better off finding another job. In today's schools, principals are expected to work long hours. In many cases, they are drained at the end of the day and feel like they have a continuous stream of paperwork they seem to never catch up on. Principals frequently deal with complicated or emotional discipline issues and unsupportive or hostile parents. In many cases, parents no longer align with school administration but rather see it as more important to advocate for their children. Many principals have meetings at night that cut into personal family time. They spend many hours attending school and community functions. In a study done in 2003 (Johnson, 2005), nine principals who voluntarily left the principalship revealed that the reason they left was because their purpose for and image of becoming a principal did not match reality.

According to the National Center for Educational Statistics 2008-09 Principal Follow-up Survey (Battle, 2010), during the 2007-08 school year there were 89,920

public school principals in the United States. Of these, 20% ($n=18,470$) had changed positions by the start of the 2008-09 school year. Approximately 7% ($n=6,210$) moved to a different school, 11.9% ($n=10,690$) left the principalship or retired, and 1.8% ($n=1,570$) left for unknown reasons. Of those who left, 45.4% ($n=4,247$) retired, 15.6% ($n=1,459$) continued working in a K-12 school, 33.2% ($n=3,106$) took an education position outside a school, and 3.2% ($n=299$) left education altogether. After accounting for retirements, 6.4% ($n=6,443$) of all public school principals left the principalship in 2007-08. The findings from this survey illustrate an interesting phenomenon: Many principals are leaving the principalship for reasons other than retirement (Battle, 2010).

This phenomenon that is a cause for concern and continues to be a focus for research. Johnson (2005) coined the term “exiters” to identify principals that leave the position prior to retirement. He identified four common reasons for exiters to seek an alternative to the principalship: school culture, increased demands, bureaucracy, and student discipline and irate parents. Johnson also found that many exiting principals identified a desire to focus on teaching and learning in their building; however, they found it difficult and frustrating to change the culture of their school. The increased anxiety and frustration of a workload that far exceeded the school day was a second reason administrators sought alternative employment. Some exiting principals found that increased pressures and the demands of the workload were unreasonable. Those demands ranged from focusing on continuous school improvement to supervising staff and managing all areas of the school, including all additional school and community functions. The third reason for exiting was bureaucracy. These individuals reported that federal, state, and local policies that included a steady flow of paperwork required a

tremendous amount of time to complete. Evaluation processes and responsibilities were noted as bureaucratic obstacles. Student discipline and irate parents were identified as the final area of challenge in Johnson's study. These principals felt that the challenges they faced when dealing with student discipline issues and unsupportive or hostile parents affected their working conditions to the point where they felt they would be better off out of the position. For the principals Johnson studied, these challenges defined the tipping point that led them to become ex-principals.

Johnson's (2005) findings have been noted in other studies (Combs, Edmonson, & Jackson, 2009; Cusick, 2003; Fenwick & Pierce, 2001; Gutterman, 2007; Lovely, 2005; Papa, 2007; Rayfield & Diamantes, 2004). According to Cusick (2003), school administrators deal with issues pertaining to school improvement, teacher performance, accountability, core curriculum, staff development, student safety, special education, and student achievement. In North Carolina, these areas of focus are not only assigned to the school administrator but also legislated (NC Gen. Stat., §115C-288, 2010). Else and Sodoma (1999) found that job demands and time requirements to meet the responsibilities of a school administrator are the primary reasons for job dissatisfaction. Indeed, when principals were asked to identify primary barriers to an effective principalship, they identified stress (91%) and time required at work (86%) as the top barriers, followed by low pay (67%), accountability mandates (64%), and increasing disrespect from students (54%; DiPaola & Tschannen-Moran, 2003). Unfortunately, those demands have not only led school administrators to leave the principalship; they have also led to increased levels of stress, exhaustion, and burnout (Combs et al., 2009). In one study, researchers found that due to an increase of stress and pressure from the job,

school leaders are at risk for stress-related diseases (Weber, Weltle, & Lederer, 2005). Stress, exhaustion, and burnout are consistently noted as contributing factors for leaving a principalship.

Identifying and Measuring Demands and Stress

With the increase in administrators leaving the profession, it is important to not only identify the specific causes of stress, but also to determine how districts are supporting administrators in dealing with the stress. As accountability becomes more involved, there is a need to examine the pressures and demands of school-based administrators within this context (Akiba & Reichardt, 2004). Several studies have looked at administrator stress (Johnson, 2005; Rayfield & Diamantes, 2004); however, these have examined perceived stress after the administrator has left the position. Research on practicing school-based administrators is limited to the examination of relationships between demands, resources, and burnout (Combs et al., 2007).

Wolverton, Wolverton, & Gmelch (2002) define work-related stress as those characteristics of the work environment that threaten the individual. If the level of stress exceeds the individual's capacity to address it appropriately, stress responses are triggered (Sapolsky, 1998). Student discipline, teacher efficacy, administrative support, and increased accountability measures may have an impact on the stress experienced by educators (Ingersoll, 2001; Keigher, 2010). The cumulative effect of these stressful experiences can result in burnout.

A great deal of research has focused on measuring teacher stress (Hammer & Marting, 1998). The Classroom Appraisal of Resources and Demands (CARD; Lambert, Abbott-Shim, & McCarthy, 2001) was developed to measure the resources and demands

perceived by teachers in their classrooms. Lambert, McCarthy, O'Donnell, and Melendres (2007) administered the CARD to measure teacher perception of classroom demands and the availability of resources to help them meet those demands. Two hundred seventy-six elementary teachers and teacher's aides from Texas, North Carolina, and South Carolina completed the 104-item survey. The measure was divided into two sections, resources and demands, and participants were asked to rate each item on a 5-point Likert scale (1=very unhelpful to 5=very helpful and 1=not demanding to 5=extremely demanding, respectively). Lambert et al. found four themes in terms of classroom demands, listed from most to least severe: students with behavior difficulty, administrative demands, students with other special needs, and the availability of instructional materials. In addition, teachers identified instructional resources, additional adults in the classroom, support personnel, and specialized resources as helpful in meeting the demands of the classroom. More than 30% of participants were found to be at substantial risk for stress. In other words, their perceptions of the demands of their job were greater than their perception of the helpfulness of school-provided resources to meet demands. The authors suggested that principals take these results into account when making student placement decisions and allocating school resources.

While understanding and identifying the stresses on classroom teachers is important in preventing burnout and retaining high-quality teachers, there is clearly a need to address the stress experienced by school principals to achieve the same goal. The CARD has been found to be a valid, reliable measure for measuring teacher stress and has been adapted to measure the stress of other groups of professionals in the field of

education, including preschool teachers (Lambert et al., 2001) and school counselors (McCarthy, Kerne, Calfa, Lambert, & Guzmán, 2010).

Recently, the CARD has been adapted for elementary principals. Maerz, (2011) developed the CARD-P using a three step process. First, a questionnaire was administered to a purposeful sample of six current principals, stratified by grade level, to determine the constructs perceived as contributing the most to stress in the elementary principalship. Next, Maerz aligned the constructs with relevant literature to generate items and subscales for inclusion in the survey. In the final step, cognitive interviews with six elementary principals were conducted to improve the comprehension, structure, and clarity of the survey.

The CARD-P (Maerz, 2011) consists of 104 items. The survey is composed of five parts: (1) general demographic information about the principal, (2) general characteristics about the school and district, (3) an appraisal of perceived current demands, (4) an appraisal of perceived available resources, and (5) general open-ended questions. The instrument measures principal stress as the difference between perceived demands and perceived resources.

This study will be the first to use the CARD-P to measure the perceived stress of principals by appraising their perception of resources and demands within their current position.

The CARD-P will be used to address the following research questions:

1. How do principals rate the demands of their job?
2. How do principals rate the helpfulness of resources to meet the demands of their job?
3. What is the relationship between principals' perception of stress and personal demographics ?
4. What is the relationship between principals' perception of stress and school demographics?

Delimitations and Limitations

The participants in this study included elementary school principals across the state of North Carolina. While principals may share similar experiences, it cannot be assumed that these principals' perceived demands and resources represent those of principals in other states (Creswell, 2008; Marshall & Rossman, 2006). Further, it is possible that the perceptions of principals most at risk of leaving the profession will not be captured. In other words, given that participation in the study is voluntary, a principal experiencing high levels of stress may decide to not complete the survey. It is also possible that there may be response bias if principals feel pressured to respond to the items on the survey in a positive way (Creswell, 2008). In addition, there may be differences in responses based on levels of experience among the principals.

All public schools in North Carolina are required to administer state accountability measures in compliance with No Child Left Behind (NCLB) and the North Carolina accountability model. Given that private and charter schools are exempt from

these requirements, the perceptions of these principals may not reflect those of public school principals. Therefore, principals of private or charter schools were not included.

The CARD-P was administered during the summer months after the 2011-2012 academic school year. It is possible that responses would have been different if the survey had been administered at the beginning or ending of the school year, as other demands may present themselves or be perceived as more demanding at other times during the academic year.

Definitions

CARD: The Classroom Appraisal of Resources and Demands instrument (Lambert et al., 2001) is a self-appraisal of the subjective experience of both classroom demands and resources provided by the school. The CARD attempts to capture the situationally specific nature of teacher stress (Lambert, R., McCarthy, C., O'Donnel, M., & Wang, C., 2009). *Cognitive-transactional paradigm of stress: a paradigm within stress research that emphasizes the perceptual nature of stress* (Folkman & Lazarus, 1988; Matheny, Aycock, Pugh, Curlette & Canella, 1986). Stress is hypothesized to result from an appraised imbalance between perceived demands and the perceived adequacy of one's resources to coping with the demands (Brack & McCarthy, 1996; Folkman & Lazarus, 1988; Lazarus, 1966). Demands and resources are perceived and appraised from both an individual and social/cultural perspective (Bernard & Krupat, 1994; Hobfoll, 1998; Lazarus, 2001; Meyer, 2003).

Demand: a perceived stimulus or situation that, in the context in which it is experienced, is appraised as a threat or may lead to frustration (Monat & Lazarus, 1991)

Principal: the primary leader of a school building or school, used interchangeably with school-based administrator.

Resource (coping resources): an individual's subjective appraisal of personal properties (health, energy, positive beliefs, problem-solving and social skills), social support (emotional, informational, or tangible), and/or materials (i.e., money, goods, and services) that define his or her ability to cope with perceived demands (Lazarus & Folkman, 1984).

School administrator: the primary leader of the school, in most cases the principal or headmaster.

Stress: from a psychological perspective and within the cognitive-transactional paradigm, stress is "the relationship between a person and the environment that is appraised by the person to be taxing or exceeding his or her resources and endangering his or her well-being" (Lazarus & Folkman, 1984, p.19). This builds on the definitions hypothesized by Gmelch & Swent (1984) and Lazarus (1966).

CHAPTER TWO: REVIEW OF LITERATURE

A review of research and related literature was conducted to provide context for this study. Literature and research were reviewed in the areas of: (a) worklife of the school administrator, (b) stress and coping, and (c) instruments for measuring stress.

Working Life of School-Based Administrators

Since the passage of NCLB, the role of the school administrator has become more complex. The principal has inherited additional responsibilities and pressure from increased accountability measures. The position has changed from that of a day-to-day manager to a more complex, facilitative leader who can efficiently and effectively multitask to positively affect the teaching and learning of teachers and students. Within the average day, today's principal deals with issues of policies and procedures, testing and accountability, curriculum, teacher evaluation, discipline, and much more.

According to a National Association of Elementary School Principals (NAESP) report published in 1998, the average elementary school principal worked 40 hours a week and had the majority of the summer off. They were seen as managers more than instructional leaders. They had control of 17% of the school budget and spent little time in the classroom. The NAESP platform (2011) illustrated the expanding role of the

principal. A current principal works 10 hours on weekdays and 8 hours on the weekend. They control 26% of the school budget and spend the majority of their time supervising staff, interacting with students, and dealing with discipline issues (Pierce, 2000). The NAESP recommends that a person entering the principalship have a minimum of five years of teaching experience, along with extensive training and a master's degree.

The changing scope of the principalship can also be seen in the adoption of national and state policy standards. Crafted as a guide for school leaders, the Interstate School Leaders Licensure Consortium (ISLLC) believes that a school leader's primary responsibility is to ensure that all students receive a high-quality education through the teaching and learning process. The six standards that were created by ISLLC were designed to influence the preparation of principals, guide states in the development of their own state principal standards, and serve as a tool for licensure or evaluation. The six standards (Figure 1) address a principal's need to promote the success of all students.

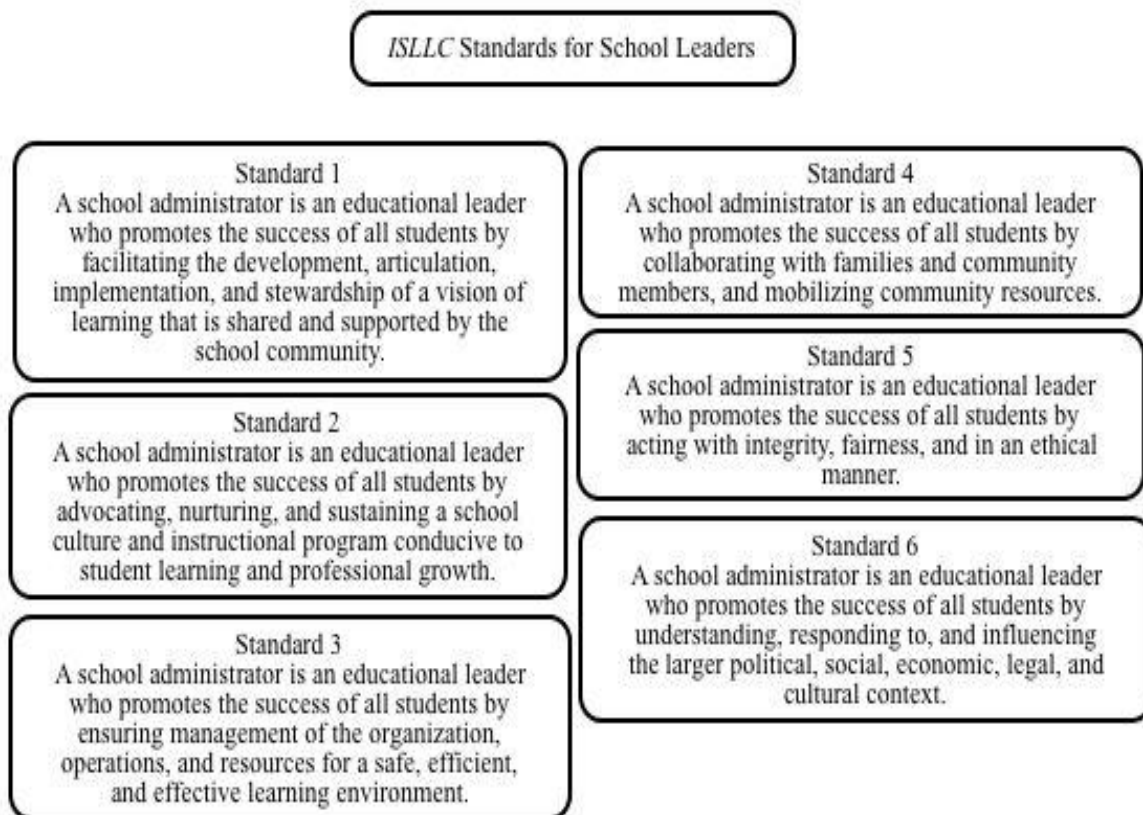


Figure 1. ISLLC Standards for School Leaders

Many states used the ISLLC standards to review and modify their own standards for school leaders. For example, in 2006, the North Carolina State Board of Education approved the North Carolina Standards for School Executives (Figure 2). Both the ISLLC and the NC Standards for School Executives focus on developing a well-rounded, facilitative leader who can lead change and increase performance. As a result, principals have encountered more demands and increased responsibility.

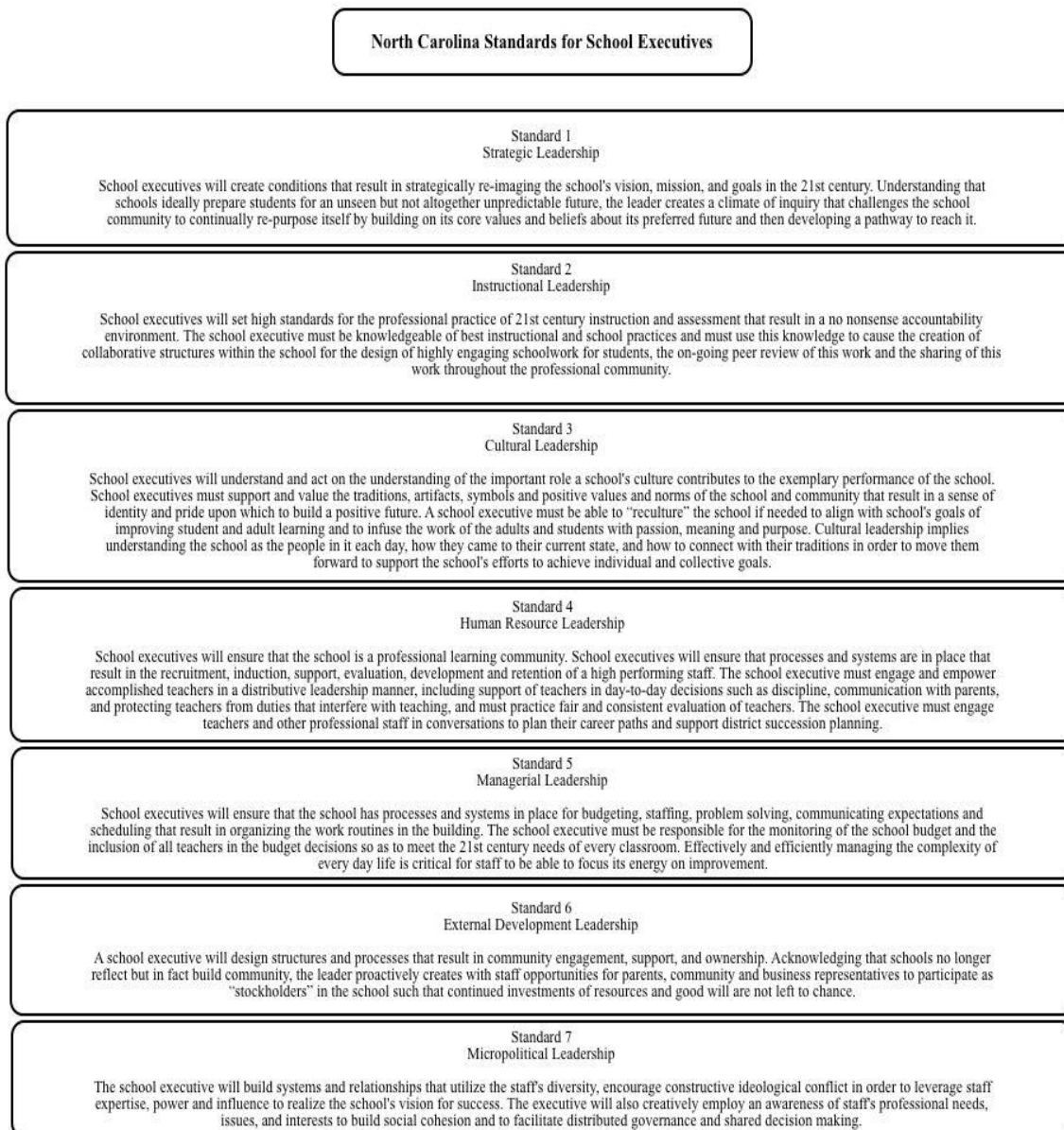


Figure 2. North Carolina Standards for School Executives

According to a principal's job description (Figure 3), published by the North Carolina Department of Public Instruction, the duties of the principal include developing policies, programs, and curriculum, along with conceptualizing a mission and vision and creating a professional learning community to that ensure all school goals are met.

Figure 3. Job Description: Principal

Job Description: Principal

Supervises all school personnel: Directly and/or indirectly

Purpose: To serve as the chief administrator of a school in developing and implementing policies, programs, curriculum activities, and budgets in a manner that promotes the educational development of each student and the professional development of each staff member.

General Planning: Conceptualizes the broad goals of the school and plans accordingly to ensure that procedures and schedules are implemented to carry out the total school program.

General Coordination: Ensures that the school program is compatible with the legal, financial and organizational structure of the school system. The principal defines the responsibilities and accountability of staff members and develops plans for interpreting the school program to the community.

Enhancement of Personnel Skills: Provides activities which facilitate the professional growth of the school staff and enhance the quality of the instructional program.

School Objectives: Identifies the annual objectives for the instructional, extracurricular, and athletic programs of the school. Curriculum Objectives Ensures that instructional objectives for a given subject and/or classroom are developed, and involves the faculty and others in the development of specific curricular objectives to meet the needs of the school program. The principal provides opportunities for staff participation in the school program.

Establishes Formal Work Relationships: Evaluates student progress in the instructional program by means that include the maintaining of up-to-date student data. The principal supervises and appraises the performance of the school staff.

Facilitates Organizational Efficiency: Maintains inter-school system communication and seeks assistance from central office staff to improve performance. The principal maintains good relationships with students, staff, and parents. The principal complies with established lines of authority.

New Staff and Students: Orients and assists new staff and new students and provides opportunities for their input in the school program.

Community: Encourages the use of community resources, cooperates with the community in the use of school facilities, interprets the school program for the community, and maintains communication with community members.

Supplies and Equipment: Manages, directs, and maintains records on the materials, supplies and equipment which are necessary to carry out the daily school routine. The principal involves the staff in determining priorities for instructional purposes.

Services: Organizes, oversee, and provides support to the various services, supplies, material, and equipment provided to carry out the school program. The principal makes use of community resources.

Figure 3. From North Carolina Department of Public Instruction, 2012. Job description title: Principal. Retrieved from <http://www.dpi.state.nc.us/work4ncschools/employment/jobdescrip/>

According to Grubb and Flessa (2006), due to the amount of responsibility required, some question whether one person can successfully meet all the demands. Maninger (2007) conducted a case study of one elementary school principal to learn more about a day in the life of a principal. This principal described how a typical day begins very early and, in many cases, ends very late. He described the two types of days he

encounters. The first are the days he loves. On these days he can do things such as assess curricula, examine academic data, or have a meaningful conversation with a student or teacher. The days of survival are the other type. These days consist of a series of events that require immediate attention, such as disciplining a student who has made a poor decision, responding to an irate parent, or receiving unexpected additional paperwork from the district. He reported that as the “days of survival” increase, the days he loves decrease. The descriptions from this principal illustrate the uncertainty and variability of today’s principalship.

Additionally, in a recent profile, two veteran principals identified and prioritized their five most important job responsibilities. Both concluded that before they handle any task on the job, their first and primary responsibility is the kids they serve. Being an instructional leader and focusing on excellent teaching was second, and said that to know what is happening in classrooms and support student learning, the principal must be visible. Third, these principals reported that being a learner and facilitator was important in order to set a clear vision for the school and to motivate and challenge others to meet shared goals. In other words, principals must model continuous self-improvement. The fourth responsibility was as “CEO” of the school. Principals must focus on understanding the entire scope of the position and its accountability for all areas of the school. Last, they identified their role as technology integrator and described this responsibility as ever-changing but critical to making the school successful and competitive. They stated that without technology integration, a school could quickly fall behind. While these principals provided insight into the principal’s role, there are still other responsibilities they did not

prioritize. Perhaps more worrisome is that many principals do not have adequate resources to meet those demands.

A survey of administrators in the state of Virginia was conducted to examine resource needs. Seventy-eight percent of respondents believed their education prepared them for their positions; however, 90% felt that they needed additional professional development and support to effectively meet the expectations of their role. Instructional leadership was targeted as the area needing the most additional support. Ninety percent believed that increasing student achievement, assessing and improving instructional time, professional development, curriculum integration and alignment, and increasing staff morale were critical to their success as professionals and to the success of their schools (DiPaola & Tschannen-Moran, 2003). These concerns may be even more pronounced today, given the challenging economic times administrators are facing.

In a recent study, the Center for Public Education (2010) examined levels of principal satisfaction during challenging economic times. They concluded that budget cuts may also have a negative effect on principals' overall health. More than 50% of the respondents reported that their health had gotten much worse and that they were very worried about it. Many of these principals noted that it was difficult to do much more with much less; working conditions were more challenging, and accountability was being scrutinized at higher levels. Seventy percent of the respondents either used the term "stress" or described symptoms of stress in their responses.

The 2008-2009 Principal Follow-up Survey (Battle, 2010) revealed that 55% ($n=49,160$) of the 89,920 principals surveyed worked more than 60 hours per week. An additional 16% ($n=14,040$) worked more than 55 hours per week. Battle (2010) also

found that 12% ($n=10,690$) of those who responded left the principalship at the end of the 2007-2008 school year, and 7% ($n=6,294$) chose to change schools. The survey results also showed that 26% ($n=23,250$) of those who responded felt a reduced level of enthusiasm since becoming a principal, and 20% ($n=17,984$) reported that they would leave the profession if they could secure a higher-paying job. As responsibilities and demands of the principalship increase, the position becomes less attractive and the number of principals leaving increases (Cusick, 2003).

According to Lovely (2004), the principalship is a “lethal mixture” of deterrents for both candidates and present principals. With the increase in administrators leaving the profession, it is important to identify the specific causes of stress and determine what resources may be helpful in dealing with these stressors.

Stress and Coping

Stress is a difficult concept to define (Hobfoll 2001). This has led some researchers to suggest that the term not be used (Hinkle, 1974; Mason, 1975). Others believe that stress should be used as a blanket term to describe the sources of, responses to, and symptoms of stressors (Lazarus, 1966; Matheny & Ashby, 2005). From a scientific standpoint, stress is typically defined in terms of internal or external stimuli that require a response from an individual (Gugliemi & Tatrow, 1998; Lazarus, 1990; Sparks, 1983). However, due its difficulty to define and interrelated nature, Monat and Lazarus (1991) perceive of stress as a phenomenon, which research has since been categorized into different conceptual structures. Due to their complexity, multiple philosophical frameworks have been formulated. Schwarzer (2001) has identified the models of stress

research, which include response-based, stimulus-based, cognitive-transactional, and conservation of resources.

Response-based

The general adaptation syndrome (GAS) model was the first response-based model of stress. This model identifies stressors through a response or a series of responses (Heath, 1995). According to Selye (1974) and his GAS model of stress, “Stress is the non-specific response of the body to any demand made on it” (p. 293). According to this model, the body goes through three stages when dealing with stress. The first is the alarm stage, during which the body recognizes that there is something wrong and tries to prepare itself. The stage is the resistance stage, during which the body identifies the cause of the stress and puts measures into place to counterbalance and bring itself back to a normal state. If the body cannot remain balanced, it goes into the third and last stage, exhaustion. In the exhaustion stage, the body is in overload and the stress levels remain high. This stage is considered hazardous to health.

The GAS has been found to be a valid model for understanding stress; however, two disadvantages have been identified. First, the model assumes that all stressors produce the same physiological reactions. For example, having a sudden increase in temperature compared to a gradual increase would produce the same emotional response. The second disadvantage is that cognitive appraisal is not taken into account. A study conducted by Tennes and Kreye (1985) found that children who were slightly above average in intelligence experienced more stress on the day of an exam than lower-achieving children. The authors measured cortisol levels during both regular school days and testing days. Lower levels were associated with lower-achieving students and higher

levels of cortisol with higher-achieving students. Therefore, results suggest there were differences in levels of stress based on cognitive abilities.

Stimulus-based

According to Heath (1995), a stimulus-based model identifies a stressor as a prior disruptive or distressing event. Holmes and Rahe (1967) developed the Social Readjustment Rating Scale, which identifies stressors that cause a significant life change for an individual. This rating scale measures the frequency of life events over a 12-month period to determine how much stress a person is dealing with. This concept is based on the notion that stress is cumulative.

Cognitive-Transactional

A unique difference between response- and stimulus-based theories and the cognitive-transactional model (CTM) is that CTM recognizes individual differences in both the perception of and responses to stimuli (Heath, 1995). CTM is based on how an individual perceives a life demand and whether or not they are capable of meeting the demand. Stress is the primary outcome of personal appraisal (Lazarus & Folkman, 1984). In other words, if one feels as though they are not capable of meeting the demand, stress occurs. According to Holroyd and Lazarus (1982), stress involves the “judgment that environmental or intentional demands tax or exceed the individual’s resources for managing them.” It is the relationship between the person and the environment that is causing resources to diminish. As individual demands increase, causing reduced resources, the response capacity becomes limited and threatened.

Hobfoll (2001) wanted to bridge the gap between the environmental and cognitive standpoints by integrating critical components of the three models. The result was the conservation of resources theory.

Conservation of Resources Theory

Hobfoll's (1998) conservation of resources (COR) theory is based on the central tenet that people strive to obtain, build, and protect that which they value (e.g., resources), and that psychological stress occurs when these resources are lost or threatened with loss, or if individuals fail to replenish resources after significant investment. Within this model, individuals consistently seek to maintain resources throughout their life. Resources include objects such as a home, food, and clothing; personal beliefs, such as self esteem; conditions, such as marriage or social support; and forms of energy represented by time, money, or knowledge. Therefore, this theory considers both environmental (external) and cognitive (internal) processes and gives them equal weight. COR is different from other theories because it emphasizes the nature of one's environment, both objective (e.g., actual resources) and socially construed (e.g., access to resources), in determining the stress process, rather than solely the outcome of stress or the individual's cognitive appraisal of stressors (Hobfoll, 2001).

Understanding How Individuals Perceive and Deal with Stress

Hobfoll (2001) theorizes that appraisals are constant and that people actively and proactively appraise their total environment, including life situations, short- and long-term goals, potential obstacles, and demands to minimize or reduce stress. The process of appraisal is twofold—on the one hand, it's reactive to a perceived demand, but on the other, it's also proactive to perceived potential demands. Individuals are continuously

appraising resources while also searching, acquiring, and maintaining additional ones. Hobfoll further contends that “people must invest resources in order to protect against resource loss, recover from losses, and gain resources” (p. 349).

Hobfoll’s COR theory (1998) also theorizes that appraisals are tied to the social context of the individual. Since there is a direct connection, a shared social-biological appraisal must be considered. In fact, as one considers their resources and the environment in which they are used, they are also ranked in order of importance or value. The rank of resources is determined by both social and biological factors. Hobfoll (2001) also sees appraisals as an automatic outgrowth of learned rules of interpretation, as well as shared and cultural scripting of responses. Individuals cope by acquiring and maintaining resources, recognizing and responding to early warning signs of demands, and investing in additional resources to maximize advantages. When individuals maintain a surplus of resources they tend to have a positive sense of well-being (Cohen & Edwards, 1985). However, those that have minimal resources tend to be more vulnerable (Rappaport, 1981).

As Hobfoll (2001) understands the importance of the social and cultural components, the COR theory addresses their influence. Cultures and societies have their own set of rules about what they perceive to be stressful (Colby, 1987). Therefore, social and cultural structures do not only consider individual traits and behaviors, but also interactions within the social and cultural environment in which one lives (Meyer, 2003). Hobfoll (1998) suggests that the inclusion of social and cultural influences on demands would advance the theory of stress and why individuals who experience similar demands respond so differently.

The workplace is a social/cultural environment that can produce stress.

Researchers have studied occupational stress for many years. According to the National Institute of Occupational Safety and Health (2009), occupational stress is defined as the harmful physical and emotional responses that occur when the responsibilities of a job do not match the individual's capabilities, resources, or needs. McGrath (1976) describes social stress as a four-stage cycle that focuses on the interaction between a person and their environment. In stage one, the stressors are perceived by the individual. In stage two, stressors are individually interpreted, and each person chooses how to view the stressor. In stage three, the individual considers the possible consequence and then decides how to respond to the stressor. The final stage is the resulting behavior. Within these four stages, McGrath proposed linking processes. In the appraisal process, which links stages one and two, the individual appraises the situation and determines the threat. The decision process connects stages two and three; here, the individual considers the results of the appraisal, past experiences, current conditions, and available resources. Next, the performance process links stages three and four and results in a set of behaviors that can be appraised in terms of quality and quantity. Last, the outcome process links stage four back to stage one. Here, the behavior of the individual and the consequences determine the ultimate outcome.

Similar to McGrath (1976), a four-stage stress cycle was proposed by Gmelch (1986) to better understand how stress can be beneficial or detrimental to an individual or an organization. Stage one involves situations that cause stress, such as meetings, self-expectations, interruptions, rules and regulations, a heavy workload, or conflicts within the organization. Stage two deals with the individual's perception of the stressors.

Although stress can occur on different levels and from different sources, it is the interaction of the individual's personality and perception of the stressor that determines the responses that occur. Stage three is the stress response and the manner in which the individual chooses to cope with the stress, which leads to consequences in stage four. Depending on the individual's choice of response in stage three, stage four can result in either illness or wellness. Gmelch, (1986) emphasize that a balance between stress and performance needs to be maintained for an individual to cope effectively with stressful situations.

Koch, Tung, Gmelch, & Swent (1982) have identified four sources of stress in the field of educational administration: role-based stress, task-based stress, boundary-spanning stress, and conflict-mediating stress. *Role-based stress* is defined by an administrator's beliefs or attitudes about the role he or she plays in the educational process. *Task-based stress* is determined by the everyday activities required by an administrative position, such as phone calls, scheduled meetings, interruptions, unscheduled meetings, reports, memos, grant applications, program evaluations, after-school activities, and a myriad of other tasks. *Boundary-spanning stress* is associated with interrelationships with agencies, public relations, and other community coalitions required to gain public support for educational programs. *Conflict-mediating stress* arises from settling conflicts, such as student discipline, parent-school disagreements, or staff differences. Koch et al. then used these four dimensions to identify stressors of school administrators and develop more effective coping strategies. Results from a 1993 study that focused on the four dimensions of stress (Bredeson, 1993) found strong relationships in administrators between task-based stress and emotional exhaustion. When comparing

elementary and secondary principals, mean stress scores were higher for elementary principals. Bredeson, (1993) attributed this to higher levels of parental participation and significantly smaller administrative teams at the elementary level.

When an individual is unable to effectively respond to a demand, the demand is perceived as a threat (Monat & Lazarus, 1991). A threat is the perception of potential harm that results from a demand that exceeds available resources. Once a demand creates a stress situation, individuals typically feel frustration, which can be defined as the dissatisfaction—often accompanied by anxiety or depression—that results from unfulfilled needs or unresolved problems that block or hinder progress toward a goal. Once an individual gets to the state of frustration, responses are limited. While threats and frustration have different causes, they can both create physiological and psychological reactions (Heath, 1995; Matheny et al., 1986). Stress reactions are unique for each individual (Hobfoll, 2001). Demands are individually appraised with respect to situation and personal resources, and the perception of one's ability to adequately handle the demand through available resources leads to individualized responses and reactions (Gmelch & Burns, 1994).

Coping

Coping is the process of managing a stress situation (Lazarus, Averill, & Opton, 1974; Lazarus & Folkman, 1984). The effectiveness of coping depends on the type of stressor, the particular individual, and the circumstances. Monat and Lazarus (1991) view coping as an individual's efforts to manage or modify demands that exceed available resources. They suggest that coping falls into two main categories: problem-focused and emotion-focused. Problem-focused coping occurs when an individual directly targets the

causes of stress and deals with the problem or stressful situation that is causing stress.

Then, they either remove the stress or identifying the stress and using strategies to reduce or remove the demand (threat). Emotion-focused responses are the negative emotional responses that result from not meeting a demand—for example, an individual avoiding a health issue that has been diagnosed. According to Monat and Lazarus (1991), coping strategies in many cases are used together to reduce stress, regardless of their focus. Current research (Hobfoll, 2001) regarding coping resources indicates that the majority of the resources for stress and coping focus on stress responses rather than coping and preventative resources. In his COR model, Hobfoll (1998) focuses on the appraisal of preventative resources.

The concept of coping and preventative resources is central to Hobfoll's work (1998, 2001). He believes that focusing on coping resources rather than on measurement of demands allows for a more accurate prediction of a stressful reaction. Other researchers, such as McCarthy (1997), agree and add that when an individual focuses on preventative coping resources, it is easier for them to identify, modify, or control the demands they encounter. Therefore, if preventative coping resources are successful, removing the perceived demand and stress response is possible (McCarthy et al., 1997). Cognitive-transactional models of stress involve fluid interactions between the individual and the environment (Schwarzer, 2001). The interaction is continually assessed by the individual as he or she seeks to appraise perceived demands and available resources (Matheny et al., 2005). McCarthy and colleagues (2002) place this concept in a stress-prevention and coping model (Figure 4). As a life event occurs, an individual becomes aware of a demand. The individual then makes an appraisal of available resources to face

the demand. When the resources are greater than the demand, a challenge and eventual opportunity for growth and optimal functioning occur. When the demand exceeds the available resources, a stress situation occurs and elicits a stress response. At this point, a secondary appraisal of the individual's coping resources occurs, leading to available coping resources. These can either be preventive—and change the individual's perception of the life event and awareness of the demand—or combative, which address the stressors through a problem-focused or emotionally focused strategy.

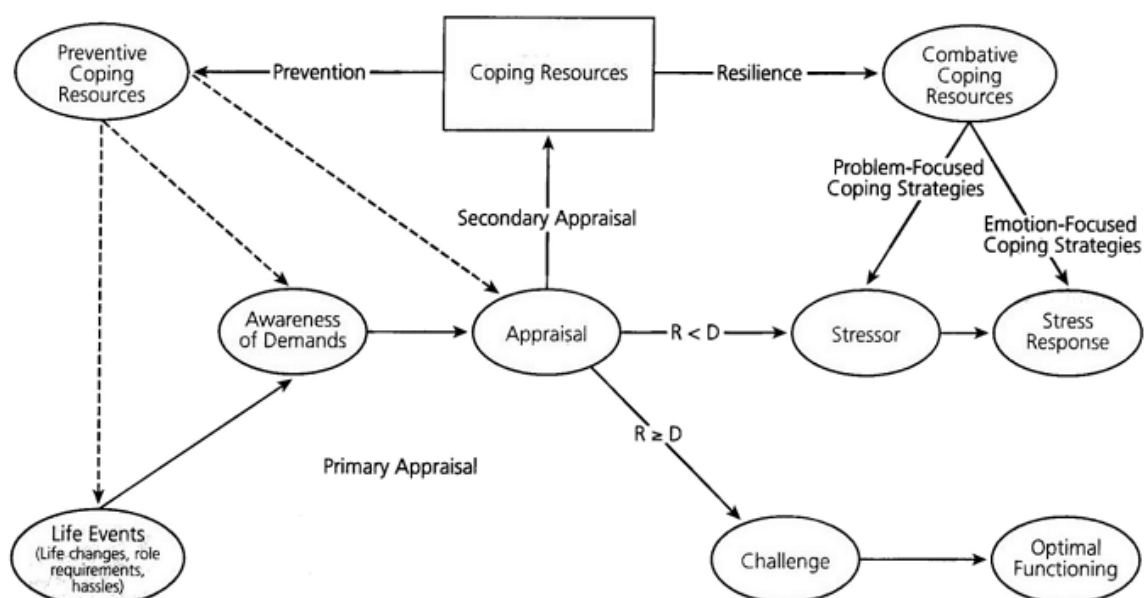


Figure 4. Model of prevention of stress and coping. From “Factor structure of the preventive resources inventory and its relationship to existing measures of stress and coping” by C. J. McCarthy, R.G. Lambert, M. Beard, and A. Dematatis, 2002, in *Toward Wellness: Prevention, Coping, and Stress*, G.S. Gates and M. Wolverton (Eds.). Greenwich, CT: Information Age Publishing.

McCarthy and colleagues' (2002) model of prevention of stress and coping is different from Lazarus and Folkman's (1984) cognitive-transactional model. According

to McCarthy, preventive coping resources may change an individual's perception of life events and block the elevation of stress to demand status. Preventive coping resources may also amend the individual's appraisal of their ability to address future demands.

Measuring Demands and Stress

In the past, stress theory has primarily focused on measuring demands (stressors) or stress responses. Stress has commonly been assessed from either a response-based or stimulus-based standpoint, rather than as a cognitive process. However, researchers have begun to look at stress as a cognitive process through the transactional model and assess the use of appraisal and coping behaviors.

Response-based measures focus on reactions to stimuli. As noted by Seyle (1975), these measures are independent of the demand and often depend on characteristics of the individual. Response-based measures focus on the symptoms or feelings experienced by an individual. They typically include a component called a "perceived stress scale" that allows an individual to respond to how stressed they feel. However, these measures can be very misleading, because when a stressful event occurs, it's difficult to determine whether the feeling is the stress itself or the outcome of stress.

Stimulus-based measures focus on critical events or demands and either measure the stressor (stimulus) or the distress (demand). The first stimulus-based instrument was the Schedule of Recent Experiences (SRE) developed by Hawkins, Davies, and Holmes (1957). This instrument looks at the major life events an individual has experienced during the last year and assigns a score to each. These scores are then added together, giving a total that shows the amount of major stress experienced during the year. Currently, the most commonly used stimulus-based instrument is the Social

Readjustment Rating Scale (SRRS), which was developed by Holmes and Rahe (1967) and was based on the (SRE). However, the SRRS contains 43 life events, also known as Life Changing Units (LCUs), which have different weights. For example, a minor traffic violation has a weight of 11, whereas the death of a spouse is weighted as 100. The higher the score, the more likely the individual is to be stressed. There have been many debates about using this instrument. Some researchers believe that the effectiveness of this approach is compromised because it weighs all LCUs equally and does not consider the perception of stress from one individual to another (Turner & Wheaton, 1995). Therefore, in 1989, Lazarus and Folkman (1996) introduced the Daily Hassles & Daily Uplift Scale. This scale assumes that an individual's life, both wellness and illness, is more greatly affected by frequent minor events than one major event. However, this scale, like others focused on the measurement of perceived demands (Matheny et al., 1993). According to cognitive-transactional theorists, to adequately measure stress, it is equally important to assess demands and resources along with available responses and coping resources. To expand stress inventories, the additional assessment of coping responses is critical. Early instruments in the area of coping research were based on interview responses about stress situations. As responses were recorded, they were then categorized. Numerous instruments have been developed to assess coping strategies used by individuals during stressful transactions.

Coping has been examined through the lenses of style and process. Early response-based inventories were primarily designed as interview protocols in which participants respond to a given stress situation and a coping response. Once the coping responses were collected, they were categorized. Questionnaires such as Coping-

Avoidance Sentence Completion Test, The Defense Mechanism Inventory, and Coping-Defense Measure were common instruments (Lazarus, 1993).

From a process standpoint, coping is defined as ongoing cognitive and behavioral methods to manage internal and external demands when appraisals exceed the resources of the individual (Lazarus, 1993). In other words, researchers began to operate under the idea that coping was situational. Therefore, Lazarus introduced a new checklist called the Ways of Coping Questionnaire (WCQ), which required individuals to recall a stress situation and fully describe their thoughts, feelings, and actions. Some researchers have criticized this tool because they felt some of the coping items were conceptually ambiguous. As a result, new instruments were developed that focused more on the cognitive-transactional model.

Wong and Reker's Coping Inventory (1983) required participants to select problems that they faced in their own life and identify the coping strategies they used to address them (Lazarus & Folkman, 1984). Stone and Neale (1984) developed an open-ended approach that identified stress situations followed by offering participants choices of coping responses. This coping questionnaire provided information about the specific actions and thoughts associated with the coping strategy. Through a combination of quantitative and qualitative measures, it also provided a more complete picture of the dynamic process of coping in different individuals. In 1986, Rahe, Veach, Tolles, and Murakami (2000) developed the Stress and Coping Inventory (SCI). This was a comprehensive examination of four categories of a person's recent life stresses and four categories of their current coping capabilities. In 1999, an abbreviated version of the SCI,

called the Brief Stress and Coping Inventory (BSCI), assessed a person's current major stresses and their reported coping capabilities.

To truly measure stress within the cognitive-transactional model, instruments must go beyond simply measuring responses (Schwarzer, 2000; Matheny et al., 1993) and also measure both demands and coping resources. According to stress research, there are two types of resources: material and personal (Lazarus & Folkman, 1984). Material resources include those collected or provided by individuals to address demands as they occur. Personal resources are more subjective. Because stress is so personal, individual responses are based largely on personal social structures, previous experiences, life events, and education.

Measuring Demands and Stress in the Context of Education

Given the complexity and fluidity of schools, the situational appraisal of resources and demands in the context of educational settings is critical. The CARD instrument was developed to assess the unique demands and resources experienced by teachers (Lambert et al., 2001). The resources section emphasizes materials available to teachers in their school, while the demands section focuses on the classroom environment. Two versions of the CARD were developed, one for school-age teachers (CARD) and the other for preschool teachers (CARD-PS).

Based on the transactional model of stress and coping, the CARD was designed using existing research on teacher stress and included questions about demands, such as the number of students with difficult behaviors, class size, required paperwork, and administrative pressure (Lambert, R., McCarthy, C., O'Donnell, M., & Wang, C., 2009). The inventory consisted of 84 items. The Classroom Resource scale consists of 30

classroom/school resources with a 5-point Likert scale from 1, “very unhelpful,” to 5, “very helpful.” The Classroom Demands scale consists of 35 classroom/school demands, with a 5-point Likert scale from 1, “not demanding,” to 5, “extremely demanding.” Both the resource and demand items were carefully considered, clear, and distinct. The difference in scale scores were examined to define the measures. The correlation between the scales ($r = -.208$) indicates that they are conceptually distinct (McCarthy et al., 2009).

A measure of stress can be determined by calculating the difference in perceived demands and resources (Lambert et al., 2009). These stress scores can be classified into three groups: resourced, balanced, and at-risk. Subjects were considered resourced when their Resource scale was higher than the Demand scale ($R > D$). Subjects with a Resource scale within 95% error of measurement of the Demand scale ($R = D$) were considered balanced. Subjects were considered at-risk when the Demand scale exceeded the Resource scale ($R < D$).

Research suggests the CARD is a reliable and valid instrument. For example, Lambert et al. (2009) found that the instrument has sample-specific reliability for the Demands scale ($\alpha = .916$) and Resource scale ($\alpha = .954$). In addition, criterion validity was determined by examining the associations with predicted scale score directions and classroom demographic information. The examination of the preschool version of this instrument, the CARD-PS, yielded similar results in terms of reliability for Demands ($\alpha = .94$) and Resources ($\alpha = .95$) and criterion validity.

These findings have led to the adaptation of the instrument for other education professionals. For example, the CARD-SC was developed to measure the perceived stress of school counselors (McCarthy et al., 2010). And given the differences in education

level, researchers have also suggested that the instrument be adapted for middle and high school teachers. Maerz (2011) adapted the instrument to measure the perceived stress of school-based administrators using a three-step process. First, a questionnaire was administered to a purposeful sample of six current principals, stratified by grade level, to determine the constructs perceived as most contributing to stress in the elementary principalship. Next, the constructs were aligned with relevant literature to generate items and subscales for inclusion in the instrument. Cognitive interviews with six elementary principals were then conducted to improve the comprehension, structure, and clarity of each item on the survey.

The CARD-P (Maerz & Lambert, 2011) consists of 104 items and has five parts: (a) general demographic information about the principal, (b) general characteristics of their school and district, (c) appraisal of perceived current demands, (d) appraisal of perceived available resources, and (d) open-ended questions. Similar to the CARD and CARD-PS, the instrument measures stress as the difference between perceived demands and perceived resources.

Summary

Based on the cognitive-transactional (Lazarus and Folkman, 1984) and conservation of resources (Hobfoll, 1998) models, stress results when situational demands exceed available resources (Gmelch & Burns, 1984). Efforts to support principals and limit the stress of their position must focus on identifying both demands and resources. Once identified, stress can be reduced by decreasing the demands or providing additional resources.

The CARD has been used effectively with teachers (Lambert et al., 2001; O'Donnell, Lambert, & McCarthy, 2008). Research on the CARD has shown it to be a reliable and valid measure of teacher demands and resources (Lambert et al., 2007). The adaptation of the CARD for use with school-based administrators (CARD-P) offers tool for appraising the resources and demands of the principalship. This study was the first to use the CARD-P to measure the perceived stress of principals in their current administrative role.

CHAPTER 3: METHODOLOGY

The purpose of this study was to measure the perceived stress of principals by assessing their perception of resources and demands within their current position. The research was a nonexperimental quantitative study using survey methods. The design of the study uses descriptive and inferential statistics to examine the research questions. The survey provided descriptive information about perceived principal demands and the resources available to cope with those demands. The survey instrument (CARD-P) was created by Maerz (2011) and was adapted from the CARD; Lambert et al., 2001), which was developed to measure teacher perception of classroom demands and the availability of resources to help them meet those demands.

This chapter presents the methods used to investigate the research questions and information describing the participants, study design, instrumentation, procedures used for data collection, and a description of the data analyses that were conducted.

Participants

All public elementary school principals in the state of North Carolina were invited to participate in this study. Public elementary school principals were defined as principals who currently head any prekindergarten through sixth grade school or any combination of grades between kindergarten and sixth grade. In the state of North

Carolina, the Department of Public Instruction identifies all schools as being federal, charter, or public. All public schools in North Carolina are required to administer state accountability measures in compliance with NCLB and the North Carolina accountability model. Given that private and charter schools may deviate from these requirements, the perceptions of these principals may not reflect those of public school principals. Therefore, principals of private or charter schools were not included.

The sampling frame consisted of the most recently available electronic addresses from the North Carolina Department of Public Instruction's website as of April 15, 2012. This sample consisted of 1,105 elementary, public school principals. The responses elicited from respondents placed principals into one of three groups (Demands>Resources, Demands=Resources, Resources>Demands). The standardized mean difference effect size between the D>R and R>D groups was .5 standard deviations. Previous research in which the CARD was administered to teachers has revealed an effect of .5 standard deviation units. Therefore, for this study, a minimum of 59 respondents per group (i.e., D>R, D=R, R>D) were needed to achieve statistical power of .80, given $\alpha=.05$ and an effect size of .5.

Design

Survey-Share was used to gather responses electronically from elementary school principals regarding the perceived demands associated with their job responsibilities and the resources available to help them with their responsibilities. The CARD-P measure was used to collect this information.

There are four frequently cited errors associated with survey research: sampling, coverage, measurement, and nonresponse (Creswell, 2005; Dillman, 2000). Sampling errors result from surveying only some elements of the survey population; therefore, a

large population size was contacted. Coverage errors result from not allowing all members of the survey population to have an equal chance of participating. To control for this type of error, all elementary school principals in the state of North Carolina were invited to participate in the study. The third type, measurement errors, result from poor wording of questions and/or poor presentation of items that may elicit inaccurate or uninterpretable responses from participants. This type of error was minimized when the CARD-P was developed, which included several reviews to identify the appropriate content and improve the clarity of items. Finally, nonresponse errors result when the individuals who respond to the survey are different those who do not respond. To limit nonresponse errors, two follow-up email reminders about completing the survey were sent to participants.

Frequencies of responses were reported related to principal demographics, school/district characteristics, perceptions of administrative responsibilities, and perceptions of resources available to meet administrative responsibilities. Several variables were also analyzed for evidence of any relationship with the principals' self-reported demands and resources. These included personal demographics, such as gender, years of experience, and age, and also school/district characteristics, such as size of school/district and percentage of children performing below grade level.

Instrumentation

This present study was the first implementation of the CARD-P measure. Participants were emailed a prenotification email on June 18, 2012 and a cover letter and link to the survey on June 25, 2012. Follow-up email reminders were emailed to all participants one week and three weeks later.

Prenotification Email

Mehta and Sivadas (1995) suggest that prenotification for e-mail surveys is necessary. Prenotification has been found to increase response speed (Sheehan & McMillan, 1999; Taylor & Lynn, 1998); therefore, a prenotification email was sent one week before the cover letter and link to the survey were sent.

Cover Letter

A copy of the cover letter can be found in Appendix A. The one-page letter served as an overview of the project and also as the participants' informed consent, which included information regarding consent, voluntary participation, contact information, and anonymity of responses. The cover letter was emailed to each participant, along with the link to the electronic survey.

Measure

The CARD-P (Maerz, 2011) was created to allow administrators to appraise the resources and demands of their position as principal and operationalize their level of stress. The CARD-P follows the tailored design model (Dillman, 2000) and was adapted from the CARD instrument developed for elementary teachers (Lambert, McCarthy, & Abbott-Shim, 2001) and preschool teachers (Lambert, Abbott-Shim, & McCarthy, 2001). The readability and validity of using the CARD with teachers has been established in previous research (Lambert et al, 2009).

The CARD-P was created in three phases. In the first phase, the construct was defined, scale formats were determined, and a practitioner panel was formed to create an exhaustive list of perceived resources and demands. Six licensed, current North Carolina

principals with at least three years of experience served on the review panel and completed the Practitioner Assessment of Perceived Stress questionnaire. Responses were grouped by theme to suggest subscales to measure the intended constructs.

In the second phase of development, measurement items were generated. Content validity and face validity were conducted to ensure that the measurement reflected the intended construct and that the items were presented clearly. The final phase of development was the evaluation and revision of the instrument. The CARD-P was administered individually to the members of the review panel, and face-to-face interviews were conducted to obtain specific comment on difficulties with items, subscales, or the structure of the instrument. Panelists were asked to assess items for clarity, readability, and understanding.

The 104-item survey has five components: (a) general demographic information about the principal (13 questions), (b) general characteristics about his/her school and school district/system (17 questions), (c) appraisal of perceived demands (36 questions), (d) appraisal of perceived resources available (34 questions), and (e) general open-ended questions (4 questions). A copy of the survey can be found in Appendix B. A Likert-type scale was used to rank demands of job responsibilities, from 1= Not Demanding to 5= Extremely Demanding, and helpfulness of resources, from 1= Very Unhelpful to 5= Very Helpful.

Reminders to complete survey

Follow-up email reminders were sent to remind participants to complete the survey if they had not and to thank those who had already completed the survey. These

reminders were emailed 1 week and 3 weeks after the initial emailing. A copy of the email reminder can be found in Appendix C.

Procedures

Once the participant pool was formed, surveys were emailed to administrators along with the cover letter, instructions for completing the survey, and a link to the survey. The surveys were not coded in any way that would allow identification of an individual administrator. Two follow-up email reminders were sent to each potential respondent 1 week and 3 weeks after the initial emailing. All responses received were included in the analysis. Electronic data were merged into a dataset in SPSS. Data were screened for missing data and/or outliers. If missing data for any of the variables was higher than 5%, a decision was made about which method to use to assign missing values (Tabachnik & Fidell, 2007). Three cases were screened out due to multiple incomplete responses.

Data Analysis

The purpose of survey research is to describe the trends in the data collected from a population (Creswell, 2005). Data collected during this study was analyzed for frequencies and for differences and relationships between variables. Descriptive statistics were used to describe the sample in terms of demographics (Table 1). A difference score was created by subtracting each respondent's resources (R) score from their demands (D) score. A 95% confidence interval was constructed around zero difference, and the upper and lower bounds of this interval were used to establish the cut scores for classifying principals. The independent variable for this study was perceptions of stress. Each principal was classified into one of three groups: resources greater than demands ($R > D$),

resources equal to demands ($R = D$), and demands greater than resources ($D > R$). This method allowed for 95% confidence that the true score for the difference between Resources and Demands was not zero in either of the extreme groups. The independent variable included personal characteristics (i.e., gender, years of experience, age) and community characteristics (i.e., average school size and percentage of children in various special-needs categories). The specific data source and analysis for each research question is presented in Table 4.

Table 1. Research Questions, Data Sources, and Analysis

Questions	Items #	Analysis
1. How do principals rate the demands of their job?	29	Descriptive statistics
2. How do principals rate the helpfulness of resources to meet the demands of their job?	30	Descriptive statistics
3. What is the relationship between principals' perception of stress and personal demographics?	1-9	One way ANOVA Chi-square test of association
4. What is the relationship between principals' perception of stress and school/district demographics?	12-28	One way ANOVA Chi-square test of association

Descriptive statistics were used to determine the percentage of respondents that endorsed each level on the rating scale (from Very Unhelpful to Very Helpful) for each item on the resources section of the measure.

For each of the principal personal characteristics that were quantitative in nature, the three stress groups were compared using one-way ANOVA. The stress group classification ($D > R$, $D = R$, and $R > D$) was the independent variable and the principal

personal characteristics were the dependent variable. The dependent variables for these analyses were age and years of experience.

For each of the principal personal characteristics that were qualitative in nature, the three stress groups were compared using the chi-square test of association. The stress group classification ($D>R$, $D=R$, and $R>D$) was examined for association with each of the categorical principal personal characteristics. The variables for these analyses were degrees earned, gender, and ethnicity.

For each of the building/district level characteristics that were quantitative in nature, the three stress groups were compared using one-way ANOVA. The stress group classification ($D>R$, $D=R$, and $R>D$) was the independent variable and the principal personal characteristics were the dependent variable. The dependent variables for these analysis were number of students enrolled in respondent's school, number of certified or licensed teachers in respondent's school, approximate percentage of children in respondent's school who were identified as intellectually or academically gifted, and number of schools in respondent's district.

For each of the building/district level characteristics that were qualitative in nature, the three stress groups were compared using the chi-square test of association. The stress group classification ($D>R$, $D=R$, and $R>D$) were examined for association with each of the categorical principal personal characteristics. The variables for these analyses were the grades taught in the school and the type of community the school served.

CHAPTER 4: RESULTS

This chapter will describe the results of the analysis of the quantitative data collected during the study. Survey-Share was used to gather responses electronically from elementary school principals regarding the perceived demands associated with their job responsibilities and the resources available to help them with their responsibilities. The CARD-P measure was used to collect this information. Responses were analyzed using descriptive statistics, one-way ANOVA, and the chi-square test of association. Frequencies and percentages were computed for a number of classifications.

Demographic Information

All elementary school principals in the state of North Carolina were invited to participate in the study. Public elementary school principals were defined in this study as principals who currently headed any prekindergarten through sixth grade school or any combination of grades between prekindergarten and sixth grade. A total of 303 elementary school principals from 81 counties in the state responded. This was a return rate of 27.4% and represented 70.4% of the counties in the state of North Carolina. Principals of all 8 regions (100%) were represented. Females made up 64.5% ($n=189$) and males 35.5% ($n=104$) of the sample. Eighty-three percent ($n=241$) were White and

16.9% ($n=49$) were non-White. The average age of respondents was 46.5 (range 31-67 years).

The majority of respondents (93%) had master's degrees; several had advanced degrees, such as Educational Specialist ($n=49$) and Doctor of Education ($n=32$). Nearly all the respondents (99.7%) had previously served as a teacher and an assistant principal (93.4%). The average number of years respondents had served as principal was 6 (range 6 months to 34 years). Complete demographic data related to participants are presented in Table 2.

Table 2. Participant Demographics

	n	%
Years served as principal		
0-5	155	51.32
6-10	97	32.11
11-15	39	12.91
16+	11	3.64
Served as an assistant principal		
Yes	282	93.38
No	20	6.62
Served as a teacher		
Yes	292	99.66
No	1	0.34
Degrees earned		
A.S.	26	8.67
B.A./B.S.	241	80.33
M.S./M.Ed.	279	93.00
Ed.S.	48	16.00
Ed.D	32	10.67
Currently working toward a degree		
Yes	64	21.48
No	234	78.52
Age		
30-40	76	26.11
41-50	126	42.30
51-60	71	24.40
61+	18	6.20

Gender		
Male	104	35.49
Female	189	64.51
Ethnicity		
White	241	83.10
Non-White	49	16.90
Lives in the community school district served		
Yes	145	48.66
No	153	51.34
Parent/guardian of school-aged children		
Yes	148	49.50
No	151	50.50

A majority of respondents (63.64%) had an assistant principal and 97% had a school counselor. While 100% of respondents reported responsibility for evaluating staff performance, 61% shared these responsibilities with assistant principals and 11.34% with other designated staff. Complete demographic information regarding the participants' school/district is presented in Table 3.

Table 3. Demographics of participants' school/district

	<i>n</i>	%
Assistant principal		
Yes	189	63.64
No	108	36.36
School counselor		
Yes	287	96.63
No	10	3.37
Evaluates staff		
Principal	299	100
Assistant Principal	183	61.20
Other	34	11.34
Number of licensed teachers in the school		
0-25	99	33.56
26-50	173	58.64
51-75	22	7.46
76+	1	0.34
Number of staff members in the school		

0-25	214	77.54
26-50	75	25.42
51-75	4	1.36
76+	2	0.68
Grades taught in the school		
PK	168	55.63
K	277	91.72
1	277	91.72
2	277	91.72
3	272	90.07
4	272	90.07
5	264	87.42
6	71	23.51
Number of children in the school		
0-250	40	13.30
251-500	139	46.18
501-750	92	30.56
751+	30	9.96
Number of schools in the district		
0-20	157	52.51
21-40	99	33.11
41-60	35	11.71
61+	8	2.68
Type of community		
Rural	147	49.30
Small town	85	28.50
Suburban	48	16.10
Urban	18	6.00

The CARD-P measures principal stress as the difference between their perceived demands and perceived resources. The responses elicited from respondents placed principals into one of three groups (Demands>Resources, Demands=Resources, Resources>Demands). Previous research in which the CARD was administered to teachers has revealed an effect size of approximately .5 standard deviation units difference between the groups (Demands>Resources, Demands=Resources, Resources>Demands) across various aspects of their classrooms. Therefore, this variable was used to determine the minimum number of subjects needed to compare the three groups. For this study, a minimum of 59 respondents per group (i.e., D>R, D=R, R>D) were needed to achieve statistical power of .80, given $\alpha=.05$ and an effect size of .5. This minimum number was exceeded in this sample. Used to determine the internal consistency or average correlation of the items on the CARD-P was the Cronbach's alpha. Results of the Cronbach's alpha for demands=.95 and resources=.94.

Research Question 1: How do principals rate the demands of their job?

Overall, a majority (54.2%) of respondents found their role as principal to be very or extremely demanding. Approximately 36% rated their responsibilities as moderately demanding, while only 9% rated their responsibilities as not demanding or occasionally demanding. Administrative responsibilities that were rated among the most demanding (i.e., items rated on average very demanding or extremely demanding) included teacher evaluations (75%), curriculum/instructional initiatives (72%), Annual Yearly Progress/NCLB legislation (58.9%), state and federal summative testing (57%), and changes in policy and procedures (52.4%). Administrative responsibilities that were rated among the least demanding (i.e., items rated not demanding or occasionally demanding)

included extracurricular activities (73.8%), working with students who are homeless or transient (74.5%), and students with diverse cultural backgrounds (69.2%). The ratings for all the responsibilities included in the CARD-P are presented in Table 4.

Table 4. How demanding are your administrative responsibilities?

Demands	%	%	%	%	%	Mean	SD
	Not Dem	Occ Dem	Mod Dem	Very Dem	Ext Dem		
Number of children	17.40	24.10	38.50	15.70	4.30	2.66	1.07
Limited English	41.30	27.90	19.80	8.70	2.30	2.03	1.08
Diverse cultural backgrounds	26.70	37.30	22.00	10.70	3.30	2.27	1.07
Diverse economic backgrounds	8.10	22.50	33.20	26.20	10.10	3.08	1.10
Below grade level	1.30	13.40	32.80	35.50	17.10	3.54	0.97
IEP or 504 Plan	3.70	21.70	35.30	27.30	12.00	3.22	1.04
Academically gifted	27.80	39.50	23.40	8.00	1.30	2.16	0.97
Homeless or transient	37.60	36.90	15.10	8.40	2.00	2.00	1.02
Poor attendance (10 or more)	6.70	29.60	41.10	16.80	5.70	2.85	0.97
Discipline issues	8.40	39.60	28.50	17.40	6.00	2.73	1.04
Resolving student conflict	8.10	40.90	32.60	13.10	5.40	2.67	0.99
Communication with stakeholders	7.00	22.70	33.00	23.30	14.00	3.15	1.13
Conflicts with parent	12.40	43.80	27.40	10.40	6.00	2.54	1.03
Disruptions during the day	12.80	35.80	30.40	13.20	7.80	2.67	1.10
Meetings after hours	22.10	42.50	21.70	11.00	2.70	2.30	1.02
Extracurricular activities	30.50	43.30	17.80	6.00	2.30	2.06	0.97
Paperwork requirements	1.00	11.10	27.90	34.90	25.20	3.72	1.00
Hiring and placement of staff	8.80	35.80	30.40	19.90	5.10	2.77	1.03
Teacher evaluation	1.30	5.00	18.40	39.50	35.80	4.03	0.93
Teacher issues/needs	2.70	11.40	38.60	32.60	14.80	3.45	0.97
Staff (non-teacher) evaluation	8.40	34.90	37.20	13.10	6.40	2.74	1.00
Staff (non-teacher) issues/needs	6.10	31.80	37.80	18.60	5.70	2.86	0.98
On campus meetings	6.20	28.40	29.50	27.10	8.90	3.04	1.08
Off campus meetings	4.30	29.00	35.30	25.00	6.30	3.00	0.99
Parent communications	4.70	27.10	43.80	17.40	7.00	2.95	0.96
Benchmark assessments	1.70	22.00	40.20	28.40	7.80	3.19	0.92
State and federal testing	2.30	10.70	29.90	33.20	23.80	3.65	1.03
AYP and NCLB Legislation	4.40	12.10	24.60	35.00	23.90	3.62	1.11

Policy changes	2.00	13.40	32.20	31.90	20.50	3.55	1.02
Curriculum initiatives	0.00	5.70	22.20	37.40	34.70	4.01	0.90
Allocating budget resources	0.70	21.00	38.30	29.00	11.00	3.29	0.94
Developing schedules	4.40	25.30	34.70	26.30	9.40	3.11	1.03
Community expectations	4.30	21.30	35.70	24.70	14.00	3.23	1.07
Maintaining facilities	6.00	30.30	38.00	19.30	6.30	2.90	0.99
Student and staff safety	6.70	31.40	36.50	16.40	9.00	2.90	1.05
Overall, Demands	1.00	8.40	36.50	33.80	20.40	3.64	0.93

Research Question 2: How do principals rate the helpfulness of resources to meet the demands of their job?

Overall, a majority (64.9%) of respondents found the resources available moderately or very helpful in meeting the demands of the principalship. Approximately 29% rated their resources as neither helpful nor unhelpful, while only 6% rated the resources available as unhelpful or very unhelpful. Resources that were rated among the most helpful (i.e., items rated moderately helpful or very helpful) included the school improvement team (91.6%), office staff (95.7), teachers (94.9%), and school counselor (86.5%). Available resources that were rated among the least helpful (i.e., items rated unhelpful or very unhelpful) included recognition of accomplishments (25.9%), district support for diverse cultures (23.8%), and district support for economically diverse families (22.6%). While 40% of respondents viewed their salary as neither helpful nor unhelpful, 35.6% rated their salary as unhelpful or very unhelpful in meeting the responsibilities of the principalship. The ratings for all the resources included in the CARD-P are presented in Table 5.

Research Question 3: What is the relationship between principals' perception of stress and personal demographics?

For each of the principal personal characteristics that were quantitative in nature, the three stress groups were compared using one-way ANOVAs. The stress-group classification (D>R, D=R, and R>D) was the independent variable and the principal personal characteristic was the dependent variable. The mean and standard deviations for differences in principal demographics and stress level groups is presented in Table 6. There was no statistically significant differences between the groups with respect to age ($F_{(2, 285)}=1.221, p=.296$) or years of experience ($F_{(2,296)}= 1.465, p=.233$).

Table 6. Mean and standard deviations for differences in principal demographics and stress-level groups

		Group 1 R>D	Group 2 D=R	Group 3 D>R	Total	F
Age	n	86	96	106	288	1.22
	Mean	47.35	45.59	47.13	46.68	
	SD	8.53	7.96	8.81	8.46	
Years of Experience	n	93	99	107	299	1.47
	Mean	6.27	5.70	6.87	6.30	
	SD	4.90	5.06	4.84	4.94	

For each of the principal personal characteristics that were qualitative in nature, the three stress groups were compared using the chi-square test of association. The stress-group classification (D>R, =R, and R>D) was examined for association with each of the categorical principal personal characteristics. The differences in principal demographic characteristics between the stress-level groups in presented in Table 7. There were no statistically significant differences between the stress groups and respondents' ethnicity, degree earned, or gender; however, females reported higher levels of stress ($\chi^2_{(2)}= 5.846, p=.054$) and in this sample were more likely to be classified in the D>R group.

Table 7. Differences in principal demographic characteristics between the stress-level groups

		Group 1	Group 2	Group 3	Total	χ^2
		R>D	D=R	D>R		
Gender	n	90	95	105	N=290	5.85
	Male	42.2%	38.9%	26.7%	35.5%	
	Female	57.8%	61.1%	73.3%	64.5%	
Ethnicity	n	88	96	104	288	2.40
	White	80.7%	87.5%	82.6%	82.6%	
	Non-White	19.3%	12.5%	17.4%	17.4%	
Degree	n	92	98	106	296	3.70
	M.Ed.	81.5%	73.5%	70.8%	75%	
	Ed.S.	12%	14.3%	16%	14.2%	
	Ed.D.	6.5%	12.2%	13.2%	10.8%	

Research Question 4: What is the relationship between principals' perception of stress and school/district demographics?

For each of the building/district level characteristics that were quantitative in nature, the three stress groups were compared using one-way ANOVA. The stress-group classification (D>R, D=R, and R>D) was the independent variable and the school/district characteristic was the dependent variable. The mean and standard deviations for differences in school/district characteristics and stress level groups is presented in Table 8. The results indicate that there was a statistically significant difference based on school size ($F_{(2,295)} = 5.647$, $p = .004$) and number of teachers ($F_{(2, 288)} = 8.821$, $p = .000$), indicating that on average, principals of larger schools experience more stress. There was not a statistically significant difference in stress level based on district size. A number of student characteristics were also analyzed. There were no statistically significant differences in stress level based on the number of students who were English Language Learners, had special needs, were academically gifted, were homeless/transient, had poor

attendance, or had behavior issues. There was a statistically significant difference in levels of stress based on the proportion of students performing below grade level ($F_{(2,275)}=5.245, p=.006$), indicating that on average, principals who have larger populations of students below grade level experience higher levels of stress.

Table 8. Mean and standard deviations for differences in school/district characteristics and stress-level groups

		Group 1 R>D	Group 2 D=R	Group 3 D>R	Total	F	Post Hoc
School/District Characteristics							
School Size	<i>n</i>	94	97	107	298	5.65**	1<2,3
	Mean	424.28	495.59	522.74	482.84		
	SD	195.68	217.59	220.96	215.48		
Number of Teachers	<i>n</i>	92	94	105	91	8.82**	1<2,3
	Mean	28.20	33.00	36.02	32.57		
	SD	11.31	13.66	13.99	13.45		
District Size	<i>n</i>	94	94	107	295	2.72	
	Mean	20.53	26.46	23.87	23.63		
	SD	15.05	19.94	17.08	17.56		
ELL	<i>n</i>	93	98	107	298	.68	
	Mean	18.88	16.59	20.75	18.80		
	SD	26.98	23.51	26.17	25.56		
Special Needs	<i>n</i>	92	96	105	293	.20	
	Mean	13.35	14.11	13.80	13.76		
	SD	9.13	8.91	6.72	8.25		
Academically Gifted	<i>n</i>	85	94	101	280	.49	
	Mean	7.99	8.07	9.23	8.46		
	SD	6.17	6.80	13.61	9.68		
Homeless/Transient	<i>n</i>	78	83	98	259	1.72	
	Mean	1.72	2.55	3.01	2.47		
	SD	2.32	5.45	5.21	4.64		
Poor Attendance	<i>n</i>	88	89	102	279	2.80	
	Mean	5.16	6.93	7.23	6.48		
	SD	5.06	6.49	7.25	6.42		
Behavior Issues	<i>n</i>	84	93	101	278	.71	
	Mean	3.54	3.37	4.50	3.83		
	SD	10.08	4.49	6.22	7.17		
Below Grade Level	<i>n</i>	88	91	99	278	5.25**	1<3
	Mean	15.96	18.68	22.20	19.07		

SD 12.86 11.02 15.22 13.41

**p<.001

For each of the building/district level characteristics that were qualitative in nature, the three stress groups were compared using the chi-square test of association. The stress-group classification (D>R, D=R, and R>D) was examined for association with each of the categorical school characteristics. Results (Table 9) indicate that there was no statistically significant difference between the three groups as to type of community ($\chi^2_{(6)} = 3.606$, $p=.730$) or whether there was a preschool program at the school ($\chi^2_{(2)} = .109$, $p=.947$).

Table 9. Differences in school characteristics between the stress-level groups

		Group 1	Group 2	Group 3	Total	χ^2
		R>D	D=R	D>R		
Type of Community	<i>n</i>	93	98	107	298	3.6
	Rural	54.8%	49.0%	44.9%	147	
	Small Town	29.0%	26.5%	29.9%	85	
	Suburban	11.8%	18.4%	17.8%	48	
	Urban	4.3%	6.1%	7.5%	18	
Preschool Program	<i>n</i>	94	98	106	298	.11
	Yes	56.4%	54.1%	54.7%	134	
	No	43.6%	45.9%	45.3%	164	

CHAPTER 5: DISCUSSION

This final chapter includes a summary of the study's purpose and procedures and a discussion of the results. In addition, this chapter addresses implications for practice, limitations, and areas for future research.

With the increase in administrators leaving the profession, it is important to identify the specific causes of stress. As responsibilities and accountability become more involved, there is a need to examine the pressures on and demands made of school-based administrators within this context (Akiba & Reichardt, 2004). Several studies have looked at administrator stress (Johnson, 2005; Rayfield & Diamantes, 2004); however, these have examined perceived stress after the administrator has left his or her position. The purpose of this study was to measure the perceived stress of principals by assessing their perception of resources and demands in their current position. This was a nonexperimental quantitative study using survey methods and descriptive statistics. The survey provided descriptive information about perceived principal demands and the resources available to cope with those demands. The survey instrument (CARD-P) was created by Maerz & Lambert (2011) and was adapted from the CARD (Lambert, McCarthy, & Abbott-Shim, 2001), which was developed to measure teacher perception of classroom demands and the availability of resources to help them meet those demands.

All public elementary school principals in the state of North Carolina were invited to participate in this study. Public elementary school principals in this study were defined as principals who headed any prekindergarten through sixth grade school or any combination of grades between prekindergarten and sixth grade. Of the pool of 1,105 public elementary school principals, 303 (27.4%) responded. Females made up 64.51% ($n=189$) and males 35.49% ($n=104$) of the sample. Eighty-three percent ($n=241$) were White and 16.9% ($n=49$) were non-White. The average age of respondents was 46.5 (range 31-67 years). Of the 110 counties in North Carolina, 81 (74%) are represented in the sample. Principals of all 8 regions (100%) were represented.

The following sections provide a discussion of the results organized in relation to the four research questions.

Research Question 1: How do principals rate the demands of their job?

Participants in this study were asked to rate the demands of their administrative responsibilities. They were asked to rate each item as “not demanding,” “occasionally demanding,” “moderately demanding,” “very demanding,” or “extremely demanding.” Overall, a majority of principals (54.2%) found their role to be very or extremely demanding. The responsibilities rated most demanding were related to instruction and accountability. For example, principals cited teacher evaluations, changes in policy and procedures, Annual Yearly Progress/NCLB legislation, state and federal summative testing, and curriculum/instructional initiatives as their most demanding responsibilities. Many items principals rate as most demanding and cause more stress appear to be items that are out of their control. These items seem to be directed by district or state initiatives. These findings mirror some of the reasons principals are stressed and are more likely to

leave the profession prior to retirement (Johnson, 2005). North Carolina has adopted the Common Core State Standards initiative, which likely requires additional work on the part of the principal to learn the standards and retrain their staff. Further, the state has recently redesigned the teacher evaluation process and added a value-added system. These new initiatives may help explain these ratings.

In their 1993 study, Bredeson found strong relationships between task-based stress and administrator fatigue. When comparing elementary and secondary principals, mean stress scores were higher for elementary principals. The authors posited that one of the main reasons for this was the higher percentage of parental participation at the elementary level. The results of this study do not support this finding. In fact, the elementary school principals in this study reported parent contacts/conferences and conflicts with parents as being among their least demanding responsibilities. Only 24.4% of respondents rated parent contacts/conferences as very or extremely demanding, and only 16.4% of respondents rated conflicts with parents as very or extremely demanding. It would be interesting to examine how these principals delegate responsibility to support personnel (e.g., assistant principal, school counselor, social worker). Perhaps these professionals share these responsibilities, thereby freeing the principal to focus on other responsibilities.

Finally, this group of elementary school principals did not find extracurricular activities and evening/weekend meetings to be demanding. It would be interesting to see how these items would be rated by middle and high school administrators, who typically have more extracurricular activities and events outside the school day.

Research Question 2: How do principals rate the helpfulness of resources to meet the demands of their job?

Participants in this study were asked to rate the helpfulness of available resources in meeting their administrative responsibilities. They were asked to rate each resource as “very unhelpful,” “unhelpful,” “neutral,” “moderately helpful,” or “very helpful.” Overall, a majority of principals (64.9%) perceived their available resources as moderately or very helpful in meeting the demands of the principalship. Personnel were among the resources rated most helpful. For example, principals cited their school improvement team, office staff, teachers, and school counselors as their most helpful resources. An interesting finding was that principals rated their school counselors (86.5%) and school social workers (70.1%) more favorably than their assistant principals (64.1%). There are differences across schools and districts in terms of the number of assistant principals assigned to elementary schools and the focus of their work. For example, some schools have assistant principals who focus on transportation and behavior issues, while others focus primarily on instruction. It would be interesting to learn more about the responsibilities and workload of these staff members. Perhaps the school counselors and social workers provide support in curriculum/instructional initiatives, accountability, and parent communication, making them more valuable in helping their principals meet the perceived demands of their position.

Another interesting finding is that 40% of principals viewed their salary as neither helpful nor unhelpful. This finding is supported by research that suggests principals are not drawn to the position because of salary or status (Malone, B. G., Sharp, W. L., & Walter, J. K., 2001). Only 35.6% rated salary as unhelpful or very unhelpful in meeting

the responsibilities of their position. Further, 40% of principals viewed recognition of accomplishments as neither helpful nor unhelpful. Only 25.9% rated recognition as very unhelpful or unhelpful in meeting the responsibilities of their position.

Research Question 3: What is the relationship between principals' perception of stress and personal demographics?

The three stress groups (D>R, D=R, R>D) were examined for association with principal personal characteristics. No significant differences were found between the stress groups based on age, gender, years of experience, ethnicity, or degree earned. While there was no significant difference based on gender, in this study, females reported higher levels of stress compared to males. These findings suggest that their reported levels of stress were the result of their work environment rather than their personal characteristics or women are more inclined to express their stress than men.

Research Question 4: What is the relationship between principals' perception of stress and school/district demographics?

The three stress groups (D>R, D=R, R>D) were examined for associations with school/district characteristics. There were no significant differences in stress levels based on district size, type of community served, or whether the school had a preschool program. There was, however, a significant difference in stress levels based on school size and number of teachers. Administrators of larger schools reported higher levels of stress than principals of smaller schools. Similarly, principals with more teachers reported higher levels of stress compared to principals with fewer teachers. As a result, a principal of a larger school with more students and teachers would face increased responsibilities compared to a principal of a smaller school with fewer students and teachers. It would be interesting to determine the resource allocation between small-,

mid-, and large-sized schools. In other words, if principals of larger schools receive more resources (i.e., human resources and physical materials), it would appear that the increased resources do not mitigate the increased responsibilities of serving more students and supervising more teachers.

A number of student characteristics were also analyzed. There were no significant differences in stress levels based on the number of students who were English Language Learners, had special needs, were academically gifted, were homeless/transient, had poor attendance, or had behavior issues. There was, however, a significant difference based on the proportion of students performing below grade level. Principals who led schools that served larger populations of students performing below grade level reported higher levels of stress. Perhaps this reflects the demands of increased accountability, including state and federal testing requirements.

It is interesting to compare these findings to the results of a study (Lambert et al., 2007) in which the CARD was administered to a group of elementary teachers. An examination of similar classroom characteristics reveals differences in teachers' stress based on the number of students with learning disabilities and the number of children with behavior problems. In other words, teachers with increased numbers of students with learning disabilities or with behavior problems reported higher levels of stress. Perhaps teachers feel they should be able to resolve these challenges on their own, or maybe they don't feel comfortable seeking assistance from their administrators. These same items were not statistically significant among principals in this study. If teachers do feel they need to handle these challenges on their own, perhaps that explains why principals don't perceive them to be more demanding. On the other hand, principals experienced higher

levels of stress related to students performing below grade level, a finding similar to previous research (Welmers, 2005). Because principals are ultimately responsible for the school in regard to student progress, they may be more attentive to these challenges.

Limitations

The data for this study were collected from public, elementary school principals across the state of North Carolina. All public schools in North Carolina are required to administer state accountability measures in compliance with NCLB and the North Carolina accountability model. Given that private and charter schools are exempt from those requirements, the perceptions of these principals may not reflect those of public school principals. Therefore, it is important to note that these findings do not generalize to principals of private and charter schools.

Second, while public, elementary school principals may share similar experiences, it cannot be assumed that these principals' perceived demands and resources represent those of principals in other states (Creswell, 2008; Marshall & Rossman, 2006). Further, it is possible that the perceptions of principals most at risk of leaving the profession were not captured. In other words, given that participation in the study was voluntary, a principal experiencing high levels of stress may have decided not to complete the survey. It is also possible that there was response bias if principals felt pressured to respond to the items on the survey in a positive way (Creswell, 2008). Currently, educational activities and initiatives in the state of North Carolina have increased. The increased flow of information may create an overwhelming feeling for principals.

Another limitation is that the CARD-P was administered during the summer months. It is possible that responses might be different if the survey had been

administered during the school year, when other demands may present themselves or be perceived as more demanding.

Implications

Research related to stress indicates that an individual's perception of the resources available for managing the demands placed on him or her is critical in determining whether or not stress will be experienced as harmful (Lazarus & Folkman, 1984). This study sought to identify the specific resources and demands that are critical to elementary school principals' sense that they are able to manage their job responsibilities. With high reliability results ($D=.95$, $R=.94$), the CARD-P seems to be a viable research instrument.

A recent survey of administrators was conducted to examine resource needs (DiPaola & Tschannen-Moran, 2003). While 78% of respondents believed that their education had prepared them for their positions, 90% felt that they needed additional professional development and support to effectively meet the expectations of their role. Instructional leadership was targeted as the area needing the greatest additional support. Perhaps professional development related to stress management would also be beneficial for school principals. It is important for school leaders to have the opportunity to acquire new skills in order to anticipate, prepare for, and respond to the more stressful aspects of their role. These leaders may also benefit from learning strategies to reduce or cope with stress. Given that principals are key leaders of their school, superintendents should evaluate work environments and create support groups in which principals meet regularly to share concerns, exchange ideas, and develop bonds with one another.

Organizational factors, such as school size and demographics, can certainly influence the effectiveness of a principal. Superintendents frequently analyze school

enrollments to make decisions about resource allocation. Typically, principals of larger schools receive more resources (i.e., human resources and physical materials) to meet the increased demands of serving more students. The results of this study indicate that principals of larger schools report higher levels of stress. Perhaps the increased resources do not balance the increased responsibilities of serving more students and supervising more teachers. Superintendents should take a closer look at resource allocation and gather more information from principals in order to make informed decisions about the types of additional resources that would be most helpful. This includes not only physical materials but also human resources. The principals in this study found support personnel (e.g., school counselors, social workers, office staff, assistant principals) to be helpful resources. Perhaps the roles and responsibilities of those staff members could be revised to reflect changing administrative needs. Administrative responsibilities could also be redefined so as to allow the principal to focus on the most critical aspects of the position. School demographics are another important factor that should be considered when making decisions related to resource allocation. Principals in schools with high percentages of students performing below grade level reported higher levels of stress. Superintendents should consider these issues not only in the allocation of resources but also during any redistricting process.

Future Research

There are at least three areas for future research. This was the first study to implement the CARD-P with school administrators. Future studies could be conducted with a larger sample of elementary schools from across the country. In addition, the CARD-P should be administered to a variety of administrative personnel, including

assistant principals and principals/assistant principals of middle, secondary, private, and charter schools, to learn more about the specific demands and needs of administrators in different settings. Further, future research that incorporates mixed methods by adding observational data to the self-reported information may improve our understanding of principal stress. It would also be interesting to examine school performance data in relation to the self-reported information. For example, is there a relationship between principal stress and school performance? Additionally, it would be interesting to conduct a longitudinal study to examine whether principals reporting high levels of stress leave the profession. If the CARD-P could be used predict who is at risk of leaving the position, this information could be used to intervene and, ultimately, reduce the number of administrators who leave the profession prior to retirement.

Conclusion

School administrators are faced with an increased number of responsibilities and challenges that can lead to stress. The cumulative effect of these stressful experiences can result in burnout. Given the complexity and fluidity of schools, the situational appraisal of resources and demands is critical. The adaptation of the CARD for use with school-based administrators (CARD-P) offers a tool for appraising the resources and demands of the principalship. This study was the first to use the CARD-P to measure the perceived stress of principals in their current administrative role. Understanding and identifying the stresses on elementary principals will be important in preventing burnout and retaining high-quality administrators.

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APPENDIX A: EMAIL REMINDER

Dear Colleague,

This message serves as a reminder to complete the survey on school administrator stress. The survey can be accessed by clicking on this link:

This is an important study that will help in understanding the stresses facing elementary administrators and resources available to cope with this stress.

If you have already completed the survey, thank you! If you have not, I hope you'll consider participating. Your input is very valuable. Again, the survey takes approximately 10-15 minutes to complete.

If you have questions, please contact Jim Helf (primary researcher) or Dr. Richard Lambert (Dissertation Chair) at the numbers/emails listed below. Thank you for your help in this important work.

Jim Helf

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APPENDIX B: SURVEY

Comparative Appraisal of Resources and Demands - Principal Version

*Based upon the Classroom Appraisal of Resources and Demands developed by
Richard G. Lambert, Christopher McCarthy, and Martha Abbott-Shim (2001).*

We are interested in learning about the demands of your school and administrative responsibilities, and the resources you have to handle those demands. Your responses will be kept strictly confidential and anonymous. No information about your individual responses will be shared with anyone. We appreciate your time in completing this questionnaire.

Tell us about yourself.

1. How many years have you been a principal? # _____
2. Did you serve as an assistant principal? Yes No If yes, how many years?

3. Did you serve as a teacher? Yes No If yes, how many years?

4. If yes, what level(s) did you teach? (Choose all that apply) pK-5 6-8 9-12
5. What degree(s) you have earned? (Choose all that apply) AS BA/BS MS/M.Ed. Ed.S.
6. What major(s) or field(s) are your degree(s)?
7. Are you currently working toward a degree? Yes No
8. If yes, what degree and field?
9. What is your age?
10. What is your gender? Female Male
11. What is your ethnicity? European American African American Hispanic Asian/Pacific
Islander American Indian
12. Do you live in the community your school district serves? Yes No
13. Do you have school-aged children? Yes No
14. Do they attend your school district? Yes No

Tell us about your school and school district.

15. What grades are taught in your school? pK K 1 2 3 4 5 6 7 8 9
 10 11 12
16. How many children are in your school?
17. How many children come from homes primary language other than English?
18. How many children have identified special needs requiring an IEP or 504 Plan?
19. How many children are identified as academically or intellectually gifted?
20. How many children are homeless or transient?
21. How many children have poor attendance (10 or more annual absences)?
22. How many children have behavior problems resulting in frequent office referrals?
23. How many children in your school are performing below grade level?

24. Do you have Assistant Principals in your school? Yes No If yes, how many? #

25. How many certified or licensed teachers are in your school?
26. Do you have school counselors in your school? Yes No If yes, how many? #

27. How many staff (non –teachers) members are in your school?
28. Who evaluates the staff in your school? (Choose all that apply) Principal Assistant
Principal(s) Others
29. How many schools are in your school district? # _____
30. Describe the community your school serves. Rural Small Town Suburban
 Urban
-
31. Are there any other features of your school that make it unique?

Using the scale below, rate how **demanding** your school or administrative responsibilities are in these areas.

1 = Not Demanding 2 = Occasionally Demanding 3 = Moderately Demanding 4 = Very Demanding 5 = Extremely Demanding						
32. Number of children in your school.	1	2	3	4	5	NA
33. Children with limited English skills.	1	2	3	4	5	NA
34. Children from diverse cultural backgrounds.	1	2	3	4	5	NA
35. Children from diverse economic backgrounds.	1	2	3	4	5	NA
36. Number of children performing below grade level.	1	2	3	4	5	NA
37. Children with Individualized Educational Programs or 504 Plans.	1	2	3	4	5	NA
38. Academically or intellectually gifted children.	1	2	3	4	5	NA
39. Homeless or transient children.	1	2	3	4	5	NA
40. Children with poor attendance (10 or more annual absences).	1	2	3	4	5	NA
41. Discipline issues or frequent office referrals.	1	2	3	4	5	NA
42. Resolving student conflict.	1	2	3	4	5	NA
43. Communication with stakeholders, including email and telephone.	1	2	3	4	5	NA
44. Conflicts between parent and the school.	1	2	3	4	5	NA
45. Disruptions during the day.	1	2	3	4	5	NA
46. Evening and weekend meetings.	1	2	3	4	5	NA
47. Participation and or supervision of extracurricular activities.	1	2	3	4	5	NA
48. Paperwork requirements.	1	2	3	4	5	NA
49. Hiring and placement of teachers and staff.	1	2	3	4	5	NA
50. Teacher evaluation.	1	2	3	4	5	NA
51. Teacher issues/needs.	1	2	3	4	5	NA
52. Staff (non-teacher) evaluation.	1	2	3	4	5	NA
53. Staff (non-teacher) issues/needs.	1	2	3	4	5	NA
54. On campus meetings you are required to attend.	1	2	3	4	5	NA
55. Off campus meetings you are required to attend.	1	2	3	4	5	NA
56. Parent contacts and conferences.	1	2	3	4	5	NA
57. Formative and benchmark assessments.	1	2	3	4	5	NA
58. State and federal summative testing.	1	2	3	4	5	NA
59. Adequate Yearly Progress and No Child Left Behind Legislation.	1	2	3	4	5	NA
60. Changes in district, state, and federal policies and procedures.	1	2	3	4	5	NA

61. New or modified curricular or instructional initiatives in your district or state.	1	2	3	4	5	NA
62. Preparing and allocating budget resources.	1	2	3	4	5	NA
63. Developing a master schedule.	1	2	3	4	5	NA
64. Community expectations of your school.	1	2	3	4	5	NA
65. Maintaining school facilities and grounds.	1	2	3	4	5	NA
66. Student and staff safety.	1	2	3	4	5	NA
67. Overall, how demanding is your principalship?	1	2	3	4	5	NA

Using the scale below, rate how **helpful** each of these resources is with your school and administrative responsibilities.

1 = Very Unhelpful	2 = Unhelpful	3 = Neutral	4 = Moderately Helpful			
	5 = Very Helpful					
68. Assistant principal(s) at your school.	1	2	3	4	5	NA
69. School counselor(s) at your school.	1	2	3	4	5	NA
70. School social worker(s) working with your school.	1	2	3	4	5	NA
71. Office staff at your school.	1	2	3	4	5	NA
72. Teachers at your school.	1	2	3	4	5	NA
73. School Improvement Team/Faculty Council/Leadership Team.	1	2	3	4	5	NA
74. Parent support of school learning activities and/or events.	1	2	3	4	5	NA
75. Parent and teacher organization or association.	1	2	3	4	5	NA
76. Community partnerships.	1	2	3	4	5	NA
77. Principal mentors, peers, or a principal organization within the school system.	1	2	3	4	5	NA
78. Administrative support from the system/district level.	1	2	3	4	5	NA
79. Support from your local school board.	1	2	3	4	5	NA
80. Local school board policies and procedures.	1	2	3	4	5	NA
81. District support personnel for children requiring Individualized Education Programs.	1	2	3	4	5	NA
82. Materials for children requiring Individualized Education Programs.	1	2	3	4	5	NA
83. District support personnel for children identified as academically or intellectually gifted.	1	2	3	4	5	NA
84. Materials for children identified as academically or intellectually gifted.	1	2	3	4	5	NA

85. District support personnel for children with limited English skills.	1	2	3	4	5	NA
86. Materials for children with limited English skills.	1	2	3	4	5	NA
87. District support personnel for children performing below grade level.	1	2	3	4	5	NA
88. Materials for children performing below grade level.	1	2	3	4	5	NA
89. District support for children from diverse cultural backgrounds.	1	2	3	4	5	NA
90. District support for children from economically disadvantaged families.	1	2	3	4	5	NA
91. District support for facilities and grounds.	1	2	3	4	5	NA
92. District support for computers and instructional technology.	1	2	3	4	5	NA
93. District support personnel for curriculum and instruction.	1	2	3	4	5	NA
94. District support personnel for human resources.	1	2	3	4	5	NA
95. Curriculum and instructional resources provided for your school.	1	2	3	4	5	NA
96. Professional development opportunities for you.	1	2	3	4	5	NA
97. Professional development opportunities for teachers and staff.	1	2	3	4	5	NA
98. Evaluation and professional feedback from supervisors.	1	2	3	4	5	NA
99. Your annual salary.	1	2	3	4	5	NA
100. Recognition of your achievements and accomplishments.	1	2	3	4	5	NA
101. Overall, how would you rate the resources available to help with the demands of your school and principalship?	1	2	3	4	5	NA

Help us to understand your plans for next year. This information will not be shared with anyone.

I intend to continue to serve as a principal at my current school.

Yes

No

If you answered no, please check the primary reason for your decision.

- Retirement
- Assuming a principalship at a different school
- Promotion
- Returning to the classroom/previous position
- Personal reasons (family move, spend more time with children, health, etc.)
- Professional reasons (pursuing another career, no longer like being a principal, stress, low pay, lack of recognition, etc.)
- Other (please specify) _____

If the demands of your school were fewer, and resources were more abundant, how would your principalship be different?

Do you have additional comments about the demands of your principalship?

Do you have any additional comments about resources that are helpful to your in dealing with the demands of your principalship?

Thank you for your time.

APPENDIX C: COVER LETTER AND CONSENT

Dear Colleague,

I am a doctoral candidate in Educational Leadership at UNC Charlotte and currently working on my dissertation. I am writing to ask for your help in completing a 2012 state survey on school administrator stress. This is an important study that will help in understanding the stresses facing elementary principals and resources available to cope with this stress. Completing this survey directly benefits you, as your perspectives may be shared with other professionals who are interested in administrator retention, as well as state stakeholders who create policy. Your input as a school administrator is very valuable. Below you will find a link to a survey. By completing and submitting this survey you are giving researchers permission to use your answers as part of the results of this statewide study. Your name and any other identifiable information will not be used. You are under no obligation to complete the attached survey, and there is no penalty for not participating. If you have questions, feel free to contact Jim Helf (primary researcher), Dr. Richard Lambert (Dissertation Chair), or the Office of Research Compliance at the numbers/emails listed below. If you would like to participate, please complete the short survey and submit your responses electronically. The survey takes approximately 10-15 minutes to complete.

Thank you for your help in this important work.

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